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Remarks from the Editors

Our goal is to promote research activities and publication through the volume of NUM Research Series. NUM Research Series represents the activities of our researchers in academic and educational aspects. This second volume of the NUM Research Series aims to promote the continuing research activities among our faculty members and disseminate their research findings as part of a process of knowledge sharing with our academic community. As a university fully committed to promoting a higher quality of academic life, publishing the NUM Research Series is one of the many tasks which will help us to move in this direction.

This second volume consists of eleven articles on a wide range of topics which include: commercial conflict resolution in Cambodia, leadership, entrepreneurship, human capital and economic growth, academic quality performance, career choice, IT in business and the factors which influence profitability of commercial banks. I do believe that these academic articles will help make NUM a real place for academic research discussion and development.

Thank you all very much.

Sincerely,

Hor Peng, Ph.D., Chief Editor

Ly Sok Heng, Ph.D.

Dr. Kang Sovannara

Stephen Paterson, MA

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DIPUTE SETTLING THROUGH ADR APPROACHES AND COURT SYSTEM: COMMERCIAL CONFLICT RESOLUTION IN CAMBODIA

Dr. SENG Bunthoeun¹

Abstract

This article profoundly discusses on the mechanisms of commercial conflict resolution in Cambodia since 1993 up to the recent day. It explicitly draws attention on the alternative dispute resolution (ADR) especially, the related terms and its keys underlying principle of this method. In addition, it also points out the jurisdiction of the existing court over the commercial disputes while such dispute should be adjudicated by the separate court known as Commercial Court.

This paper is structured into four main areas. First, it is about the development context of Cambodia that economic and legal frameworks are briefly talked. Second, it examines the mechanism of commercial disputes resolutions which both solutions outside the court and through the court system are comprehensively discussed.

The final area concerns with area on the implementation of the legal jurisdiction over commercial disputes. This subsequent part provides an insight understanding on the conflict of law and competence implementation on commercial disputes.

Key words: *ADR (Alternative Dispute Resolution), Commercial conflict resolution, Negotiation, Mediation, Conciliation, Law counterfeiting, Public order, Commercial arbitration, Court system.*

¹ Dr. SENG Bunthoeun is currently a lecturer of Law, Cambodian History and a Vice-Rector of the National University of Management (NUM).

1

Introduction

Disputes are inevitable in business transaction. Having them resolved quickly while preserving the parties' ongoing relationship is a key concern in a modern commercial environment. For that reason, having good laws and clear mechanisms for doing business are imperative for a country to implement in order to increase investor's trust and to boost economic growth.

In Cambodia, it is recognized that the formal methods available for the commercial disputes settlement since 1993 are the court and arbitration². The commercial court, however, has not established so far for adjudicating the commercial cases. In this circumstance, a key question for this article which intends to seek for is how are commercial disputes in Cambodia being solved? This article is of critical importance for two main reasons. First, it reviews the common methods that have been practiced so far for undertaking commercial disputes. Second, while less attention focuses on the conflict of laws and the implementation of competent rule of law on commercial disputes, this article clearly deliberates on such matter and it offered some recommendations that had been set the light to leading to launch the *National Arbitration Center* (NAC) in 2011.

After emerging from decades of long civil war and internal conflict that demolished many foundations for economic growth and development of country, the Royal Government of Cambodia (RGC) has put many efforts to reconstruct the country after the national election in 1993. Many basic institutions and policy transformations (administration, judiciary, legal and economy) have been built and reformed respectively to strengthen a rule of law, good governance and prosperity of the country.

Cambodia, as a result of the major structural reforms, has not only obtained internal peace in the country, but it has also experienced an extraordinarily rapid expansion in its economic with an average growth of 7.8% between 1994 and 2010, lifted per capita income from USD248 to USD735³. This achievement revealed the hardworking of the RGC in promoting the country wealthy.

However, despite much advancement is being made, there are still many things remain to be done. Remarkably, the effective institution, basic laws and separated court are still inadequate and absence in Cambodia until the very recent day. These shortages of reliable, dispute resolutions are cited as an impediment to both local and international investors to set foot on business in Cambodia⁴.

² Bunthoeun, The Resolution of the Commercial Conflict in the Kingdom of Cambodia, 2012, p. 1 Bunthoeun, The Resolution of the Commercial Conflict in the Kingdom of Cambodia, 2012, p. 1

³ Annual Development Review 2011-2012, published by CDRI-Cambodian's leading independent development policy research institute, 2012, p.1

⁴ Private Sector Discussions: The Establishment of Commercial Arbitration Services in Cambodia, published by The International Finance Cooperation (IFC), 2009, Number 24, p. 3

Regarding the judiciary system, Cambodia has a unitary judiciary⁵ with the lower courts, or the courts of first instance. These courts consist of provincial/ municipal courts, which sit in every 24 provinces/municipals, and the Military Court, which situates only one in Phnom Penh. The first instance courts or the provincial/ municipal courts hear all types of offenses⁶ regardless of natures of magnitudes of the disputes including civil, commercial, criminal, and administration. However, for other offense conducted by the military personnel, it is the jurisdiction of the Military Court to adjudicate. For, further appeals are respectively made to the upper courts which exist of Appeal Court and Supreme Court. Both appellate courts consist of one each and place only in Phnom Penh. The Appeal Court hears on *Ang Het* (matters of fact) and *Ang Chbab* (matters of law), while the Supreme Court only reviews on *Ang Chbab* (matters of law) excepts in the case of a joint trial of the second grievance complaints that it has to hear both on *Ang Het* (matters of fact) and *Ang Chbab* (matters of law) for the final decision⁷.

Unlike other developed countries, it reflects that the Cambodian judiciary system⁸ has not separated its jurisdiction over the cases of civil, criminal, administration, labor and commercial. All cases except offense committed by the military personnel are adjudicated under the common court⁹. In France, on the other hand, the court has separated its jurisdiction according to the characteristic of the disputes. For instance, it has Administrative Court, Labor Court, Civil Court, Criminal Court, Administrative Court and Commercial Court¹⁰.

To improve commercial climate as well as to comply with the requirement of the World Trade Organization (WTO) which Cambodia became a member in 2004, the RGC has drafted many new laws and established many institutions that would benefit to the commercial disputes resolution. As seen in 2001, Cambodia enacted the *Arbitration Council* which cited as the first ADR law¹¹ by the *Prakas* number 317-01 of the Ministry of Labor and Vocational Training (MoLVT). Then, in a year later, *the Royal School of Judges* and Prosecutors was established in 2002. In March 2006, Cambodia has passed the second ADR law, known as the *Commercial Arbitration*. Further, in the same year on July 06, 2006, *the Civil Procedure Code* was enacted. Currently, the Ministry of Commerce (MOC) in collaboration with the Ministry of Justice (MOJ) and with support from Canada Development Agency is drafting a Law on *Commercial Court* (IFC, 2009, p.4).

⁵ Private Sector Discussions: The Establishment of Commercial Arbitration Services in Cambodia, published by The International Finance Cooperation (IFC), 2009), Number 24, p. 4

⁶ See Cambodian Constitution Art 128 (3), 1993. This article indicates that the court has jurisdiction over all types of matter included the administration.

⁷ See Introduction to Cambodian Law- Overview of the Cambodian Legal and Judicial System by Kong Phallack, published by the Konrad Adenauer-Stiftung, 2012, p. 11

⁸ Bunthoeun, The Resolution of the Commercial Conflict in the Kingdom of Cambodia, 2012, p. 1, 2012, p. 1

⁹ See Cambodian Constitution 1993, Art. 128...

¹⁰ Foucher, Notions fondamentales de droit; 3è edition Paris 2001, p.2

¹¹ Alternative Dispute Resolution-Cambodia, published by the American Bar Association, Second Edition, 2010, p. 3

2 Mechanisms of Commercial Disputes Resolution

According to the practice, there are two mechanisms for resolving commercial dispute in Cambodia. Those mechanisms are the *arbitration* and *court*.

2.1 Dispute Settling Outside The Court

Settling disputes outside the court system is quite popular in the modern commercial environment. This is because it often saves time, cost and increases user satisfaction. As is widely known, this way of dispute settlement is named as *Alternative Disputes Resolution* (ADR) which decisions on the resolution of the disputes are made or assisted by a neutral third party (Rozdieczer and Alvarez de la Campa 2006, Dispute outside Court System).

In Cambodia, it is claimed that ADR approaches are not new since it has been practiced long time ago. Traditionally, Cambodian people prefer having their disputes settled outside the court. Among other ways of ADR procedures, the most common ADR methods are negotiation, conciliation, mediation and arbitration.

Even though there are four main methods available for the commercial disputes resolution, solution through negotiation, conciliation and mediation have no legal effect to enforce individual parties to follow. That is every individual party of the dispute is still able to further appeal to the commercial arbitration or the court if they are not satisfied with the decision of arbitration. Therefore, we can conclude that resolutions through negotiation, conciliation and mediation are the *pre-arbitration* before it was handed to commercial arbitration.

Among all ADR procedures, *negotiation* is the only way of dispute settling outside the court system that neutral party does not involve¹². Put it in other words, both sides of the dispute parties must work together in order to reach an agreement without the assist of the third party.

¹² Asian Foundation, Dispute Resolution outside the Court, 2001, p. 6

Negotiation can possibly be made in case the relationships between both parties do not severely broken and they still want to find the solution of the dispute by their own way. In practice, *negotiation* is cited as the most popular ADR approach in Cambodia and used by majorities of parties in addressing the disputes¹³. As mentioned, *negotiation* does not need the help from the third party. That is parties conduct the negotiation by themselves or via their representatives. However, when negotiation fails to reach an agreement, individual parties can ask for one or more neutral parties to assist in their disputes settlement¹⁴.

As its characteristic, *negotiation* is only an act of compromising between individual parties based on mutual benefit. It has no legal binding that can force each party to implement the decision. However, *negotiation* is still allowed by the Investment law¹⁵ of Cambodia.

2.1.1 Conciliation

Conciliation is the process of ending the dispute or violation to reach an agreement by non-violation procedure. It is a continuing process of negotiation in which the third party is an important person in bringing both parties to meet and discuss for resolution of the dispute. Like meditation, conciliation extensively permits both parties to decide on ways of resolving the dispute which they are satisfied with.

By conciliation and mediation, they have preserved an ongoing commercial relationship and helped balanced in power of each party in which they have lost so far. These terms, *conciliation* and *mediation*, are sometimes cited as synonym to each other that can be used interchangeable¹⁶. However, there are some specific differences to their procedures. Conciliation is a modification of mediation that a conciliator meets with the parties separately not jointly as in mediation process¹⁷. A conciliator works as an intermediary agent that he or she tries to seek for contribution from both parties to the resolution.

2.1.2 Mediation

Mediation is another ADR procedure in which both parties agree to have a neutral third party to intervene and reconcile in the dispute resolution. It mostly occurs as negotiation failed to reach an agreement¹⁸. The person who assists in the dispute resolution is called mediator.

¹³ Kong Phallack: Introduction to Cambodian Law- Overview of the Cambodian Legal and Judicial System published by the Konrad Adenauer-Stiftung, 2012, page 13

¹⁴ [http:// www .arbitrationindia.com/ htm/over view.htm](http://www.arbitrationindia.com/htm/over view.htm) retrieved on 11st January, 2009

¹⁵ Cambodian Investment Law, 1994, Article 20

¹⁶ Alan Redfern, Martin Hunter, Nigel Blackaby, Constantine Partasides : Law and Practice of International Arbitration, 2007, page 44

¹⁷ Bunthoeun, The resolution of the commercial conflicts of the Kingdom of Cambodia, 2012, p 23

¹⁸ The evaluation of province environmental exploitations of Cambodia : The survey of economic governance and World Bank conception policy, IFC-MPDF and AsusAid/ Asia foundation 2008 page 48, The investigation indicated that 92% of companies in Cambodia, Selected for negotiation by its top choice in the resolution conflicts. To be contrary, it has only 1% of company that confirmed that the file to the court is the best choice for their resolution method.

In practice, mediator jointly meets with the parties to discuss and decide on ways of the dispute resolution. Similar to conciliation, mediator has no right to make a binding decision even though he or she assists directly both parties towards an agreement¹⁹.

2.1.3 Arbitration

Arbitration is a bilateral dispute resolution in which a neutral third party or arbitrator accountable for receiving and examining the appeal handed by parties in order to making a decision about the outcome of the dispute.

It is different from the court process; arbitration allows parties the flexibility to select both the arbitrators as well as the procedures that will be followed in deciding the case. Unlike other ADR approaches, once parties have agreed with the process, arbitration is binding²⁰. That is when arbitrator made decision over the dispute; disputants must follow the decision even if one or both of them disagree with it.

According to the Business Issues Bulletin issued in 2005 by IFC reported that the practice of arbitration has been limited in Cambodia, occurring only since 2002 and solely in labor disputes.

2.2 Dispute settling through the court

In principle, commercial disputes settle through the court system are processed under the *Commercial Court* ²¹. To date, however, this type of appellate court does not exist in Cambodia yet for hearing the commercial cases. That is all the commercial disputes are settled through the existing courts.

According to article 128 of the Cambodian Constitution 1993, it states that the court has jurisdiction over all cases including administration. Thus commercial disputes are resolved through the normal court because of the absence of *Commercial Court*. In 2003, a draft law on the establishment of the *Commercial Court* was appeared. And in December 2007, this draft law was revised for third times. This indicates that the future Commercial Court in Cambodia will be soon established.

¹⁹ IFC, Business Issues Bulletin, 2005, P. 1

²⁰ Ibid, 2005

²¹ See Bunthoeun: Commercial Resolution in Cambodia, 2012, p. 8. According to his study, he indicated that this type of court used to exist in Cambodia during the Sangkum Reastr Niyum period from 1955-1970.

3

Implementation of the legal jurisdiction on commercial dispute

It is required that all judges shall provide solution to the dispute based on the rule of law. Commercial dispute must be resolved under the jurisdiction of the commercial law and by other laws in case of the shortages of the commercial laws. However, the problem will occur as the commercial conflict which has an international characteristic in nature. That is we do not know for sure which laws of the countries shall be implemented for resolving the dispute. In this case, the resolution on conflict of law and competent rule implementation on commercial dispute will be profoundly discussed.

3.1 Resolution on conflict of law

In principle, parties of the dispute are freely given a decision to choose the law for implementing the international contract. For instance, article 3 of the Civil Code of Cambodia (Principle of self-determination) recognizes the freedom of will of individual and regulates the equality of legal relationship between private individuals as well as legal entity. Public legal entity is regarded as private individual in commercial transaction. Parties must clearly show the clauses in contract that allow them to decide on the law of which countries for implementing when the conflict occurs.

3.2 Competent rule implementation on commercial dispute

William R. Wiebe, Esq, commented that Cambodian judges seem reluctant to enforce foreign arbitration awards because (i) the judge may be unfamiliar with international arbitration and with their responsibilities under the New York Convention; (ii) they may feel that it is unfair to enforce a foreign arbitration award in Cambodia (especially if the award is against a Cambodian business or national); (iii) they may believe that the dispute should have been brought to the Cambodian courts, and they may not want to enforce the award in order to penalize the party for not coming to the Cambodian courts first, instead of arbitrating the dispute abroad; and (iv) they may be uncertain of the authenticity of the award and may think that it was obtained by persuading the party through fraud or corruption even when there is no evidence of this. Consequently, in current practice there are no statistics of arbitral awards enforced by the Cambodian courts.

3.2.1 Data Analysis Methodology on the Questionnaire

The writer chooses target participants, who are closely related to the research topic, to respond to the 15 items of questionnaire as shown in the table below:

Question 1 – In your business activities, has your company ever had any conflict with other companies?

Participant	Number
Arbitrator	20
Commercial Judge	15
Judge	20
Lawyer	40
Businessmen	40
Officer of Commercial Ministry	10
Officer of Justice Ministry	10
Total	155

According to data above, we use a compared frequency:

$$\rightarrow f_1 = 20/155 \times 100 = 13\%$$

$$f_2 = 15/155 \times 100 = 10\%$$

$$f_3 = 20/155 \times 100 = 13\%$$

$$f_4 = 40/155 \times 100 = 26\%$$

$$f_5 = 40/155 \times 100 = 26\%$$

$$f_6 = 10/155 \times 100 = 6\%$$

$$f_7 = 10/155 \times 100 = 6\%$$

$$\rightarrow i = 17(f_1 + \dots + f_7) = 100\%$$

We know that the percentage of people who have never had any conflicts with other companies is still low as compared to total number of 155 participants who responded to the question1 above. Although some conflicts may rise, they can still be solved.

20 Arbitrators
15 Commercial Judges
20 Judges
40 Lawyers
40 Businessmen
10 Officers of Commercial Ministry
10 Officer of Justice Ministry

This number of participants account for 155 in number or in the frequency.

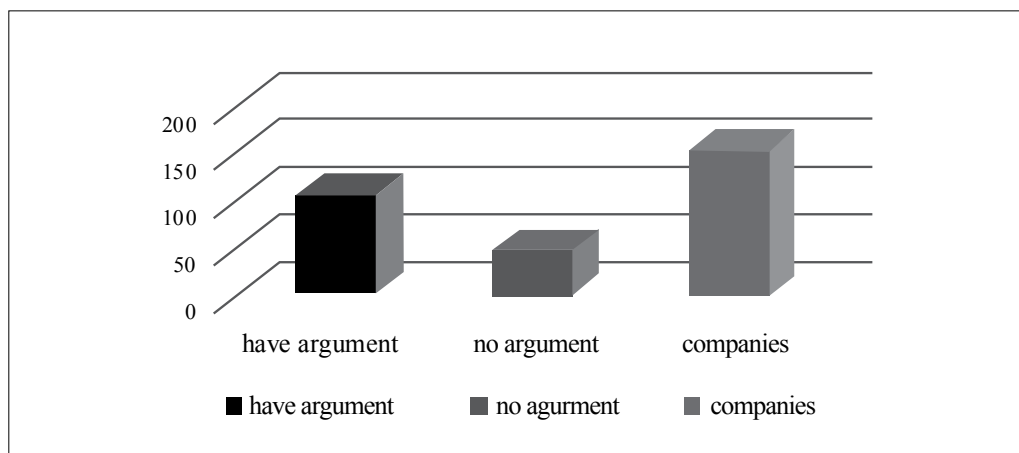
$$\bar{X} = \frac{x_1 + x_2 + \dots + x_n}{n}$$

According to the Formula of data analysis:

$$\begin{array}{l}
 x_1=20 \\
 x_1=15 \\
 x_2=20 \\
 x_3=40 \\
 x_4=40 \\
 x_5=10 \\
 x_6=10
 \end{array}
 \left. \vphantom{\begin{array}{l} x_1=20 \\ x_1=15 \\ x_2=20 \\ x_3=40 \\ x_4=40 \\ x_5=10 \\ x_6=10 \end{array}} \right\}
 \begin{array}{l}
 \rightarrow \bar{X} = \frac{20+15+20+40+40+10+10}{7} \\
 \rightarrow \bar{X} = \frac{155}{7} \\
 \rightarrow \bar{X} = 22.4
 \end{array}$$

Among 155 participants including arbitrators, commercial judges, judges, lawyer and 135 businessmen, 10 officers were selected from the Commercial Ministry and other 10 officers from Justice Ministry, which accounts for 20 in number.

In general, the writer conducted the interview with all 155 officers. The participants who clarified that their companies or tasks ever had the conflict or involved with the cases of conflict settlement account for 105, while those who clarified that their companies or tasks never had any conflict or involved with conflict settlement account for 50.



Question 2- If any conflicts rise in your company, what conflict settlement methods below would you choose? There are 4 methods to which 155 participants including commercial judges, judges, lawyers, and business people respond to this question, along with additional 10 Officers from Commercial Ministry and other 10 officers from Justice Ministry that the writer included in the interview.

Analysis: By the last data of the information, as the percentage in this table shows, there were 155 arbitrators, commercial judges, judges, lawyers, and business people, along with additional 10 Officers from Commercial Ministry and other 10 Officers from Justice Ministry.

The supporters of Answer 1, the Negotiation, account for 14.40%. While those who support the conciliation and mediation as answer 2 account for 20.71%. Meanwhile, the supporters to answer 3, the Commercial Arbitration, account only for 19.71%. For those who support to have the Commercial Court for solving the commercial argument account for 44.87% that is the largest percentage. So the largest percentage was 20.71% and 44.87%.

Question 3 – Which conflict-solving methods do you think would cost less money and time? There are 2 answers. Among the 155 people who support both answers are

arbitrators, commercial judges, Judges, lawyers, business people, including other 10 officers of Commercial Ministry and other 10 officers of Justice Ministry.

Analysis: By the number in this table, we know that among 155 participants, those who support the answer 1 which spend and waste less money and time are 116 accounting for 71.30%. While those who support the answer 2 that solve the argument by the commercial court are 39 accounting for 28.69%.

Question 4 – In case of the argument happened in the company, do they solve the problem by themselves or ask for help from the third person? The people who answered and supported the answer of the question 4 were arbitrators, commercial judges, judges, lawyers, business people, 10 officers from Commercial Ministry, and other 10 officers form Justice Ministry which account for 155 in total.

Analysis: By the number in this table, we know that the supporters of the answer 1: the case of the argument happening in the company and have to solve the problem by them-selves, are 29.04%. The people who choose the answer 2: solving the problem by asking for help from the third person is 108, which represents 70.95%.

Question 5 – Which conflict-solving method below is more effective?

The participants involving answering this question are arbitrators, commercial Judges, Judges, Lawyers, Business people, 10 Officers from Commercial Ministry, and other 10 officers from Justice Ministry, which accounts for 155 in total.

Analysis: by the number in this table, we have arbitrators, commercial Judges, Judges, Lawyers, Business people, 10 Officers from Commercial Ministry, and other 10 officers from Justice Ministry, which accounts for 155 in total. Among 155 participants, there are 30.83% clarifying that Commercial Arbitration is more effective which is in line with the answer 3. While the people who clarify that Commercial Court in the answer 4 are 40.35%. In fact, by this survey, there are only Commercial Arbitration and Commercial Court that can be a better argument-solving method than others and it has more supporters.

Question 6 – Is the argument-solving method for the people by the way that spend less money and less time a factor pushing the investments to have a trust on the government's policy?

The people who have to answer this question are arbitrators, commercial Judges, Judges, Lawyers, Business people, 10 Officers from Commercial Ministry, and other 10 officers from Justice Ministry, which accounts for 155 in total.

Analysis: According to the number in this table, we know that the people who support the answer 1 are 64.16%. The people who support the answer 2: spending less money and less time not to help the government's policy are 35.83%. So the conflict-solving method that cost less money and time is really a factor pushing the investment to trust in the government's policy.

Question 7 – Does the implementation of commercial argument-solving method outside the court really help the Cambodia's justice system to solve the commercial conflict?

As described above, the people who have to answer this question are arbitrators, commercial Judges, Judges, Lawyers, Business people, 10 Officers from Commercial Ministry, and other 10 officers from Justice Ministry, which accounts for 155 in total.

Analysis: by the number in this table, we know that among 155 participants, who support the commercial problem-solving method outside the court in the Cambodian justice system to solve the commercial conflict, account for 73.57%, which is excessively high in volume; while the people who support the answer 2: the implementation of commercial conflict-solving method outside the court system does not at all help the Cambodian justice system in solving the conflict, represent small number, which accounts for 26.42%.

Question 8 – The law on Cambodia's Commercial Arbitration was enacted by the national assembly in 2006. From your own view points, does this law cover meaningful contents to respond to justice finding mechanism for the national and international investors who have the conflict?

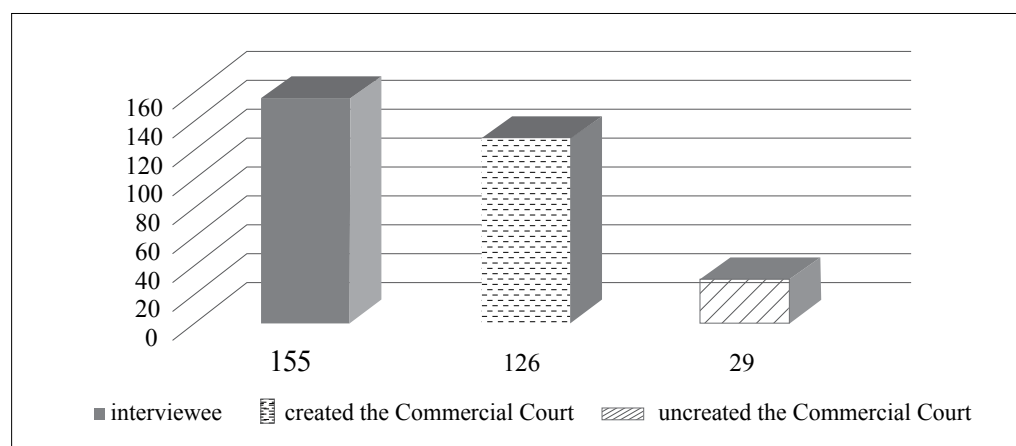
The people who have to answer this question are arbitrators, commercial Judges, Judges, Lawyers, Business people, 10 Officers from Commercial Ministry, and other 10 officers from Justice Ministry, which accounts for 155 in total.

By number in this table, we know that among 155 participants who are involving with this sector represent 30.36%. Meanwhile those who support the answer 2: law on Cambodian Arbitration does not cover meaningful contents to respond to justice finding mechanism for the national and international investors who have the conflict, represent 69.64%.

Question 9 – Does the Commercial Court play important role in solving the commercial argument and should this court be set up?

The people who have to answer this question are arbitrators, commercial Judges, Judges, Lawyers, Business people, 10 Officers from Commercial Ministry, and other 10 officers from Justice Ministry, which accounts for 155 in total.

Analysis: by number in this table, we know that among 155 participants who support the Commercial Court in playing important role to solve the commercial argument and the court should be established are 126 accounting for 82.73%; while the people who do not support the establishment of the court earlier are 17.26%. This means that, there are only 29 participants out of 155 who do not support. Therefore, with the current economic growth, Cambodia can create the Commercial Court.

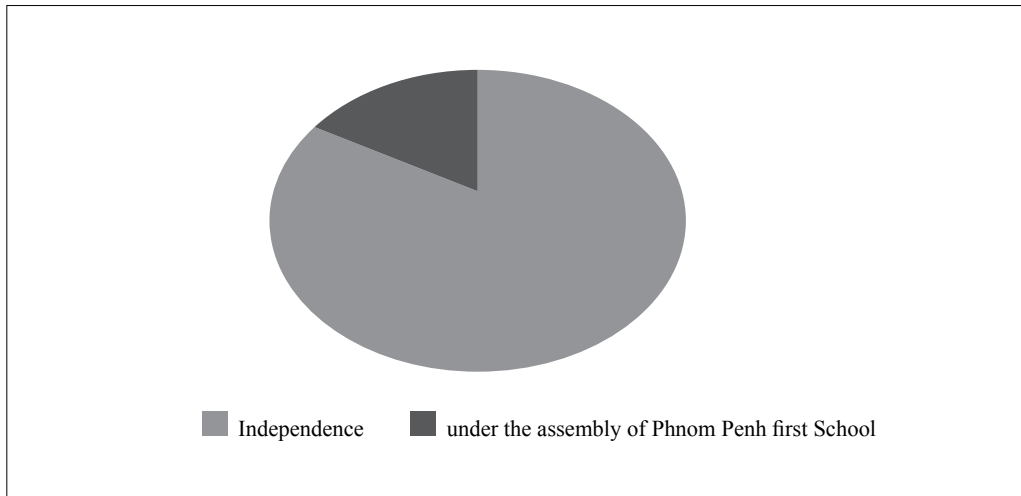


Question 10 – Should we create the Commercial Court outside or under Chamber of Phnom Penh municipal court of first instance?

We decide to choose the same 155 participants including arbitrators, commercial Judges, Judges, Lawyers, Business people, Officers from Commercial Ministry, and other officers from Justice Ministry.

Analysis: by the number in this bar chart, we know that the people, who support to create the Commercial Court for solving the commercial argument outside the Chamber of Phnom Penh Municipal court of first Instance, are 82.73%; while those who support to

create the Commercial Court under the Chamber of Phnom Penh Municipal Court of first Instance are only 17.26%. So, it means that the Commercial Court has the important role to solve the commercial argument and that it should be created and shall stay independently. It should not be under the Chamber of Phnom Penh Municipal Court of first Instance.



Question 11: Among the component of three judges in commercial court, should there be two vocational judges or only one vocational judge, apart from this are jurors?

To support this answer, we chose the same 115 people who are arbitrators, commercial judges, judges, lawyers, businesspeople, and 20 government officials from Ministry of Commerce and Ministry of Justice.

Analysis: According to number above, we can analyze that among 115 people who are arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials from Ministry of Commerce and Ministry of Justice, there are 76.31% of people who said to support the idea of having 2 vocational judges and only one juror in component of the three judges at commercial court.

Question 12: Should the commercial court be under control of Ministry of commerce or Ministry of Justice?

We chose 115 people who are arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials from Ministry of Commerce and Ministry of Justice. Below is the result of interview.

Analysis: According to the number chart above, we can analyze that among 115 people who are arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials from Ministry of Commerce and Ministry of Justice, there are 40.11% of people who said to support the commercial court under control of Ministry of Commerce, while there are 59.88% of people who said to support the commercial court under control of Ministry of Justice. In sum, there are many people to support this court to be under control of Ministry of Justice more than under control of Ministry of commerce, but it is not too many.

Question 13: Should commercial court be established only in Phnom Penh or in other provinces as well?

This question was taken to ask arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials from Ministry of Commerce and Ministry of Justice to find out if the commercial court should be established in Phnom Penh or other provinces. We chose the same 115 people who are arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials from Ministry of Commerce and Ministry of Justice. Below is the result of interview.

Analysis: Among 115 people who are arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials from Ministry of Commerce and Ministry of Justice, there are 67.26% of people who said to support the commercial court located only in Phnom Penh in this stage, while there are 33.45% of people who said to support the commercial court located in other provinces. According to this tendency, the commercial court should be established only in Phnom Penh in the first stage.

Question 14: According to the previous observation, most judges practice only local laws to deal with disputants who are Khmer and foreigners because of absence of subject of conflict. Is making the subject of conflict for the case necessary in dealing with every international commercial conflict?

This question was taken to ask arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials from Ministry of Commerce and Ministry of Justice to find out if we should make subjective of conflict to deal with conflict between Khmer and foreigner disputant.

Analysis: Among 115 people who are managing and working at law and business relating institutions, they are people who are experienced and decided to reply in favor of this question. Among 115 people, there are 87.41% of people who replied to first answer that is in favor of subject of conflict to deal with international commercial conflict like the case above, while there are 12.59% of people who support the second answer that refuses the proposal above. In fact, the absence of subject of conflict leads most judges to enforce local laws to deal with conflict between Khmer and

foreigner that makes it biased. Making the subject of conflict is a very important factor to deal with international commercial conflict. Moreover, this court should be prepared in a universal way.

Question 15: Is the commercial court the key factor to build the investors' trust to invest more or not?

We chose the same 115 people who are arbitrators, commercial judges, judges, lawyers, businesspeople, and the government officials who work at registration department and legislation department and Ministry of Justice. Below is the result of interview.

Analysis: Among 115 people who have been interviewed, there are 74.84% of people who replied in favor of the first answer, while there are 25.16% of people who replied in favor of the second answer. So, it is real that commercial court is a key factor to build investors' trust and attract investors to invest more; it is a government's insistence to develop national economy through other strategies, especially in a private sector like this.

So, commercial court is a new tool that is very important to make trust for national and international investors to invest in order to increase the economic growth faster. Commercial court is a vocational court; it means that the solution given by this court is clear and accurate and equitable because this court has judges who are trained in commercial law; moreover, there are also non-vocational judges who join in the legal process and decision in making verdict. If we look at present court system, the standard is not accurate yet because Cambodian court has only one type and deal with all kinds of cases. This is a big concern to find out justice in Cambodia because this kind of court system can lead to injustice by decisions of the judges who are not specialized in dealing with conflict.

4 Evaluation (strength and weakness)

4.1 The strength of solving commercial dispute resolution mechanism

a. Dispute resolution outside the court

Commercial dispute resolution is a mechanism that guarantees the smoothness, easiness, and flexibility and it also provides the confidential behavior toward the party in disputes. According to previous practices, most mechanism is used especially on negotiation according to the business atmosphere at the provinces of the Kingdom of Cambodia that is the tool to evaluate the economic governance and the formal principal of World Bank/IFC-MPDF and AusAid/ Asian Fund (2007, p.48). 92% of the companies in Cambodia decide to choose the negotiation resolution as the top choice, according to the observation. However, there is only 1% percent of a company considers that dispute resolution can be done generally at the court²². Living condition factor is very important that the commercial dispute resolution can be a good choice outside the court. People's living condition is still low while the court fee is high because it is determined based on the proportion of subject of disputes²³. If the lawsuit is preceded to the Appellate and Supreme Court, the prices reach 1.5 times and 2 times as high as the court of first instance, respectively ²⁴. Moreover, dispute resolution outside the court will keep good relationship between the conflicting parties and the confidentiality is kept.

According to these reasons, in order to attract the important foreign investors, Cambodia has to conduct the commercial dispute resolution outside the court more effectively and promote the rule of law.

²² Steven M. Autermiller, Esq: Alternative Dispute Resolution, 2010, p.14

²³ The Civil Code 2006, Article 61-62

²⁴ Quotation article 62-63

b. Dispute resolution inside court

The Cambodian Court is a kind of *individualism* which means that each court has the competent to solve all kinds of disputes including the administration management except the military disputes²⁵. The military dispute is under the jurisdiction of Military Court. This individual characteristic shows the agreement in dispute resolution that provides people to sue which court that has the authority to solve all disputes. In this case, it also shows about the agreement among the court laws.

4.2. The strength of applying the rule on commercial dispute

4.2.1 The Rule of Legal Dispute

The rule of legal dispute is a rule that shows which laws of the other countries have the competency to solve the private international disputes. Cambodian laws are prioritized to solve the private international disputes in Cambodia. For example, if there is any dispute between Cambodian company and foreign company or between foreign company and foreign company in Cambodia, the Cambodian court has the jurisdiction and the Cambodian laws will be applied on such a disputes²⁶.

4.2.2 The Implementation of Competent Rule

Free market economy was opened in 1993 in respond to the international economic growth and many legal measures have been adopted to manage business transaction. Moreover, some of draft law is being prepared to fulfill the requirement of the trade sector. The implementation of the law is more effective than before, because the government has created judge school to training the professional judge to reinforce the law and justice. Also, the civil law, general law, came into force on December 21, 2011.

4.3 The weakness of commercial dispute resolution mechanisms

4.3.1 Dispute Resolution outside the Court System

Although ADR benefits to conflicting parties, some negative impacts should not be ignored. The deal is just an excuse of one party who intend to delay the time, because the party has a deliberate ill-intention not to solve the disputes. The dispute between Thailand and Cambodia, for instance, has been long time unsolved, because Thailand

²⁵ Constitution 1993, New Article 128

²⁶ The Law of Business Enterprises, 2005, Article 273

does not want to get it done. The negotiation and compromise is just an excuse to gain political interest. Informal agreement outside the court is not binding upon the parties.

Moreover, Cambodia does not have legal measures on managing the mechanism to resolve dispute outside court system, for example, through negotiation, conciliation, or mediation yet.

The absence of legal rules above also make foreign investors lost confidence and faith if the conflicts occur without understanding clearly how to handle and take any legal measures to solve the dispute.

4.3.2 Resolving Disputes through Court System

ADR is an important mechanism for Cambodia because there are many problems in Cambodian court including spending too much times on procedure and money. The parties in dispute are in bad circumstance as their case is not preceded. If most of them hire the lawyers, they need to spend huge amount of money on the case and continue wasting money on the dispute. Often, they are worried about the possibility in the proceedings, especially corruption in the judicial system. According to evaluation report on 183 corrupt countries made by International Transparency released on December 1, 2011, Cambodia is one among them. From this report, Cambodia is ranked on 164th place over 183 corrupt countries. The most corruption is in the judiciary system, police officers, and in the public administration. This corruption in the justice system is important obstacle to absorb foreign investment and interrupt development of the whole country.

The court decision is often known as the zero-sum game because this judgment benefits to one party, but the others and lead to the negative impact on trade transaction. The difficulty of the judgment is that it is the controversy between the training of judges and law enforcement; judges were trained under the support of France, the founder of Civil law (Romano- Germanique). But legal rules on the current private Cambodian law were organized under the assistance of the Japanese government which have tendency toward Common Law. *This diverse direction leads to false judgment which shall be nullified.*

At the same time, the judicial arrangements are not standardized yet and Cambodia does not have special jurisdiction for resolving trade dispute. Because of the absence of such a jurisdiction, the judgment of the court is not technical enough; hence it leads to the loss of trust among the conflicting parties. Trade disputes were technical in the commercial sector; it requires skills for dealing with the issue to get a correct technical decision. Moreover, the absence of special court leads to the shortage of legal rules because that special court plays imperative role to create the jurisprudent. However, determining the competent court for resolving commercial disputes is not significance because the court has jurisdiction to solve all cases.

4.4 The weaknesses of the implementation of the rules on trade disputes

4.4.1 Rule of Legal Conflict

After Khmer rouge, chosen judges were elderly and were not knowledgeable enough even though some of them used to study abroad. However, due to many training courses were available with a number of experiences, judges got more understanding in the judicial matters.

Up to now, in term of private international conflict, Cambodian judges still apply its own laws by rejecting the foreign law even competent law. We observed that the procedural rule of legal disputes in Cambodia is unilateral which proved that such a rule is stagnant.

Royal School of Magistracy was established by decree on 5th February, 2002. The examination will be taken and prepared by Supreme Council of Magistracy. It shall be noticed that the government has right to choose 5 candidates among civil servants without taking exam. Candidates who passed shall promise to serve as judges at least 7 years after the appointment.

4.4.2 Implementation of Competent Rules

Cambodian commercial Law is still limited. The basic commercial rule of Cambodia is the law on the Rule and Commercial List adopted in 2005 and amended on some articles by the Law on Amendment in 1999. This law, however, was not enough to administer the commercial transaction. For instance, we do not know what level of business that needs to be registered. This shortage leads to the loss of national tax collection. The intellectual property right is not strictly protected, such as copying books of special works and CD in market. Weaknesses of this law enforcement have de-motivated the author in their works; it is a very important part in the development of human resource. Moreover, the law on the internet and commercial contract are not adopted yet. These legal measures provide benefit in business transaction in the high-tech world. Internet law has not been actualized, but Commercial Law is being drafted for a long time but it is yet to be adopted. This problem is not new to the world, but it is new to Cambodia.

Thus, the slow development of the Business law, as described above, may result from the lack of good will from the state which is the conduit of the law establishment.

4.4.3 Implementation of the law chosen by parties

Parties are free to enter into the contract. This freedom is guaranteed by law²⁷. This contract is the law of the parties²⁸. Therefore, before enter into the contract; parties have to thoroughly take many points into account, especially the law that will apply when the dispute happens because it obliges upon the parties. Choosing the law is considered as the principle, judge or arbitrator will depend on the law chosen by the parties to resolve the prospective problem (1) except when it is against the public interest or against police law and law counterfeiting. This shows the prohibition of the above principle (2).

4.4.4 Principle of legal implementation chosen by the parties.

Because the contract is an agreement of the parties, therefore they are free to create the agreement as long as it is done freely and truly. This agreement is happened based on the self-determination of the parties (1.1). This principle can be a problem when it is implemented in Cambodia because international private law in Cambodia is limited (1.2).

Freedom of Choosing

A. Basis of International Norm

International treaty has played a crucial role to guarantee the consistency of the rule of norm, rule of dispute or rule of material. Those treaties also mention about the freedom of the parties to choose the laws. It has brought a problem whether the principle of parties' freedom is created by the *treaty or international law*. To answer this question, we have to look at the source of those laws whether the national laws exist first or international laws exist first. We have seen that the national law in general exist first, especially the principle of the parties' freedom. Based on the national law, many countries have agreed to establish the international treaty related to the contract.

All these treaties have incorporated the above theory into their rule. Bilateral Treaty between Cambodia and Republic of South Korea on the Protection and Promotion of Investment, for instance, was adopted on July 19, 1999. According to article 10, paragraph one of this treaty allows the conflicting parties to choose the law that is closely related to the dispute. Therefore, if the dispute settlement is governed by this or that treaty in which the parties are the signature countries or general principle of international law, parties to the contract are allowed to choose the close law to the dispute. This article does not state clearly whether the laws chosen by the parties shall be the laws of the signature countries. The vague meaning of this article means that the parties are allowed to choose the law that is closely related to the dispute regardless the where law exists such as the international custom, practiced custom of international

²⁷ Article 3, Civil Code in 2007

²⁸ Decree-law No: 38 on Contracts and Liability, 1989, Article 22.

commerce, and commercial law²⁹. The freedom of choosing the closed law is considered as a crucial means to protect the parties and boost the foreign investment in Cambodia.

United Nations Convention on Contracts For the international Sale of Goods, 1980 (CISG)³⁰ also proffers freedom of the contract to the parties to reject the implement of this treaty or state against this treaty or alter the provision of this treaty³¹. As a result, this treaty provides priority of the parties' will. This treaty, on the one hand, supplements the will of the parties and it can be rejected if parties mention it in the any clause. Similarly, the treaty was established aiming at choosing law to implement the obligation of the contract in European Union the so-called Rome Convention, June 19, 1980. The crucial point of this treaty is its universal value. Article 2 of this treaty, any law can be used to resolve the dispute as long as it has competency. This treaty also creates the jurisprudent that is incorporated in the private international law of the contract of the signature countries. Jurisdiction of the signature countries has to implement the laws even though it is not the law of the signature countries.

In reality, a dispute happened between Cambodian and France and it was brought to the France Court. In this case, if the Rome Convention indicates that Cambodian law is competent, the France Court has to base on Cambodian law to resolve such a dispute even though Cambodia is not the party to this convention. Article 3 of this convention also recognizes the freedom of parties to choose the law to implement the contract freely. The choosing must be clear and it also can be a result of the clause written by the parties. This article mentions clearly about characteristics of the international contract that allows the parties choose any laws whether it is the law of the signature countries or not, the law does not relate to the contract or the nationality of the parties. In addition, this article also allows the parties to choose the laws of various countries to implement over a contract.

²⁹ Nan Bunna: Doctor Dissertation on the Establishment of Cambodian International Private Law (Legal Dispute), presented and defended successfully in Phnom Penh on November 30, 2007, page 50.

³⁰ United Nations Convention on Contracts For the international Sale of Goods, 1980 (CISG)

³¹ Decree law- Article 6: The parties may exclude the application of this Convention or, subject to article 12: Derogate from or vary the effect of any of its provisions.

B. Basic of National Norm

According to article 22 of the decree 38, contract is the law of the parties. Narrowly interpreting, parties have to oblige what have been agreed in the contract; if not they will be punished.

Broadly interpreting, parties have choice to choose the law to be applied. This reflects about the self-determination of the parties to choose the law to be applied even though that law is not stated clearly. Article 3 of the Civil Code is stated more precisely than the article 22 of the decree 38. Obviously, it states about the self-determination of the individuals. However, the relationship of the international private is limited.

On the one side, the decree 38 allows the parties to alter the contract during the implementation of the obligations in the contract³². This means that parties can alter the law to resolve the dispute in the contract freely both before the dispute arising, after the arising of the dispute and during the arising of the dispute if parties agree to do so. The alter must be consistent with the public order and it is done freely by the parties. The agreement is not free and real if the defects happen³³. The agreement is not free and real if the defects happen. This defection will lead to void contract³⁴. The nullity refers to the cancellation of the contract that does not fulfill the validity principles required by law. The cancellation leads to retroactive effect. The alteration of the law results into many problems in the real practice because it is hard to determine the law and to find the common agreement of the parties.

Therefore, the two articles have to be collaborated to determine the above principle. However, there are more important principles of the decree 38 that are not included into the civil code. Hence, when the law on the implementation of the civil code in 2007 come into force, there will be questioned whether the decree 38 will be fully abrogated or not? The answer is that the decree 38 is fully abrogated except article 83 until article 88³⁵. This exception of article 83 until article 88 of the decree 38 is because the Civil Code does include the transportation contract.

³² Decree-law No: 38 on Contracts and Liability, 1989, article 22-1.

³³ D-article 7

³⁴ D-article 6

³⁵ Law on the Implementation of Civil Code signed by the King on May 31, 2011, article 79.

5 The prohibition on the principle of the implementation of the law chosen by parties

5.1 Notion of the public order

Until now there has no legal text defines the word public order yet. Public order includes laws and regulations which serve the social security, morality, health and well-being of the citizens within a country. The judge plays very important role to interpret the public order; however, up to now there has no any jurisprudent related to the notion of the public order yet. The judge may prohibit the freedom of the parties to choose law to implement in the contract if it affects the public order of Cambodia³⁶. This means that if the international law chosen by the parties against the competent of the court, judge may reject that law and replace it by its national law³⁷.

5.2 Police Law or Imperative Law

The Police Law was translated from France language, la loi de police. This word means that the law is imperative or the so-called Imperative Law³⁸. This law aims to protect the social institutions, politics and economics of a country³⁹. Some provisions are implemented forcefully and urgently while some are not. There are two references which determine the urgent and forceful implementation of a provision. First, the provision of a state that has political and economic purpose and it is necessary to govern the citizens living within that state⁴⁰. Second, the provision of the internal law aims to protect the assigned organization and social economic of a state.

As a principle, the imperative law administers all the problems that happen within a territorial integrity of a state. The factors that determine this laws are the resident of the person, place where the real estate locate or working place.

³⁶ Decree-law No: 38 on Contracts and Liability, 1989, article 5.

³⁷ This definition was given by the decision of France Supreme Court dated on July 15, 1963.

³⁸ Labor Law, 1997, article 13.

³⁹ PH. Francescakis, Quelques précisions sur les lois d'application immédiate, et leurs rapports avec les règles de conflit de loi, RCDIP 1966, p.1 et s.

⁴⁰ Yvon Loussouarn et Pierre Bourel, Précis Dalloz, International Private Law, seventh publication in 2001, p.7.

In the globalization process, international dispute settlement should be done base on the provision that is closely to the dispute. By the doing so, the solution may be more acceptable. Finding the closed law to the dispute requires the parties to use Bilateral Strategy of legal dispute. However, Cambodia used Unilateral Strategy instead. Until now Cambodia lacks of many legal instruments that are related to the legal disputes. Those include rule of the dispute and rule of material such as the Treaty on the International Sale of Good in 1980. We can observe that until now there is only the bilateral treaty between Cambodia and South Korea that has stated about the rule of dispute⁴¹. The problem is that whether such a bilateral treaty can be applied to all international private disputes or not. In general, bilateral treaty can be enforced toward the signature countries; hence it cannot be applied to the countries which are not the signature countries.

With regards to national laws, we notice that the rules of norm in civil and commercial case do not state clearly about the rule of dispute yet. The Civil Code of Cambodia in 2007, of course, play significant rule to facilitate and administer both the national and international relation; however, there has no any article mentions about the rule of dispute.

Cambodian laws do not recognize rule of legal dispute in the international contract yet even though it has happened in real practice. Judges usually use Cambodian laws to settle the problem because it is very challenge and difficult for them to use international laws, which are written in foreign languages.

Judges review whether the contract is done in Cambodia or not. If it is done and the dispute happens in Cambodia and it is sent to Cambodian court then they are likely to settle the problems based on its law.

⁴¹ Bilateral agreement between Cambodia and Republic of South Korea on the Protection and Promotion of Investment dated on July 19, 1999.

6 Conclusion

The Alternative Dispute Resolution (ADR) is categorized as negotiation, conciliation, mediation and arbitration. ADR is known as the dispute settlement outside the court. It is also quite popular for resolving the commercial disputes in Cambodia due to low costs, time saving, and confidential keeping.

Through the existing research and discovery, we have worked with arbitrators, commercial judges, judges, lawyers, workers including officers of the Ministry of Commerce and officers at the Ministry of Justice. Therefore, the received information is accurate and reliable. The establishment of the commercial court is desired by majority of the interviewees, 82, 73 %. By doing so, it is believed that the investors are more confident to invest in Cambodia and it also guarantees the confidentiality and builds trust among the stakeholders.

The commercial field has been progressing from day to day coincide with the development process of the nation. The present of enterprises, commercial companies and all kinds of businesses has been developing remarkably. Disputes are inevitable for companies and commercial enterprises. However, most of them are reluctant to settle the dispute through the existing court system. Although the commercial court does not exist, the commercial disputes settlement is not rejected by the existing court. On the other hand, it would be better for the government to create the commercial court for resolving the commercial disputes.

The recent Cambodian legal system is still considered as insufficient and ineffective to attract the potential investors. Even though there are many new laws have been recently adopted, the implementation of the existing laws is considered as an impediment and a big obstacle for developing the economy of Cambodia. Hence an effective legal implementation is a prerequisite condition that could build the trust among the stakeholders, especially the potential investors.

7 Recommendation

In respond to the globalization and in order to attract the investors, Cambodia has to update itself and take many points into consideration. In order to absorb the potential investors and boost economic grow; a few recommendations are given as follow:

The stakeholders, the Royal Government, the National Assembly, the Senate, Non-governmental organizations (NGOs), should push the drafting law relevant to the commercial sectors, Law on E-Commerce, the law on establishing the commercial court, law on the commercial contract, in respond to the shortage of formal measurement in managing the commercial sector. Furthermore, strengthening the law implementation is also needed in order to attract the investors and guarantee the rule of law.

Commercial court should be established in respond to the need of the commercial transaction and economic growth of Cambodia. Establishing this court will lead to the confidentiality of the investors for resolving the commercial disputes that might arise from the commercial transaction.

Long term and good investors want transparency and less bureaucracy in order to run their business within a country; therefore, anti-corruption in an effective way is viewed as the most powerful weapon to build the trust among the investors. Judges, prosecutors, lawyers and other stakeholders need more training in commercial sectors.

Accepting the jurisdiction of the foreign courts and laws is also needed in order to promote the international private law in respond to the globalization era and build the confidentiality with the foreign investors. By doing so, the foreign investors feel more confident to invest and do business in Cambodia and feel more secure about their interests.

The political willingness is the seriously defined factor that can be used solve all above problems in a sufficient, justice, and acceptable way. Hence politicians have to maximize the national interest with the participation of the public.

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LEADERSHIP DEVELOPMENT AND ITS EFFECT ON JOB PERFORMANCE IN CAMBODIA

Dr. TAN Saroeun⁴²

Abstract

The purpose of the study aims to research the empirical model of leadership development and its effects on the job performance in order to find some specific factors, coaching, training, participation, delegation, and empowering that was a positive relationship with job performance for all the management level to understand how to improve job performance in their organization.

The research methods were administered for sample size of 384 that survey from the Master program, students who are employed for some private, NGOs, and public sectors. After data screening, there are only 313 left by dividing into 157 for employer stratum, and 156 employees stratum. Before Multiple Regression analyzed, Cronbach Alpha was tested for items' reliability. Its result of $0.925 > 0.70$ is excellent. Moreover, the four assumptions were also tested to meet the conditions of Multiple regression. The results were found that there are five predicted variables, coaching, training, delegation, participation and empowering are positive relationship with job performance for employer stratum. For employee stratum, there are only four independent variables; including coaching, training, delegation, and empowering are positive relationship with job performance. Therefore, the implication of the study indicated the participation (employee stratum) is not significant due to time constraints, trust autocratic behavior, nature of work, geographical dispersion.

Key words: leadership development, and job performance improvement.

⁴² Deputy Director of Graduate School Studies, NUM

1

The Statement of Problem

Every organization, recruitment has always intended to need potential skilled employees to serve in his or her organization in order to best be achieved organizations' mission. Meaningful employee performance is a determinant to a successful organization. Moreover, it can be used as a strategy which organization finds other predictors which effect on successful job performance, including vision, mission, goals and objectives or operational actions of their task which is prepared as the work structure in organization from top management level to low level. To achieve the mission; there are not only employees skilled, but they have to work in a better management environment, that is leadership development; as Moradi (2009) remarked that to utilize employees' abilities is not feasible without existing effective leadership development for driving mechanism including employees' motivation, creating perspectives, improving and developing employees' abilities to achieve organizational objectives.

1.2

Background of Problem

Human are different from tools, they feel that will become the tools when they cannot make a decision in their job description, by waiting for only superiors to give an order to do something without recognizing their attainment. The impact of the employees' feeling always takes place on the skilled people who really feel disappointed with poor morale behavior in their job performance. This is the reason why the work performance orientation falls down due to without recognizing their value of achievement from managers or organization. Based on the reason; only traditional management is not suitable for satisfying the subordinates' needs of job performance, the management development has to put into artful actions instead of strict management.

To develop better management, the managers have to understand a lot of subordinates' knowledge, attitude, skills and their needs. Like Gary Yukl (2010) remarked in comparison of the management and leadership. Managers are related to working right (efficiency) and leaders are related to the right working (effectiveness). Another word, Managers value stability, order, and efficiency and Leaders value flexibility, innovation, and adaptation.

Cambodia society is always taking the concept of wide methods of culture of peace that continue from an ancient root of Buddhist's advices, a need lives in social cohesion, promote a culture of tolerance, non-violence in order to develop country for peace lives. Even though the traditional culture followed, Cambodia's culture has been influenced

by other cross-cultural components that slightly and slightly absorb into managerial culture, including the both the political doctrines, and private, public organizational sectors that are based largely on traditional centralization. This culture of such style causes the lack of flexibility in the right employee attitude on the right changeable dynamic social culture, i.e., Leadership development that contains in its elements to impact on subordinates performance improvement.

1.3 Research Questions

- Is there a significant relationship between leadership development and job performance ?

2 Objectives of Study

- To study the relationship between leadership development and job performance,
- To provide a conclusion and recommendation.

3 Hypothesis

The study stated a hypothesis is a plan for testing, formulating an analysis plan of sample data to accept or rejects the null hypothesis. Thus, the hypothesis tested need to state two types, the null hypothesis and the alternative hypothesis.

Null hypothesis: There is no positive relationship between leadership developments and job performance

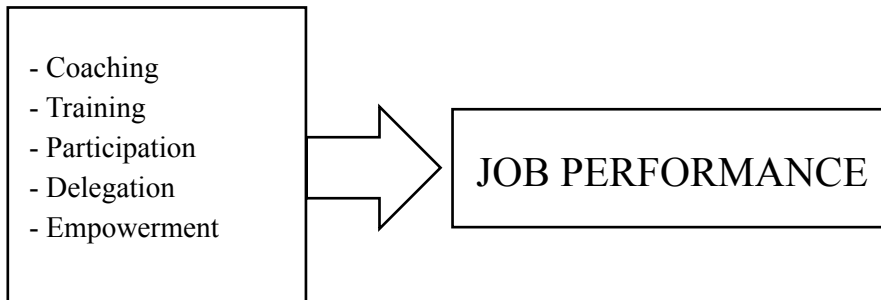
Alternative Hypothesis: There is a positive relationship between leadership development and job performance.

4 Literature Review

This sector reviewed has related literature relevant, the effects of leadership development on job performance. The literature review aimed the theoretical and conceptual framework as well as analysis of themes of the study under; leadership development, coaching, training and development, participation, empowerment, and delegation; impact on job performance. Moreover, to test the hypothesis in the literature review; each predictor variable, coaching, training, delegation, supporting, empowering are clarified the result to find a significant relationship with job performance or not.

4.1 Theoretical Framework

This framework is designed to find effective tools of the independent variables, leadership development; relate to dependent variables, employee performance. Sheri-Lynne, Parbudyal (2007) has chosen seven criteria and strategies to develop employees for the current business organizations. Each factor of leadership development; includes coaching, training development, delegation, participation, and empowering.



Sheri-Lynne, Parbudyal (2007)

4.2 Leadership

Leadership is individual ability which influences others to understand and accept about what is necessary to be done and how doing it, and the process of facilitating individual and collective efforts to achieve shared objectives. (Yukl, 2010)

Leadership is “the ability to step outside the culture... to start evolutionary change processes that are more adaptive.” (Schein, 1992, p. 2)

Another researcher Burn (1978, p. 18) indicated that “Leadership is exercised when persons... mobilize... institutional, political, psychological, and other resources so as to arouse, engage, and satisfy the motives of followers”.

4.3 Leadership Development and Job Performance

The study made by Gadot, (2007) highlighted that the relationship between leadership and performance was performed the both, indirect and direct, which provides the significance of developing leaders through leadership development programs. Referring to Yukl, (2002) noted that leadership development can be assigned to regular job responsibilities because it is an important area which is implemented in organization for increasing human capability and some other benefits like a competitive advantage achievement.

Another researcher, Ollrich, Gold Smith & Karter, (2005) remarked that leadership development needs, improvement of employees’ abilities to establish perspective, including coaching, training and development, leadership styles, job empowerment, and delegation; for motivating and directing of employee toward commitment achievement.

4.3.1 Coaching and Job Performance

Coaching is one part of leadership development which provides employees with techniques and methods to be able to perform their works by themselves at will.

Referring to Agarwal (2006) remarked that coaching relates treating employees as individuals in accomplishing both personal and organizational objectives. Thus, it is a vital activity in the development of employee. Another research made by Ritu (2006) addressed that coaching is a major source for enhancing the job performance. Moreover the employees are given more perception of a safe working environment which helps them to improve to improve their knowledge and skills. (Edmondson, 1999). For Pandora (1977) highlighted that besides, enhancing the job performance, developing feedback, coaching plays important role in accentuate self-confidence and is further supported by social cognitive theory, where is used as an instrument for enhancing self-efficacy beliefs.

H₁: There is a positive relationship between coaching and job performance.

4.3.2 Training and Job Performance

Styles of leadership are operated due to internal competence of an organization. According to Leibowitz (1981) and Gordon (1992) noted training and development is a long term process which is able to change behavior about how to do a particular task and its outcomes in an enhanced level of skill, knowledge and competency that are performing work effectively.

Another researcher, McNamara (2008) remarked that development and training relevant orientation to someone or the organization upgrades capability in performing their obligations at present as well as hereafter. Their abilities contribute the outcomes of performance to make them reach goals. (Herbert, John & Lee 2000)

H₂: There is a positive relationship between Training and job performance .

4.3.3 Delegation and Job Performance

Every employee needs others to recognize their achievements even though they attain less or big events. Consequently, many researchers provide the methods of management development, such as missionary work, empowering and so on.

Referring to Yukl and Fu (1999) remarked that delegation is a component of leadership that transfers the tasks of the task description to subordinates with strong commitment in self-determination with authority discretion without request earlier approval from the director.

Another researcher, Leanna (1986) addressed that delegation relates to individual decision making rather than joint-decision or group decision, i.e., delegation concentrates on autonomous decision making.

Other writers, Richard L, Robert C, Gordon J., (2009, p. 493) implied that delegation relates to an individual who is transferred empowering to exempt responsibility for completing specific projects by private decisions to go through making decisions more concerned autonomy with carrying out development responsibility than participation.

Another researcher, Yukl (2010) notified that the ranking provides an individual or group the responsibility and authority in a making decision. Moreover, the manager usually gives them the prior approval or not a prior approved final option before the making decision can be implemented.

H₃: There is a positive relationship between delegation and job performance..

4.3.4 Participation and Job Performance

To take responsibility in solving problem effectively, participation has played an important role in decision making the both, routine affaire and critical problem. Newstrom and Davis (2004) observed that participation can promote employees to agree to take duty for their team activities to achieve better quality of output because they feel more accepted and linked in the existing state of affairs. Turnover and absence may reduce when the employee feels that they are recognized, their accomplishment in better work space.

Several previous researches addressed that employee participation makes them dare making a self–decision, and they are flexible in issue solving and autonomy, especially enhance causally employee satisfaction. (Cordery et al., 1991; Harris, 1992; Scott et al., 2003)

Another researcher; James, Debra and Laurie (2006) and MD. Anowar Hossain Bhuiya (2010) reported that participation is a style that develop better management, it supplies the employees an opportunity to partake in their thoughts, opinion, especially meeting up some knowledge that lacks in other individual and have positive influences on employees’ attitudes toward the work, achieve business objective, select their work schedules to ensure workforce diversity in organizations.

H₄: There is a positive relationship between participation and job performance .

4.3.5 Empowerment and Job Performance

According to Blanchard commented that empowering style is used for one who possesses high competence and high loyalty. This accomplishment is playing a critical part in sharing specific explanation to other sources. The survey produced by Singh (2003) highlighted that the ranking has to guarantee that the subordinates are full of potential work to be executed, such as sciences, knowledge, attitude, power, rewards, and update information to transfer on autonomous task decision for efficient and efficient outcomes. Another author, Venkat Ratnam (2006) and Kanter (1983) emphasized that empowerment focuses on power and control development technique which is used to move in power exercise over task responsibility for outcome efforts.

H₅: There is a positive relationship between empowerment and job performance .

5 Significance of the study

After researching this topic, results are found some benefits for all layers of leaders and managers, as the following:

1. Leaders and Managers know clearly about the demands of leadership development that influence to employees' performance,
2. Leaders and Managers see more significances of coaching, training, participation, empowerment, delegation impact on employees' performance,
3. Leaders and Managers know clearly about his or her tasks, i.e. , they are not producers, instead of human resource constructors and delegates responsibility and authority for important activities of subsidiaries,
4. Delegate with specific agency to his or her subordinates as producers,
5. Leaders and Managers move bureaucratic constraints and unnecessary controls,
6. Leadership and Managers feel well as superiors because his or her subordinates will also.

6 Methodology

To clarify reliable data for collecting and analyzing them, the methodology of the study is used in three phases: how to calculate sample size and sampling, sources of data and procedure and technique of collection, and statistical tools.

6.1 Sample size and Sampling

The work is refined only the private and public sectors in Phnom Penh alone. According to Cochran (1963) defined the sample sizes which are specified when the population is unknown; the inquiry is determined only 385 and the respondents by using Stratified sampling which divided into two strata. The first stratum represents as top manager, middle managers, and low or Frontline managers and the second stratum is pure employees who are learning in semester 3 and 4 of the Master of Business Administration and Master of Finance programs at the National University of Management. The both strata respondents come from 110 (35%) from commercial banks and Services, 78 (25.30%) from commercial companies, 18 (05.80%) from NGOs, 38 (12.30%) from public organizations and 69 (21.60%) hidden the organizations' name.

6.2 Sources of Data and Procedure of Collection

The current survey gathers both information from primary and secondary roots. Primary data is compiled with the supporter of structured questionnaires. A piece of the master program classes is administered to obtain comprehensive data about the hypothesis development, including coaching, training, delegation, participation, and empowerment. Also, particular research instruments are given to collect information from the sample respondents; including, top management, middle management, low management, and employees; about the troubles confronted by them while have worked in their own governance.

Further, published and unpublished data from several secondary sources are collected for their role in this work. Information pertaining to this work is accumulated from different origins, such as textbooks from the library and internet or web pages, and some document policies from more or less private and NGOs organizations in Cambodia.

6.3 Statistical Tools

Statistical analysis Tools for the outcomes of the relationship between variables, Multiple Regression analysis is used by IBM, SPSS 21 whenever it is necessary, including test assumption, such as normality, homoscedasticity, multicollinearity, and outlier data screening. Moreover, IBM Amos 20 will be also facilitated in seeking some data that are abnormal (Mahalanobis) before Multiple Regression performing decision in data analysis.

7 Reliability

Due to data analysis used by Multiple Regression, so the linked scales at 7 levels were arranged for data aggregation. Cronbach's Alpha (α) which is a step of internal consistency is applied in the field to test for being reliable items of the questionnaire in research instruments for the both strata, employer and employee study.

Where $\alpha = \text{Reliability}$

$$\alpha = \frac{k}{k-1} \left[1 - \frac{\sum SD_i^2}{SD_t^2} \right]$$

$SD_i^2 = \text{Sum of the variance of individual item}$

$SD_t^2 = \text{variance of the total Mean}$

$K = \text{Number of items in the questionnaire}$

The outcomes of test Cronbach's Alpha are 0.925 with very high reliability in total 48 items of questionnaires. All items have strong to very strong total correlation, and alpha would go up over 0.70. Thus the researcher retained all of them. Separately, the result of the employee stratum of $0.934 > 0.70$ is excellent (high-stakes testing)⁴³. The result of the employer stratum of 0.929 is excellent (high-stakes testing)⁴⁴.

8 Data Analysis and its outcomes

The linkert scales at 7 levels (1. Very strongly disagree to 7 very strong agree) were arranged as research instrument for data collecting; the same is computed and tabulated keeping the objective of the study in mind. The interrelationship among data forms the basis for a Multiple Regression form that are used wherever required.

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Y = Job Performance in Cambodia

X1 = Coaching

X2 = Training and Development

X3 = Participation

X4 = Delegation

X5 = Empowerment

$$JPC = b_1 \text{Coaching} + b_2 \text{Training} + b_3 \text{Delegation} + b_4 \text{participation} + b_5 \text{Empowerment} + e$$

9 Test Assumption

To fill condition of the multiple regression data analysis, the sample size of 334 tested by four main statistical assumptions for multivariate data analysis is normality, homo- scedasticity, multicollinearity check and outlier data screening.

⁴³ George, D. & Mallery, P. (2003)

⁴⁴ ibid

9.1 Normality of Test Assumption

Regarding to violations of normality, the statistical tested operates, especially large sample, so the test should be evaluated on graphical techniques; the histogram, normality plot, and boxplot for confirmation of meeting the normality assumption.

9.1.1 Test Normality of Employer Stratum

The normal distribution test is administered in two parts, studentized residuals and standardized residuals.

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Studentized Residual	.063	157	.200*	.989	157	.232
Standardized Residual	.061	157	.200*	.989	157	.285

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The studentized and standardized residual test is conducted two phases: statistical and graphical approaches.

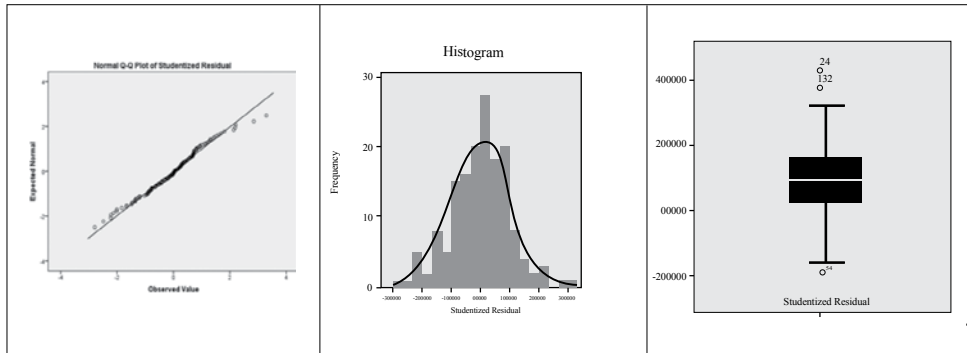
1. Statistical Approach

For a sample size of over 50 cases, the only Kolmogorov test administered. As the result, p value of 0.20 is larger than 0.05, so the null hypothesis is accepted. Totally, the both residuals are normally distributed in statistical approach.

2. Graphical Approach

The distribution of values for metric variable that compares with a normal curve is tested with normality plots, histograms, and boxplot. The first graph is the scatter plots, the spots of normality are very close to the straight-line. Thus, it is normally distributed. The second graph indicates the center of zero, and the line draws as bell curve (normality).

The last one is the boxplot, its medium draws almost at the center of the box. Hence, it is normally distributed.



9.1.2 Test of Normal Distribution of Employee Stratum

This test is not different from employer stratum. There are two approaches of test, statistical test and graphical approaches.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	.066	156	.098	.966	156	.001
Studentized Residual	.067	156	.087	.967	156	.001

a. Lilliefors Significance Correction

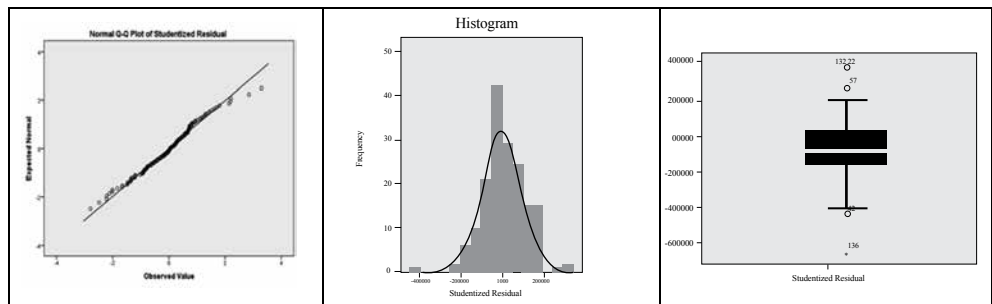
The same of the employer stratum residuals, the employee stratum normality is tested by two approaches, statistical, and graphical approaches with only Kolmogorov-Smirnov due to sample size over 50 cases.

1 .The statistical approach

The mathematical approach that indicates the both of p value are larger than .05, so null hypothesis are not rejected, the both residuals are normally distributed.

2. Graphical Approach

graphs shown that the shapes are normally distributed. Therefore, the two approaches are normally distributed. Totally, the model of variables is good enough to run the multiple regression data



9.2 Homoscedasticity

The both strata resulted the plots are closely the straight-line that show about using plots ZRESID against ZPRED. And histogram also shapes as the bell curve. Therefore, the predicted variables are related to the dependent variable⁴⁵.

9.3 Multicollinearity Check

Detecting the value of a Variable Inflation Factor (VIF) for each independent variable is operating multiple regressions by using the dependent variable, and done on all the remaining IVs by following the rules of thumb, as VIF is less than 5 ($VIF < 5$), and a tolerance is larger than .20 (tolerance $> .20$). (O'Brien R.M,2007)

Referring to the current multicollinearity test, the VIF is less than 4, and a tolerance is larger than 0.20. However, coaching and participation are not significant. i.e., $p > .05$ and $t\text{-value} < 2^{46}$. For solving this problem, outliers, data screening is a test.

⁴⁵ infra, p.53

⁴⁶ infra, p.54

9.4 Outlier Data Screening

This data screening method is used in SPSS and AMOS to find D^2 (Mahalanobis) to check the numbers of data that is abnormal data. The abnormal data are always appeared when $p1$ is less than 0.05⁴⁷. It is shown that some data numbers run out of the rating scales 1-7 and the IV replies are not consistent with DV's, it is truly abnormal and then checks them carefully. After removing out 17 data numbers from the list of data in SPSS, the effect of multiple regressions has changed closely casual model in test assumption by follow only 313 sample size.

10 Result of Data Analysis

The results of data analyzed are divided into two parts; one is frequency analysis and second is multiple regression analysis. The first part show about frequency; such as gender, work organization, position, work experience. Second part from six variables, five are the predictor variables (coaching, training, delegation participation, and empowerment) and one criterion variable (job performance in Cambodia). Moreover the process of the multiple regression analysis is operated into two strata, one is a employer stratum is represented as 157 managers and the employee stratum is represented as 156 employees in multiple regression result findings.

10.1 Frequency Data Analysis

Grounding to the findings leadership development in organizations. So the respondents of sample size for 313 are selected from the specific organizations where they are working for, such as 110 (35%) from Commercial Banks and Services, 78 (25.3%) from Commercial Companies, 18 (5.8%) from NGOs, 38 (12.3%) from public organizations and 64 (20.8%) no identified organizations' title. Moreover, the original sources also identify 252 local and 56 international organizations. To clarify their responding in the questionnaires, some other identification is noted through ages, gender, and position in their arrangements, education, and employment experience. The two results of strata frequency has shown below:

⁴⁷ infra, p.55

Variables		Employer Stratum		Employee Stratum	
		Frequency	Percent	Frequency	Percent
Ages	20-29	77.00	49.00	113	72.40
	30-39	72.00	45.90	40	25.60
	40-49	8.00	5.10	03	1.90
	Total	157	100	156	100
Gender	Male	112	71.30	98	62.80
	Female	45	28.7	58	37.20
	Total	157	100	156	100
Job Title	Top Manager	16	10.20	156	100
	Middle Manager	70	44.60		
	Low Manager	71	45.20		
	Total	157	100	156	100
Education	Bachelor	42	26.70	56	35.90
	Master	115	73.20	100	64.10
	Total	157	100	156	100
Work Experience	Below 5 years	46	29.30	91	58.30
	5 years	27	17.20	15	9.60
	Above 5 years	84	53.50	50	32.10
	Total	157	100	156	100

10.1.1 **Ages of the respondents**

Based on the result of employer stratum, 49% for ages of 20-29. This account is less than the employee stratum, 72.40%. But for 45.90% of the employer stratum are larger than 25.60% for the ages of employee stratum at 30-39. the ages of 40-49, 5.10% for employer stratum is still larger than the employees' ages, 1.90%. Therefore the position in the workplaces exactly related the ages of respondents.

10.1.2 **Gender**

The number of the male managers (71.30%) is larger than the female manager's (28.70%). As for the number of male employees (62.80%) is larger than female employees (37.20%).

10.1.3 **Job Title**

The numbers of the manager respondents include top manager for 10.20%, middle manager for 44.60% and low managers for 45.20%. For the employees are totally 156(100%).

10.1.4 **Education**

The bachelor level is 26.70%, and 73.20% master degree for manager stratum. Separately, 35.90% for bachelor degree, and 64.10% master degree employee stratum.

10.1.5 **Work Experience**

For the employer stratum, the manager who has work experience below 5 years is about 29.30%, at 5 years for 17.20%, and above 5 years for 53.50%. If we glance the employees' work experience, the result shows that 58.30% for below 5 years 9.60% for 5 years. and 32.10 for above 5 years.

10.2 **Result of Multiple Regressions**

Results shown that the multiple regressions of the both strata are possible to respond to the model of Summary, Anova, and Coefficient.

Model	Employers	Employees	Interpretations ⁴⁸
Multiple R	85.40%	89.30%	Strength relationship between the set of IVs and DV is large.
R Square	73.00%	79.70%	Correlation and the dependent variable explained by the assemblage of independent variables are large.
Adjust R	72.10%	79.10%	Arrangement a number of variables in the regression model.
F-test	81.62	118	The outcomes of the predictors are related to score in the population.

Coefficient				
Variables	Employee Stratum			Interpretation
	Beta	t-value	Sig.	
Coaching	.137	2.075	.040	Rejected
Training	.119	2.083	.039	Rejected
Participation	.132	2.457	.015	Rejected
Delegation	.180	2.544	.012	Rejected
Empowering	.287	5.107	.000	Rejected

⁴⁸ infra, pp.54-55

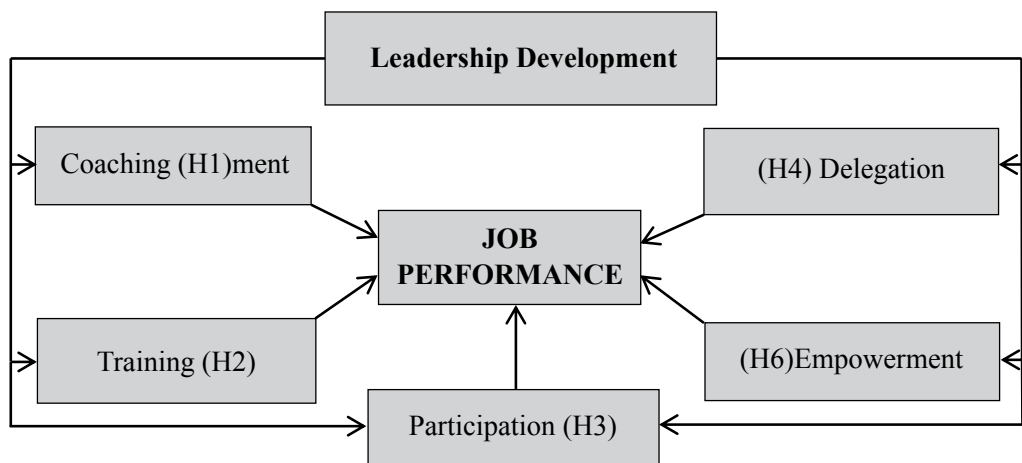
Variables	Employee Stratum			Interpretation
	Beta	t-value	Sig.	
Coaching	.109	2.046	.042	Rejected
Training	.151	2.772	.006	Rejected
Participation	-.045	-.540	.590	Accepted
Delegation	.168	2.563	.011	Rejected
Empowering	.485	7.780	.000	Rejected

10.3 Hypothesis Testing

After the data analyzed the result of the null hypothesis of each predictor variable has been tested $H_0: \beta = 0$ at $\alpha > 0.05$, $H_a: \beta \neq 0$ at $\alpha \leq 0$.

H_1 : Coaching and its effect on Job Performance

The data analysis result shows that $\beta = .137$, $t = 2.018 > 2$ at $p = .045 < .05$ for the employer stratum. As for the employee stratum result that $\beta = .109$, $t = 2.053 > 2$ at $p = .042 < .05$. The both strata are significant and positive relationship.



So the null hypotheses are rejected. As many previous researchers already studied, including Agarwal, (2006) highlighted that coaching relates handling staff as individual inattaining organizational performance measure. Therefore, coaching is a vital job for the employee growth, including resolving the both employee individual and organizational problem.

H₂: Training and its Effect on Job Performance

For the result of the second hypotheses are also significant because the employer stratum shows the result of $\beta = 0.119$, $t = 1.856 < 2$ at $p = .065 < .10$; and the employee stratum provides $\beta = 0.151$, $t = 2.053 > 2$ at $p = .015 < .05$. Therefore the null hypotheses are ruled out. These outcomes are consistent with Krietner (1995) noted that skill development is a central element in reaching the organization's mission, so training increases employee competencies in the acquisition of improved organizational performance between standards' goal and actual points of employment performance.

H₃: Participation and its effect on Job Performance

The result of statistical data for the employer stratum is a positive relationship due to $\beta = .132$, $t = 2.081$, at $p = .039 < .05$. So the null hypothesis is rejected. As other previous research, Newstrom and Davis, (2004), have observed that participation can promote employees to agree their job description for their team activities to achieve better quality of output because they feel more accepted and linked in the existing state of affairs. Turnover and absence may reduce when the employee feels that they are recognized, their accomplishment in better work space.

However the employee stratum is not significant because of $\beta = -.045$, $t = -.751$, at $p = .454 > .05$. Therefore the null hypothesis is accepted. Referring to the result, as defined by Yulk, (2010). He has addressed that the same condition which the participation in an organization do not process, including leadership behavior, not relevant skills, time constraint, nature of work, geographical dispersion, autocratic trusted subordinates and so on.

H₄: Delegation and its effect on Job Performance

For the third hypothesis (delegation) result $\beta = .180$, $t = 2.307 > 2$ at $p = .022 < .05$ for the employer stratum and $\beta = .168$, $t = 2.076 > 2$ at $p = .040 < .05$ for the employee stratum. These both strata results are significant. Thus the null hypotheses are not accepted. Standing in the both results, they are also consistent with some researchers like Yukl and Fu, 1999 remarked that delegation is a component of leadership that transfer the tasks of the task description to subordinates with strong commitment in self-determination with authority discretion without request earlier approval from the director.

H₅: Empowerment and its effect on Performance

Adverting of the effect of regression analysis, the empowerment is really effected on the employee performance. Because the employer stratum shows the result of $\beta = .287$, $t = 3.440 > 2$ at $p = .001 < .05$ and $\beta = .485$, $t = 6.201 > 2$ at $p = .000 < .05$ for the stratum of employee. Therefore, they do not only predict employee performance, but are likewise shown by some previous researchers, Conger and Kanungo (1988) and Menon's (2001) defined that empowerment is moving decision making authority for low grade performance for enhancing exercise discretion, autonomy, power and control execution in their jobs.

11 Implication of Study

The outcomes of the study found will be useful for the top leaders or managers of all organizations to understand the factors that drive the job performance improvement is coaching, training, participation, delegation, and empowering. Referring to the findings, the job performances that can be improved are closely related to these elements that act as the independent variables. Therefore, top managers have to understand these appearances. First, the coaching and training really make employees and employers increase more skillful on job performance improvement. Second, participation really helps solve, especially survival problems, the subordinates can provide ideas that the managers lack. On the other hand, participation also means recognizing and promotes the subordinates in job performance improvement. Third, delegation and empowering are the core needs of the skillful subordinates who need to work independently and selves-responsible for their job performance improvement.

However, one independent variable for employee stratum, participation is not positive relationship with job performance improvement. This result, finding causes high distant power culture in Cambodia, and also it wastes the time for employees to participate in job solution. As some researchers, Hales. (2000) indicated that the sources of idea opposite in the issues of management are the need employees in the group decision. As for Strauss (2006) also remarked that the participation do not process depending on some conditions, including individual behavior, not skill relevant, time limitation, nature of work, geographical dispersion, trusted subordinates for autocratic superior and so forth.

12 Limitation of Result Study

For the research paper prepared, though the research proposed plan most detail, the researchers administered encountered some restrictions as the following. First, the researcher limited by the time constraint of NUM research series policies. This challenge has impacted on the data collection techniques that are used for survey only managers and employees, working in the private sector and NGOs, organizations in Phnom Penh and other provinces surrounding, who are masters and bachelor undergraduate students at the National University of Management.

They come with different organizations, but the same types; such as 110 (35%) from commercial banks and Services, 78 (25.30%) from commercial companies, 18 (05.80%) from NGOs, 38 (12.30%) from public organizations and 69 (21.60%) hidden the organizations.

13 Conclusion

Standing for the rule of multiple regression data analyzed, a few assumptions had to conduct; including homoscedasticity, multicollinearity, and outlier data screening.

The outcomes of statistical data analysis remarked that in the employer strata; there are 5 predictor variables such as coaching, training, participation, delegation and empowerment. Separately, employee strata; there are only 4 independent variables, including coaching, training, delegation, and empowering; are positive and significant relationship with dependent variable, organizational performance. As for participating is a negative and insignificant relationship.

Referring to the empirical study; all independent variables, coaching, training, participation, delegation, and empowering are positive relationship with job performance improvement as shown in reviewing the literature. Most of the previous researchers provided the evidences that prove each independent variable statement is a positive relationship with job performance improving.

Totally, the research outcomes are indicated successfully that coaching, training, participation, delegation, empowerment play vital roles for the top managers or leaders to drive the organizational mechanism in goal attainment. However, one element of the leadership development, participation for employee stratum is still considered for some conditions to not allow employees to participate in group decision making because of time constraining, different skills, individual behavior, and the nature of work issues and so on.

14 Suggestions

After implication of the present study; there is one predictor variable, participation is not a significant relationship with job performance. Thus, some suggestions are made for only employee stratum.

- To develop subordinates more skills about the steps in the decision making such as alternatives developed and how to evaluate alternatives to refine the best alternative before putting it into an action and the last evaluation for a making decision.
- To allow subordinates to participate in the decision making of critical problem, including strategic planning, and other problems that relevant their job description. It makes them improve in a making decision on their skills.
- Abolish the bureaucratic constraint and unnecessary controls to reduce procedures and power concentration on one or a small group.

15 Future Research

This paper is considered as a model for other researchers, especially the students and employers who intend to research about leadership development to develop their organizations or earn their degree for school. The future research will concentrate on a type of organizational line, such as Banks in Cambodia, Garment Industries in Phnom Penh, Government offices, private or Public Universities in Cambodia, Hotels...in Siem Riep and so on ; to find clearly about the model of the leadership development as predictor variables, that remains significant or insignificant relationship with job performance improvement.

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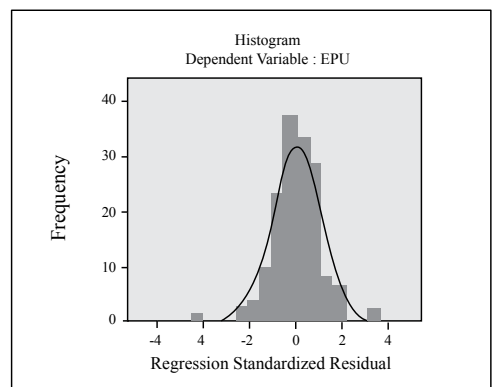
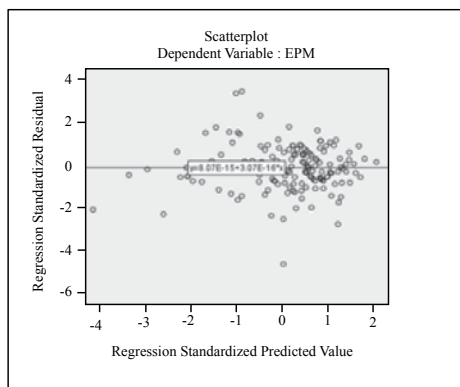
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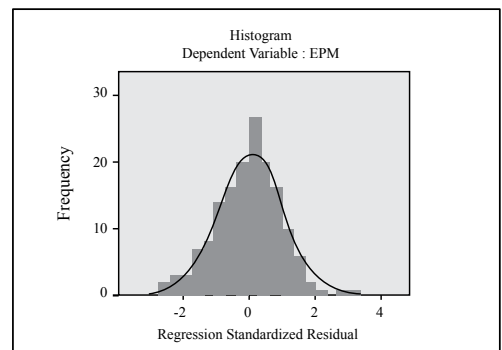
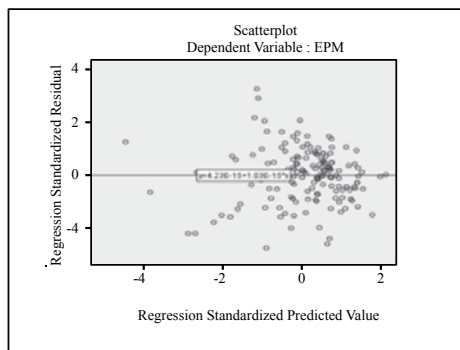
Appendix A

1. Test Homoscedasticity

a. Employee Stratum



b. Employer Stratum



2. Multicollinearity Check

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.878	.213		4.117	.000		
	Coaching	.055	.055	.052	.984	.326	.425	2.352
	Training	.187	.048	.192	3.927	.000	.505	1.979
	Participation	.006	.047	.007	.135	.893	.406	2.463
	Delegation	.265	.069	.267	3.834	.000	.249	4.022
	Supporting	.030	.069	.034	.437	.663	.204	4.893
	Empowerment	.320	.071	.330	4.502	.000	.226	4.432

a. Dependent Variable: EPM

3. Outlier data screening

Observation number	Mahalanobis d-squared	p1	p2
77	51.233	.000	.000
304	27.488	.000	.000
264	17.725	.013	.000
35	15.678	.028	.000
106	15.497	.030	.000
94	15.159	.034	.000
249	14.782	.039	.000
10	14.589	.042	.000

Appendix B

A. Result of Multiple Regression, Employer Stratum

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854 ^a	.730	.721	.50554
a. Predictors: (Constant), Empowerment, Participation, Training, Coaching, Delegation				
b. Dependent Variable: EPM				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	104.302	5	20.860	81.623	.000b
	Residual	38.591	151	.256		
	Total	142.893	156	3.927	.000	

a. Dependent Variable: EPM

b. Predictors: (Constant), Empowerment, Participation, Training, Coaching, Delegation

B. Result of Multiple Regression , Employee Stratum

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.893 ^a	.797	.791	.44340
a. Predictors: (Constant), Empowerment, Coaching, Training, Participation, Delegation				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	116.008	5	23.202	118.009	.000 ^b
	Residual	29.491	150	.197		
	Total	145.499	155			

a. Dependent Variable: EPM

b. Predictors: (Constant), Empowerment, Coaching, Training, Participation, Delegation

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.388	.228		1.697	.092		
	Coaching	.120	.059	.109	2.046	.042	.477	2.096
	Training	.147	.053	.167	2.772	.006	.373	2.681
	Participation	-.026	.048	-.032	-.540	.590	.379	2.636
	Delegation	.190	.074	.199	2.563	.011	.224	4.454
	Empowerment	.517	.066	.535	7.780	.000	.286	3.499

a. Dependent Variable: EPM

The Teaching toward Students' Active Learning in National University of Management (NUM), Phnom Penh, Cambodia

Dr. HENG Sopheap⁴⁹ and Dr. UNG Veasna⁵⁰

Abstract

The paper is a descriptive survey which sought to ascertain the attitude of students towards teaching practice. The purpose of this study was to determine the effectiveness of various teaching methods used for teaching students at undergraduate level. One thousand and five hundred undergraduate students studying in 9 major of Management, Marketing, Tourism and hospitality, Economy, Accounting, Finance and Banking, Information Technology, Law, English, were interviewed about their perceptions of best and effective teaching methods and the reason for that. Data was analyzed using frequency, means, cross-table. The findings revealed that all the methods for improving teaching practice would be adopted.

Keywords: Active learning, students' perception on teaching, National University of Management (NUM), Phnom Penh, Cambodia.

⁴⁹ Dr. HENG Sopheap is Acting dean of Tourism and Hospitality Faculty, National University of Management, Phnom Penh, Cambodia.
E-mail: sopheapheng@gmail.com

⁵⁰ Dr. UNG Veasna is Chair of Tourism and Hospitality Faculty, National University of Management, Phnom Penh, Cambodia.
E-mail: ung_veasna@yahoo.com

1 Introduction

In globalization, sustainable development in all human society can not separate from potential education. Proper education also contribute to reduce abject mass poverty in developing nations (Nwanekezi et al., 2011). Nelson Mandela once said, “Education is the most powerful weapon which you can use to change the world.” it is means education is the most powerful weapon can change ourselves the world (UNICEF, 2013). Actually, education fulfill of quality and innovation lead to create best future bright for human, new generation and a bridge to success of development of country, whole world, and increasing living standard of people. Assessment of education quality emphasizes on the factor of teaching and learning which Delaney et al., (2010) pointed out that relationship of both has been written more in recent year and Sajjad also compared both of them as two sides of a coin. As mentioned by Biggs, (2003), teaching and learning can not isolate from level of classroom, department and institution. All aspects of teaching and assessment are tuned to support high level learning in an integrated system. On the other hand, in a poor system, in which the components are not necessarily integrated and tuned to support learning, only ‘academic’ students spontaneously use higher-order learning processes.

Over the past decade, active learning in academic courses have been promoting by researchers and instructors around the world (*Pundak and Herscovitz, 2009*), and more lecturers and researchers try to look for good key or methods to teach his/her students and also want to attract students with more active learning. As international trends in education and also approach to success the study of students is a change from the traditional “teacher centred” approach to a “student centred” (Kennedy, et al.), and this era of new approach will cause educational institutes to rethink the way that lecturers teach and assess their teaching toward the goal of realistic appraisal of student learning of this shift focus (<http://www.usc.edu/programs/cet/resources/>)

Objectives of the study to find out the various teaching methods used by NUM teachers to teach graduate students in different faculty. To explore the opinion of students about the teaching method they perceived as the most interesting and best teaching method. And to provide suggestions for improving quality of teaching in the light of students perception and use of ratings

2 Literature Review

Due to Kumar & Ahmad, (2007-2008) ‘education’ is utilized in three senses: knowledge, subject and a process. We do not call it education, when a person achieves degree up to certain level. As it has been derived from two Latin words Educare (Educere) and Educatum, “Education” is in English term. “Educare” means to train or mould. It again means to bring up or to lead out or to draw out, propulsion from inward to outward. The term “Educatum” denotes the act of teaching. It throws light on the principles and practice of teaching.

The roles and responsibilities of college and university teachers (faculty members) are closely tied to the central functions of higher education. Broadly defined, faculty fulfills three primary functions at university: teaching, research, and service (Fairweather, 1996).

Schools and colleges exist has gotten more focused as the years progressed, and drawing in and holding students has gotten basic for these schools to survive and succeed in nature. The benefits of this concentrate on the teacher have been broadly discussed among staff and administrators across the land (Paswan & Young, 2002) and Ukeje (1988) also noted that lecturer is playing the role of holding the key to the door while education unlocks the door to modernization/sustainable development. But element of teachers really can not separate from teaching quality and they needs to becomes ever more skillful, innovation and experiences in their ability to evaluate teaching methods and develop teaching responses and that can be more and more effective under different situations. Lecturers are play essential role for spreading good knowledge and experiences to students and is also vital factor for ensuring sustainable educational institutes and for meeting the students and stakeholders’ needs. Internationalized become-studies, and higher education is being asked to contribute to new areas (such as innovation, civic and regional development) in order to produce an appropriately skilled workforce to meet the challenges of the 21st century, and in light of contextual shifts in the higher education atmosphere require quality teaching (Hénard,undate). Then again, for teachers and students in the professions, evaluation of learning tackles an alternate measurement regarding guaranteeing that graduates are able, and hence safe, experts (Edwards, et al., 2001) and interaction between teacher and student has been regard as key learning situation Alobietdat et al., (2010). So we can compare teacher and student as water and fish. With providing you with innovative ideas and strategies to integrate into your teaching needs method of active learning and teaching will be dipped into and referred to regularly rather than simply read and shelved (The Partnership Management Board, 2000).

Moreover, quality teacher is one who has a positive effect on student learning and development through a combination of content mastery, command of a broad set of pedagogic skills, and communications/interpersonal skills (Hightower et al., 2011), and it is life-long learners (live is not late to learn) in their subject areas, teach with commitment, and are reflective upon their teaching practice. They transfer knowledge of their subject matter and the learning process through good communication, diagnostic skills, understanding of different learning styles and cultural influences, knowledge about student development, and the ability to marshal a broad array of techniques to meet student needs. They set high expectations and support students in achieving them. They establish an environment conducive to learning, and leverage available resources outside as well as inside the classroom.

It become vital that university try to look for new and creative methods to engage students to active learning. As we known that we are in an emerging era of “classrooms without walls” and the academic paradigm change from teching to learning. But active learning of studens can not separate from methods of teaching. More teaching methods of with different style and tactics of all lecturers teach their students to learn active. According to Carpenter (2006), effectiveness of teaching methods favor constructivist, active learning methods are the results of recent studies. And he also mentioned that method of the lecture/discussion teaching method was the most preferred among students who desire to be somewhat active learners, engaging in discussion rather than passively listening to a lecture. Due to (Pundak & et al.,2009), work groups, encourage student participation in classes, learn by themselves topics from the syllabus, assignments, students’ understanding of the basis concepts of the course, identify students’ learning difficulties and develop appropriate teaching methods lead to be the active learning approach. And clear instruction and active learning can not be absent of classroom technology (e.g., accessing electronic library through laptop via wireless network anywhere and anytime, retrieving and placing learning materials on Black Board, etc) (Manochehri & Sharif, 2010 & www.use.edu/programs/cet/resources/), and this technology contribute to improve of pedagogy and student-teacher interactions (Hénard & Chen (2004). Further, method of group-oriented discussion shows evident that team learning and student-led discussions lead to produce favorable student performance outcomes, foster greater participation, self confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hochevar, 2005) that cited in Carpenter (2006). In addition, Curran & Rosen (2006) researched that instructor, course topic, course execution, and classroom [physical environment] were significant in student attitudes toward the classes. As confirmed by (Sajjad, undate) showed that effective teaching methods in higher education (such as lecture method,

group discussion, individual presentation, assignment, seminars, workshops, conferences, brain storming, role play, and case study) influences on student's interesting. Meanwhile, Biggs, (2003) noted that problem-based learning (PBL), constructive alignment, and curriculum design and management are also a very good example of aligned teaching and active learning. For students achievement involves the teacher's personality and style of interaction with the students (Shah, 2009). Moreover, methods of teaching (such as learning/value, enthusiasm, organization, group interaction, individual rapport, breadth of coverage, examination/grading, assignments, and workload/difficulty) affect on the student's active learning (Gordon, undate).

Active learning has been an issue of debate in tertiary level education (Mgeni, 2013), student performance is inconclusive, much evidence does recognize as a deterrent to students' active learning. There is also overwhelming agreement that the key to effective instruction and student learning is engaging students in active learning. Indeed, successful teaching and learning in classes involves addressing many of the requirements of good practice in teaching relevant to all students learning. These include, among others, the ability to motivate students, to actively engage students in learning, to manage class room disruptions, being systematic and organized (Revell & Wainwright, 2009).

Moreover, Some of the major characteristics associated with active learning strategies include: 1. Students are involved in more than passive listening, 2. Students are engaged in activities (e.g., reading, discussing, writing), 3. There is less emphasis placed on information transmission and greater, emphasis placed on developing student skills, 4. There is greater emphasis placed on the exploration of attitudes and values, 5. Student motivation is increased (especially for adult learners), 6. Students can receive immediate feedback from their instructor, 7. Students are involved in higher order thinking (analysis, synthesis, evaluation) (Bonwell, undate)

3 History and Environment of the National University of Management (NUM)

3.1 History of the Faculty of Business

The National University of Management (**NUM**) of the Royal Cambodian Government traces its origin to the Institute of Economic founded in 1983 in cooperation with the University of Economic in Hanoi, Vietnam; and in 1989, new name was also created as The Economic Science Institute. Since the opening up of Cambodia to the international community and the signing of the Paris Peace Accord in 1991, both the curriculum and the language policy of the Economic Sciences Institute underwent significant change. In 1993, for example, a major policy decision developed over the pursuit of the more traditional French system of higher education and language, or one more consistent with an international standard and the use of the English language (Davis, 1996).

Davis (1996) mentioned the Economic Sciences Institute was renamed the Faculty of Business (FOB). During of the times, the United States Agency for International Development (USAID) has provided grants to two U.S. institutions to assist the FOB in experimenting with the credit system, training teachers in English, modernizing its curriculum, and strengthening its teaching staff. The U.S. institutions currently under contract with USAID to work with the FOB include the University of San Francisco in the area of legal education, and Georgetown University in the area of small business training and strengthening of the teaching faculty.

Development activities at the FOB during the past several years have led to the introduction of English as a second language and the establishment of subject matter content designed to support Cambodia's overall transition to a market economy. The changes initiated at the FOB have taken on added significance with the recent award of Most Favored Nation status by the Government of the United States and the anticipated membership of Cambodia in the Association of Southeast Asian Nations (ASEAN). After that, FOB was renamed as National Institute of Management (NIM) in 1998, and in 2004, popular brand name of NIM in Cambodia was changed to new one as National University of Management (NUM) in circumstances of grow of high education institute in Cambodia, and last, NUM became an administrative public sector in 2005.

At the time of the current report the National University of Management teaching staff census was 584 and administrative staff census 73, respectively. Therefore, the effective teaching and administrative staff is estimated at thirty and with a student enrollment of nearly 20000.

Current student enrollment for the BBA degree program includes 9381 males and 8020 females of 17401 student or 54 percent and 41 percent, respectively. Enrollment by year and gender is distributed as follows: Year I enrollment is 5032 students including 2620 men and women 2412; Year II enrollment is 4646 student including 2499 men and 2148 women; Year III enrollment is 4318 students including 2384 men and 1934 women; and Year IV enrollment is 3404 students including 1878 men and 1526 women. For the MBA degree program enrollment 1364 students include 1004 men and 360 women. Enrollment by year and gender is distributed as follows: Year I enrollment is 533 students including 383 men and 150 women; Year II enrollment is 831 student including 621 men and 210 women. Moreover, Doctoral degree program enrollment 11 students include 1 women and 10 men (source: academic office of NUM, 2014).

3.2 The Environment of the National University of Management (NUM)

The environment within which the National University of Management carries out its mission is a complex one. While the National University of Management is historically a constituent faculty of the Royal University of Phnom Penh, it has operated for the past several years as an autonomous body. The National University of Management became an administrative public sector, report directly to the Ministry of Education, Youth and Sports.

More than two decades of conflict and isolation have created economic disarray in Cambodia. Today, Cambodia is one of the developing countries in the world with an estimated Gross Domestic Product per capital of over \$1000. The government's attempts at societal and economic rehabilitation are therefore critical for strengthening economic development as well as developing human capital and improving the future social welfare of the Cambodian people.

Today, Cambodia struggles to regain an informed electorate and to re-establish a modern organizational and institutional infrastructure. The National University of Management is positioned to play a key role in the government's efforts to develop the skill of the future civil service and private sector workers. Reestablishing its educational institutions and enabling its citizens to attend school is cited as a top priority. The adopted Cambodia

constitution maintains that twelve years of education is compulsory for all children. While this goal is still to be accomplished, it is part of the long-term development plan of the government and is the starting point in developing human resource capability in Cambodia.

4 Research Methodology

4.1 Development of Instrument and Sample of Study, and Survey Duration

Eight departments were selected through purposive sampling from the Faculty of Tourism and Hospitality, Management and Marketing, Economic, Accounting and Finance, Information Technology, Law, School of Post Graduate. And students studying at graduate level from five time of study were selected through judgment sampling to seek their opinion about the most effective teaching methods (as perceived by them) used by their teachers.

A 7-point numerical type scale with 7 (extremely agree); 6 (strongly agree); 5 (agree); 4 questionnaire, was developed to measure students' attitude toward teaching assessment, in which questionnaires borrowed from researcher Gordon (undate). The questionnaire consisted of two parts the first part consist of the demographic information, the second part consist thirty six items. Relevant information about student perceptions, and socio-demographics in National University of Management (NUM) is obtained by means of a survey conducted to collect data for the analysis. A survey questionnaire is designed and distributed randomly to target respondents, who come to study regularly, like chairman of each class, in NUM, Phnom Penh, Cambodia. Judgment non-probability sampling was conducted by researcher. The survey was handed out directly to undergraduate and post-graduate students through volunteer students for approximately two months, , starting from April to May 2013. Due to the fact that no incentive was offered to the respondents, their decision participating in the survey was of pure interest.

4.2 Analytical Techniques

All data collected are fed into statistical packages, in particular the Statistical Package for the Social Sciences (SPSS 20) for analysis. The statistical analysis of data includes descriptive statistics (frequency, percentage, and cross-table) on social demographic questions and average, standard deviation on likert-scale questions, and independent t-test and ANNOVA analysis.

5 Data Analysis

5.1 Profile of NUM students

The profile of respondents shown in Table 1. Of the 1550 respondents 48% were male and 52% female, and the sample also reveals that 8.5% of the respondents are bachelor degree, followed by master degree (91.5%), and 37.5% of respondents study in second year, followed by 31.1%; 20.1% and 12.2% in first, third and fourth year respectively. Moreover, major of finance and banking is 32%, followed by major of management 19.1%; accounting 18.7%, tourism 7.7%, economic 6.2%, marketing 5.7%, law 4.3%, information technology 4.1% and English 2.1%, respectively, Involving the study time of respondents, 27.8% of respondents were study at 2pm to 5pm, followed by 27.5%; 18.3%; 17.8%; and 7.7% study at 10.30am to 1.30pm; at 7am to 10am; at 5.30pm to 8.30pm; and Saturday to Sunday, respectively. With respect to students' occupation, the majority of the respondents seem to be unemployment (35.8%), followed by students in another universities (33.6%), company employees (13.8%), part-time works (9.4%), civil servant (3%), organization staffs (2.7%), own business (2.3%), and other (3.8%) respectively.

Table 1. Cross-tabulation of Accessible to students * Year of Study

			Year of Study				Total
Accessible to students	Extremely Disagree	Count	years1	years2	years3	years4	
		% within 29. Accessible to students	8	7	2	4	21
		% within Year of Study	38.1%	33.3%	9.5%	19.0%	100.0%
		% of Total	1.7%	1.2%	0.6%	2.1%	1.4%
	Very Disagree	Count	0.5%	0.5%	0.1%	0.3%	1.4%
		% within 29. Accessible to students	5	12	3	9	29
		% within Year of Study	17.2%	41.4%	10.3%	31.0%	100.0%
		% of Total	0.3%	0.8%	0.2%	0.6%	1.9%
	Slightly	Count	33	42	27	19	121
	Disagree	% within 29. Accessible to students	27.3%	34.7%	22.3%	15.7%	100.0%
		% within Year of Study	7.1%	7.2%	8.7%	10.1%	7.8%
		% of Total	2.1%	2.7%	1.7%	1.2%	7.8%
	Natural	Count	151	149	102	70	472
		% within 29. Accessible to students	32.0%	31.6%	21.6%	14.8%	100.0%
		% within Year of Study	32.3%	25.6%	32.7%	37.0%	30.5%
		% of Total	9.7%	9.6%	6.6%	4.5%	30.5%

	Slightly agree	Count	149	200	119	58	526
		% within 29.Accessible to students	28.3%	38.0%	22.6%	11.0%	100.0%
		% within Year of Study	31.9%	34.4%	38.1%	30.7%	33.9%
		% of Total	9.6%	12.9%	7.7%	3.7%	33.9%
	Very agree	% within 29.Accessible to students	31.3%	44.7%	16.2%	7.9%	100.0%
		% within Year of Study	19.5%	22.3%	15.1%	12.2%	18.8%
		% of Total	5.9%	8.4%	3.0%	1.5%	18.8%
	Extremely agree	Count	30	42	12	6	90
		% within 29.Accessible to students	33.3%	46.7%	13.3%	6.7%	100.0%
		% within Year of Study	6.4%	7.2%	3.8%	3.2%	5.8%
		% of Total	1.9%	2.7%	0.8%	0.4%	5.8%
	Total	Count	467	582	312	189	1550
		% within 29.Accessible to students	30.1%	37.5%	20.1%	12.2%	100.0%
		% within Year of Study	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	30.1%	37.5%	20.1%	12.2%	100.0%

Table 2: Mean score

Criteria	N	Mean	Std. Deviation
Learned something valuable	1550	5.098	1.206
Increased subject interest	1550	4.948	1.072
Learned/understood subject matter	1550	4.953	1.060
Overall course rating Enthusiasm of Instructor	1550	4.962	1.110
<i>Learning/Value</i>		4.990	
Enthusiastic about teaching	1550	5.164	1.129
Dynamic & energetic	1550	4.750	1.130
Teaching style held interest	1550	5.074	1.112
Overall instructor rating Course Organization	1550	4.968	1.090
<i>Enthusiasm of Instructor</i>		4.989	
Instructor explanations clear	1550	5.206	1.184
Course materials prepared & clear	1550	5.221	1.153
Objectives stated & pursued	1550	4.968	2.270
Lectures are (highly) qualified	1550	5.212	1.141
Instructor's professional and neat in appearance	1550	5.443	1.116
<i>Course Organization</i>		5.210	
Encouraged class discussion	1550	5.051	1.298

Students shared ideas/knowledge	1550	5.167	1.779
Encouraged question & answers	1550	5.216	1.120
Encouraged expression of ideas Individual Rapport	1550	5.378	1.911
<i>Examination/Grading</i>		5.239	
Reading/texts valuable	1550	5.036	1.229
Added to course understanding	1550	5.162	1.214
Case study	1550	4.717	1.199
Trip Work for students	1550	4.470	1.678
<i>Assignments</i>		4.846	
Come to teach on time	1550	5.190	1.325
Leave class on time	1550	5.177	1.200
Instructor presentation for whole semester	1550	4.914	1.259
<i>Participation</i>		5.093	

Table 2 reports the average of each attribute score. Raw scores for the perceived level of students on teaching method assessment is on the seven-point scale for attributes, which are considered to be agree to NUM student. For each of the attributes, the perceived performance scores is calculated. The results reported in Table 2 also can be summarized as follows. First, NUM student's perception is the highest for the dimension of *examination/grading*, which suggests that examination feedback valuable, evaluation methods fair/appropriate, exams emphasized course content, and exams restriction. The second refers to dimension of *course organization*, which focus on instructor explanations clear, course materials prepared & clear, objectives stated & pursued, lectures are (highly) qualified, and instructor's professional and neat in appearance. Third is dimension of group interaction, in which emphasize on encouraged class discussion, students shared ideas/knowledge, encouraged question & answers, and encouraged expression of ideas

individual rapport. Fourth, participation dimension has come to teach on time, leave class on time, and instructor presentation for whole semester. Fifth, *learning/value* dimension, which suggest that learned something valuable, increased subject interest, learned/understood subject matter. Finally, another dimensions such as enthusiasm of instructor (enthusiastic about teaching, dynamic & energetic, teaching style held interest, and overall instructor rating course organization) ; individual rapport (friendly towards students, welcomed seeking help/advise, interested in individual student, and accessible to students) ; breadth of coverage (contrasted implications, gave background of ideas & concepts, gave different points of view, and discussed current developments); and assignments (reading/texts valuable, added to course understanding, case study , and trip work for students, are also contribute the effective teaching toward active learning of NUM students. See mean score of each item in appendix 1

5.2 Reliability Check

Internal consistency for the scores on the scale and its sub-scales was estimated using Cronbach's coefficient alpha procedure. In this study, the coefficient reliabilities per scale were as follows: learning/value, = 0.805; the Enthusiasm, = 0.787; the Organization, = 0.714; group interaction, = 0.708; individual rapport = 0.742; the breadth of coverage, = 0.732; examination/grading, = 0.850; assignments, = 0.804 and participation, = 0.763. Rely on estimated reliability coefficients, it is apparent that the all dimensions are good reliable instrument.

6 Conclusion and Limitation

In era of unlimited technology and educational challenges for quality standard, one of the major goals of proper education is to promote students' active learning as a way to improve students' conceptual understanding, thinking skills, creative, and innovation. Although, most lecturers in higher education still adhere to traditional teaching methods toward active learning. The first step in order to integrate innovation into teachers' instruction is to reveal their attitudes towards such innovations. In this research we identified and characterized ninth domains in which it was possible to distinguish different attitudes towards active learning and constructed an attitude questionnaire based on these domains. This questionnaire was developed on the basis of the experience of learning of students and interviews with them involving the teaching methods of NUM lecturers.

NUM instructors should show real evident on examination feedback valuable, evaluation methods fair/appropriate, exams emphasized course content, and exams restriction. And instructors should have explanations clear, course materials prepared & clear, objectives stated & pursued, neat in appearance. NUM should select instructor's (highly) qualified, and professional. For active learning of NUM's student, lecturers should emphasize on encouraged class discussion, students shared ideas/knowledge, encouraged question & answers, and encouraged expression of ideas individual rapport. Moreover, instructors should has come to teach on time, leave class on time, and instructor presentation for whole semester.

Lecturers should provide their students with learned something valuable, increased subject interest, learned/understood subject matter. In addition, teachers should focus on enthusiastic about teaching, dynamic & energetic, teaching style, friendly towards students, welcomed seeking help/advise, interested in individual student, accessible to students, contrasted implications, giving background of ideas & concepts, giving different points of view, and discussed current developments). Finally, NUM's instructors should offer reading/texts valuable, added to course understanding, case study , and trip work for students in which contribute the effective teaching toward active learning of NUM students.

The results of independent t-test, it was evident that both MBA and BBA students share not the same feelings on enthusiastic about teaching; encouraged class discussion; and encouraged expression of ideas. Result of ANNOVA values, there are no significant different on *participation of instructor* on the effective teaching method as influence by time of study and there are significant different on *examination restriction of instructor* on the effective teaching method as influenced by major.

There were a number of limitations associated with this study. First, the data collected was self reported by students toward their instructor's teaching. Therefore, the reliability of the survey data is dependent on the students' honesty and completeness of their responses. Second, as the survey was distributed through each class chairperson and then guide them to re-distribute to his/her class members, it was limited to the students' willingness to take the initiative to read the long-questionnaire and to take the time to complete the survey. Third, there was virtually no incentive for the students to participate in this survey unless they were highly interested in such a line of research. Fourth, fine hard to access update articles involved in this study.

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Appendix 1

Learned something valuable					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	17	1.1	1.1	1.1
	Very Disagree	19	1.2	1.2	2.3
	Slightly Disagree	81	5.2	5.2	7.5
	Natural	304	19.6	19.6	27.2
	<i>Slighly agree</i>	610	39.4	39.4	66.5
	Very agree	297	19.2	19.2	85.7
	Extremely agree	221	14.3	14.3	99.9
	Total	1550	100.0	100.0	

Increased subject interest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	9	.6	.6	.6
	Very Disagree	12	.8	.8	1.4
	Slightly Disagree	92	5.9	5.9	7.3
	Natural	381	24.6	24.6	31.9
	Slightly agree	615	39.7	39.7	71.5
	Very agree	326	21.0	21.0	92.6
	Extremely agree	115	7.4	7.4	100.0
	Total	1550	100.0	100.0	

Learned/understood subject matter					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	7	.5	.5	.5
	Very Disagree	9	.6	.6	1.0
	Slightly Disagree	88	5.7	5.7	6.7
	Natural	409	26.4	26.4	33.1
	Slightly agree	582	37.5	37.5	70.6
	Very agree	343	22.1	22.1	92.8
	Extremely agree	112	7.2	7.2	100.0
	Total	1550	100.0	100.0	

Overall course rating Enthusiasm of Instructor					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	7	.5	.5	.5
	Very Disagree	19	1.2	1.2	1.7
	Slightly Disagree	88	5.7	5.7	7.4
	Natural	402	25.9	25.9	33.3
	Slightly agree	566	36.5	36.5	69.8
	Very agree	332	21.4	21.4	91.2
	Extremely agree	136	8.8	8.8	100.0
	Total	1550	100.0	100.0	

Enthusiastic about teaching					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	10	.6	.6	.6
	Very Disagree	11	.7	.7	1.4
	Slightly Disagree	71	4.6	4.6	5.9
	Natural	315	20.3	20.3	26.3
	Slightly agree	547	35.3	35.3	61.5
	Very agree	408	26.3	26.3	87.9
	Extremely agree	188	12.1	12.1	100.0
	Total	1550	100.0	100.0	

Dynamic & energetic					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	15	1.0	1.0	1.0
	Very Disagree	20	1.3	1.3	2.3
	Slightly Disagree	134	8.6	8.6	10.9
	Natural	473	30.5	30.5	41.4
	Slightly agree	523	33.7	33.7	75.2
	Very agree	297	19.2	19.2	94.3
	Extremely agree	88	5.7	5.7	100.0
	Total	1550	100.0	100.0	

Teaching style held interest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremly Disagree	1	.1	.1	.1
	Very Disagree	23	1.5	1.5	1.5
	Slightly Disagree	88	5.7	5.7	7.2
	Natural	336	21.7	21.7	28.9
	Slightly agree	560	36.1	36.1	65.0
	Very agree	385	24.8	24.8	89.9
	Extremly agree	157	10.1	10.1	100.0
	Total	1550	100.0	100.0	

Overall instructor rating Course Organization					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremly Disagree	8	.5	.5	.5
	Very Disagree	13	.8	.8	1.4
	Slightly Disagree	95	6.1	6.1	7.5
	Natural	381	24.6	24.6	32.1
	Slightly agree	584	37.7	37.7	69.7
	Very agree	346	22.3	22.3	92.1
	Extremly agree	123	7.9	7.9	100.0
	Total	1550	100.0	100.0	

Instructor explanations clear					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	7	.5	.5	.5
	Very Disagree	18	1.2	1.2	1.6
	Slightly Disagree	89	5.7	5.7	7.4
	Natural	283	18.3	18.3	25.6
	Slightly agree	523	33.7	33.7	59.4
	Very agree	398	25.7	25.7	85.0
	Extremely agree	232	15.0	15.0	100.0
	Total	1550	100.0	100.0	

Course materials prepared & clear					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	7	.5	.5	.5
	Very Disagree	12	.8	.8	1.2
	Slightly Disagree	73	4.7	4.7	5.9
	Natural	308	19.9	19.9	25.8
	Slightly agree	518	33.4	33.4	59.2
	Very agree	404	26.1	26.1	85.3
	Extremely agree	228	14.7	14.7	100.0
	Total	1550	100.0	100.0	

Objectives stated & pursued					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	6	.4	.4	.4
	Very Disagree	28	1.8	1.8	2.2
	Slightly Disagree	103	6.6	6.6	8.8
	Natural	408	26.3	26.3	35.2
	Slightly agree	568	36.6	36.6	71.8
	Very agree	297	19.2	19.2	91.0
	Extremely agree	138	8.9	8.9	99.9
	Total	1550	100.0	100.0	

Lectures are (highly) qualified					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	5	.3	.3	.3
	Very Disagree	14	.9	.9	1.2
	Slightly Disagree	76	4.9	4.9	6.1
	Natural	298	19.2	19.2	25.4
	Slightly agree	537	34.6	34.6	60.0
	Very agree	400	25.8	25.8	85.8
	Extremely agree	220	14.2	14.2	100.0
	Total	1550	100.0	100.0	

Instructor's professional and neat in appearance					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	7	.5	.5	.5
	Very Disagree	6	.4	.4	.8
	Slightly Disagree	47	3.0	3.0	3.9
	Natural	238	15.4	15.4	19.2
	Slightly agree	477	30.8	30.8	50.0
	Very agree	486	31.4	31.4	81.4
	Extremely agree	289	18.6	18.6	100.0
	Total	1550	100.0	100.0	

Encouraged class discussion					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	32	2.1	2.1	2.1
	Very Disagree	25	1.6	1.6	3.7
	Slightly Disagree	103	6.6	6.6	10.3
	Natural	296	19.1	19.1	29.4
	Slightly agree	504	32.5	32.5	61.9
	Very agree	396	25.5	25.5	87.5
	Extremely agree	194	12.5	12.5	100.0
	Total	1550	100.0	100.0	

Students shared ideas/knowledge					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	21	1.4	1.4	1.4
	Very Disagree	25	1.6	1.6	3.0
	Slightly Disagree	87	5.6	5.6	8.6
	Natural	287	18.5	18.5	27.1
	Slightly agree	512	33.0	33.0	60.1
	Very agree	405	26.1	26.1	86.3
	Extremely agree	212	13.7	13.7	99.9
	Total	1550	100.0	100.0	

Encouraged question & answers					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	6	.4	.4	.4
	Very Disagree	17	1.1	1.1	1.5
	Slightly Disagree	74	4.8	4.8	6.3
	Natural	262	16.9	16.9	23.2
	Slightly agree	568	36.6	36.6	59.8
	Very agree	427	27.5	27.5	87.4
	Extremely agree	196	12.6	12.6	100.0
	Total	1550	100.0	100.0	

Encouraged expression of ideas Individual Rapport					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremly Disgree	11	.7	.7	.7
	Very Disgree	12	.8	.8	1.5
	Slighly Disgree	68	4.4	4.4	5.9
	Natural	235	15.2	15.2	21.0
	Slighly agree	502	32.4	32.4	53.4
	Very agree	465	30.0	30.0	83.4
	Extremly agree	256	16.5	16.5	99.9
	Total	1550	100.0	100.0	

Friendly towards students					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremly Disgree	10	.6	.6	.6
	Very Disgree	13	.8	.8	1.5
	Slighly Disgree	58	3.7	3.7	5.2
	Natural	305	19.7	19.7	24.9
	Slighly agree	499	32.2	32.2	57.1
	Very agree	456	29.4	29.4	86.5
	Extremly agree	209	13.5	13.5	100.0
	Total	1550	100.0	100.0	

Welcomed seeking help/advise					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	19	1.2	1.2	1.2
	Very Disagree	24	1.5	1.5	2.8
	Slightly Disagree	93	6.0	6.0	8.8
	Natural	342	22.1	22.1	30.8
	Slightly agree	550	35.5	35.5	66.3
	Very agree	362	23.4	23.4	89.7
	Extremely agree	160	10.3	10.3	100.0
	Total	1550	100.0	100.0	

Interested in individual student					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	18	1.2	1.2	1.2
	Very Disagree	28	1.8	1.8	3.0
	Slightly Disagree	122	7.9	7.9	10.8
	Natural	449	29.0	29.0	39.8
	Slightly agree	537	34.6	34.6	74.5
	Very agree	303	19.5	19.5	94.0
	Extremely agree	92	5.9	5.9	99.9
	Total	1550	100.0	100.0	

Accessible to students					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely Disagree	21	1.4	1.4	1.4
	Very Disagree	29	1.9	1.9	3.2
	Slighly Disagree	121	7.8	7.8	11.0
	Natural	472	30.5	30.5	41.5
	Slighly agree	526	33.9	33.9	75.4
	Very agree	291	18.8	18.8	94.2
	Extremly agree	90	5.8	5.8	100.0
	Total	1550	100.0	100.0	

FACTORS INFLUENCING STUDENTS' CAREER CHOICE: THE CASE STUDY OF THE NATIONAL UNIVERSITY OF MANAGEMENT, PHNOM PENH, CAMBODIA

Dr. SOUN Hong⁵¹ and Dr. MOEUNG La⁵²

Abstract

Students have to choose their careers to make the living; however, their career choices are varied as they are influenced by different factors. In this study, the researchers found out the year that students started to think about their careers and the careers that they will choose upon graduating from the National University of Management (NUM). Also, the researchers identified the factors influencing students to choose their careers. Major findings of the study supported all the 8 hypotheses. The study concluded that, among the 281 respondents, 97 started thinking about their careers at High School; 64 at University in Year 1; 53 in Year 2; 30 in Year 3; 37 in Year 4. On the other hand, some students will have different career choices from their chosen majors when they graduate from NUM. In addition, it also concluded that Information, Counselors and Parents in the Environmental Factors; Subject Learnt, Salary and Relevant Experiences in the Opportunity Factors; Interest, Career Research by Yourself and Aptitudes in the Personal Factors; and Opportunity to Apply Skill and Knowledge, Employment Security and Self-employment Opportunity in the Outcomes Expectation Factors are the most influential factors on student career choices. To sum up, environment, opportunity, personal and outcomes expectation factors influence students in their career choice at different levels, and there is no different influence on both male and female students' career choice from all factors. It is suggested that future researchers should extend the sample size to other universities, study and compare specific majors, and use other statistic tools to improve the data analysis.

Key Words: Career Choice, Environment, Opportunity, Personal, and Outcome Expectation

⁵¹ Dr. SOUN Hong is Head of Department, School of Graduate Studies

⁵² Dr. Moeung La is Vice Director of English Department

1 Introduction

The choice of a university major is one of the most important decisions students make as it could influence their future career (Dawson-Threat & Huba, 1996; Montmarquette, Cannings, & Mahseredjian, 2001). Students need to be knowledgeable about the path they will be taking to help them prepare for their career path. However, career choice has become a complex science with the advent of information technology, the emergence of post industrial revolution and job competition. It was a common practice in the old days to find feudalism converting it into a family affair where the son of a blacksmith was destined to become a blacksmith and a feudal was born a leader. Industrialization and post industrialization has made it possible for a common person to be rich as long as they have due skills and knowledge (Wattles, 2009). Today, one has not only to make due career planning but also exhaustive career research before making a career choice so as to adjust with the evolving socio-economic conditions (Wattles, 2009).

In addition, as cited by the World Bank (2012), the youth surveys indicated that students do not have a good understanding of the skills required by employers. For instance, only 7 percent of current students believe their biggest challenge is that education providers do not teach the right skills (whereas 16 percent of employed young people believe this is their biggest challenge) (HRINC 2011). Furthermore, some surveys showed that young people may have limited access to reliable information on study and career opportunities. In particular, information provided by the government and employers fails to reach young people, and formal methods of support, such as career counseling, appear weak (HRINC 2011 and CAMFEB 2008). Information sharing and coordination appear difficult because many public and private actors are involved in higher education, including as many as nine government ministries and agencies providing higher education services, in addition to private institutions operating under the control of the MEYS. Little access to reliable information and formal support, plus reliance on informal networks in making study and career choices, are a common problem in developing countries with a proven adverse effect on the labor market.

However, among the higher education institutions in Cambodia, the National University of Management (NUM) is one of the top priorities for high school graduates to pursue their studies as it offers varieties of business majors and other minor ones. Based on the 2013-2014 undergraduate statistics from NUM's Academic Office, there are 3,646 (1,887 female) students for 21st Batch; 3,648 (1,799 female) for 20th Batch; 3,359 (1,607 female) for 19th Batch. As a result, NUM produces thousands of

students every year to supply the market. However, it is not clear that students choose their careers based on what factors. Thus, the researchers are interested in investigating the factors influencing them in choosing their careers.

1.1 Research Problem

Many batches of students who have studied at the National University of Management (NUM) have not been studied about their career choice. No one knows what factors influence them to choose their careers. It is suspected that students at NUM are influenced by environmental, opportunity, personal and outcomes expectation factors in choosing their careers.

1.2 Research Questions

The research questions for this research are as follows:

- When did students start to think about their careers?
- What career will students choose upon graduating from NUM?
- What factors influence NUM students to choose their careers?
- Are male and female students influenced by the same or different factors?
- What factor has the strongest influence on students in career choice?

1.3 Research Objectives

The objectives of this research are to:

- Find out the year that students started to think about their careers
- Find out the career that students will choose upon graduating from NUM
- Identify factors influencing NUM students to choose their careers
- Investigate factors influencing male and female students in their career choice, and
- Investigate the most influential factor on students' career choice.

1.4 Significance of Research

This study has many contributions. Firstly, students can use the findings from this research to prepare themselves in choosing careers before graduating from NUM. Secondly, employment agencies can use this information to invest their resources to train and educate students for their benefits. Thirdly, NUM can use the results to give the right orientation for students to select their majors and to choose their careers upon graduating. Finally, it is useful for parents to give advice to their children for choosing careers.

1.5 Limitations

This research is conducted for 4th year undergraduate students at NUM only, and it does not generalize to students at other universities due to the constraints of time and money.

2 Literature Review

2.1 Choice

Career choice is the selection of a particular path or vocation in terms of career, Psychology Dictionary. In addition, Medical Dictionary (1998) defines that career choice is the selection of a type of occupation or profession.

According to Kerka (2000), career choice is influenced by multiple factors including personality, interests, self concept, cultural identity, globalization, socialization, role model, social support and available resources such as information and financial. Bandura et al., (2001) state that each individual undertaking the process is influenced by several factors including the context in which they live in, their personal aptitudes, social contacts and educational attainment. Hewitt (2010) cited by Jacqueline Korir & Wish Wafula (2012) posits that factors influencing career choice can either be intrinsic, extrinsic or both. Hewitt further states that most people are influenced by careers that their parents favour, others follow careers that their educational choices have opened for them, some choose to follow their passion regardless of how much or little it will make them while others choose the careers that give high income.

Students perception of being suitable for particular jobs also has been found to be influenced by a number of factors including ethnic background, year in school, level of achievement, choice of science subjects, attitudes and differences in job characteristics (McQuaid and Bond, 2003) cited in (Jacqueline Korir & Wish Wafula, 2012). Perrone et al., (2001) found that role model supportiveness and quality of relationship contribute to career choice of students.

2.2 Environment

Career choice is the balancing of recognizing and meeting needs of the individual while at the same time responding to the outer forces and realities of life. Career decision factors involve two sets of input: the self and the world of work, (Krollet al., 1970). Agarwala (2008) found that the key individuals that could influence in career decision making are father, mother, teacher, sisters and brother, friends and relative. Boyd and MacDowall (2003) identify that all members of interpersonal information networks have significant influences on decisions. Whitley and Neil (1998) distinguish in-school and out of school information flows and suggest that in-school information provided by teachers and career guidance people is more important, but that peers play a significant role in providing out-of-school information, especially among students of low socio-economic status. Counselors can draw career preferences to the forefront, in reflecting student preferences, clarifying career preferences, summarizing and encouraging student career preferences, (Weiler, 1977). Jacqueline Korir & Wish Wafula (2012) found that environmental factors such as external influencers influenced students in their career choice. The students' support system made up of parents, relatives, siblings, peers, teachers and counselors may be the most environmental factor. Family, learning, information collection and technology environment influence career choice. Looker & Lowe (2001) identify three characteristics of socio-economic status including parents' education, parents' occupation, and parents' income. The two key factors within schools are reported to be teachers, particularly subject teachers, and career guidance staff. Subject teachers can be very influential (Reay et al., 2001) and can act as positive influencers for students of low socio-economic status, providing information and advice to make a difference for them (Connor & Dewson, 2001). Technology, as a tool in education, provides opportunities for students and increases both their awareness and understanding of the importance of making informed choices. Such awareness enhances students' thinking and encourages informed decisions (Patronis et al., 1999; Kennett & Stedwill, 1996).

Opportunities in career choice would include academic settings, technical schools, entry-level job openings, job shadowing, vocational guidance, job placement and industry contacts (Michael Borchert, 2002). He found that opportunities influence students' career choice. Splaver (2000) concluded that opportunity may influence how students have perceived their future in terms of the reasonable probability of a future in particular career fields. Sibson (2011) found that salary and income were mentioned by some students in their open-ended responses. For those who provided an explanation, it related to their income being satisfactory to support their living expenses or needs: "the pay must be reasonable to support living needs in the future", "a good income which will allow me to support myself and live a good life" and "earn enough money to live comfortably". Only one student stated that having an "excellent income" was important. National Commission's Website (1989) stated that relevant work experience has given students an upper hand in building a career. Experience rather than education seemed to carry more value in some career choices. Kerka (1997) stated that training to be portfolio workers, managing our skills as if we were our own job entity, may be the opportunities students will be faced with in the future. He stated that individuals should consider themselves a collection of attributes and skills, not a job. Heyde & Jordaan (1979) found that timing and location as opportunities are very important in fulfilling aspirations. Students have shown all the ambition, talent, and skill needed for a particular careers, but if the student has not capitalized on the right locale at the right point in time, his hopes for that productive career are reduced or nil. Supper (1957) found that Psychological testing, one means of helping a student focus on an appropriate career choice, resulted in better employment records, as shown for example in the stability, promotions earnings, and employer ratings throughout the student's career. Joann Deml, and Lia Reich (2001) cited by Michael Borchert (2002) found that work internships and work experience provide students the chance to explore while also providing valuable experience along the way. Jacqueline Korir & Wish Wafula (2012) found that Opportunity Factors such as technical schools and job opening are influential in the choice of a career. Joann Deml, career advisor for the University of Wisconsin-Stout and Lia Reich (2001), graduate student in counseling, discussed the factors that enrich students' potential for career success. Work internships and work experience provide students the chance to explore while also providing valuable experience along the way. Deml stated that students need to learn how to sell themselves, a valuable asset to getting in the door. Maturity may be the result of these types of career experiences, which should be included in a plan to insure career choice success.

2.4 **Personality**

Splaver (1977) stated it is important for students to have a good understanding of themselves, their personality, if they are to make intelligent career plans. What they would like to be, and what they are like, are determining factors in their career. The personality factors to be considered include their mental abilities, special abilities, and interests. Splaver (1977) considered factors of mental abilities to be “verbal comprehension, word fluency ability, spatial ability, numerical ability, reasoning ability, and memory.” Splaver matched careers with abilities in backing up her reasoning. She urged students to become familiar with their personality in order to guide their career choice. A developed career plan included evaluation of personality through self-assessment, and communication with others, another trait that depended heavily on personality, according to Harris and Jones (1997). Self-knowledge is shown to be a domain with many pathways (Anderson, 1995). As cited by Michael Borchert (2002), self-knowledge is the first of three integral competency areas stated in the National Career Development Guideline (National Commission Site, 1989). There have been many examples to describe the process of self-knowledge. One example would be a student’s critical look at life’s experiences to enhance their self-knowledge. Another example would be students using problem-based learning to gain insight into self-knowledge Lankard/Brown (1996a). Self -knowledge has been pivotal in career development.

Personality, the need for the student to have left a favorable impression, is an important issue during the interview process, prior to being offered a career position. Personality has been a tough quality for parents and teachers to mold into the individual especially if the career in question is not in agreement with the student. In addition, contacts are a major job seeking method. The student’s personality must match the criteria for their chosen career. It is helpful to consider the attitudes people hold about themselves when choosing a career (Kroll et al., 1970). Attitudes about personality have been organized into consistent modes of thinking, feeling and reacting to evaluation of our environment.

The process choice is affected by experience and purpose. One’s experience is limited by the ability to perceive only what the individual is prepared to perceive. Our purpose also limits our ability to perceive. Thus experience and purpose have translated to self and situation, or personality and environment (Kroll et al., 1970).

Some careers demand that you have the personality to match the qualities of the occupation. For example, sales people have to be out- going. Splaver (2000) said “personality” plays an important role in choosing the right career. A student’s personality

must be self motivated type, as to investigate career possibilities from early on in their lives, and not the procrastinating type that waits till they are compelled to decide. Splaver went on to say “It is important for you to have a good understanding of yourself, your personality, if you are to make intelligent career plans”.

Greenberger (2002) cited by Jacqueline Korir & Wish Wafula (2012) stated that boys are still being steered toward the traditional ‘male’ jobs, which are higher paying while girls are still expected to cluster into the traditional fields of cosmetology, childcare, and other similar jobs. Skills present in males and females alike have been indicative of their vocational interests. Laleger (1942) cited by Jacqueline and Wish (2012) ascertained the skill levels of girls as they applied to interests that the girls had. It is difficult to break the code of motivation that students may possess. The fact that Laleger’s study was done in 1942 shows that gender bias, and the study of it, is nothing new, and may continue to be an always-present part of the career choice process.

Michael Borchert (2002) found that students chose ‘personality’ as the most important in career choice factors, such as choosing their own high school courses, grades, and moving into non-traditional areas of work when it came to gender. In addition, Jacqueline Korir & Wish Wafula (2012) found that Personal interest influenced students in the personal factors to take a hospitality career. This could be because interest developed in them while still in high schools. Furthermore, as to whether gender influences career choice or not, it does not support the study of Okafor, Amuche .C (2012), who found that Gender does not influence most students in career choice; however, these results differ from those of Hall (2010) cited by Okafor, Amuche. C (2012) who reports that individual’s career choices are influenced by gender.

2.5 Outcome Expectations

Outcome expectations is defined as “imagined consequences of performing particular behaviours” (Lent et al., 1994) cited by Alexandera et al. (2011). It distinguishes between three types of outcomes, namely, physical (for example, job opportunities), social (image, status, et cetera) and most importantly self-evaluative (self-satisfaction). Personal expectations can change quite dramatically and, over time, individuals will give different values or preferences to outcomes. Furthermore, different individuals value the same outcome differently. Hence, outcome expectations incorporate the concept of values (Lent et al., 1994).

Students’ career choices are influenced by numerous factors including outcome expectancies, individual variants such as gender, personal interests, learning experiences, environmental factors and personal contacts. Outcome expectancies were the most

influential factors in students' career choices; however, gender and the environment play a very minimal role when it comes to career choice. There are variations in the level of influence each factor has on students' career choices by gender. Family members are more influential in students' career choices as compared to other persons. As students interact with their peers, their advice is less important as compared to family members, teachers and career counselors. However, teachers are more influential compared to career counselors. There were no variations in the level of influence that each person had on students' career choice by gender. Based on the conclusions that career choices are mostly influenced by the outcome expectancies of each career, this study recommends that career counselors should provide students with experiences that expand the exploration process and a wide range of career information on all the available careers so that they can be able to explore widely before making their choices. The study further recommends that, after initial career decisions have been made, career counselors can continue to encourage successful career development by identifying sources of psychosocial support available to students. Persons that offer career advice to students should ensure that they are well informed so as to provide accurate information that will lead students to correct career choice. Kochung Edwards and Migunde Quinter (2011) found that when students are making career choices, outcome expectations play a very influential role in their final decisions. These results are similar to those of Khami et al., (2008), Rodrigo et al (2005), Perrone et al., (2001) and Myburgh (2005) cited by Kochung Edwards and Migunde Quinter (2011) who also found out that outcome expectations influence individuals career choices. These similarities confirm that when students make career choice their decisions are much influenced by what a particular career is likely to give in returns.

3 Methodology

3.1 Methods

In this research, researchers have developed questionnaires and produced 400 copies for 2-trained students to distribute to 4th year students for completion. It took them one week, the first week of January 2014, to do this work. Upon collecting back all the distributed questionnaires, researchers found that only 70.25% of the questionnaires was useable because some students did not return the questionnaires and some did not complete them properly. Then the 2-trained students helped enter data into SPSS software Version 16. For data analysis, researchers used Descriptive Statistics: Crosstabulation, Frequencies and Percentage for the 1st and 2nd research objectives,

Mean and One Sample t-test for the 3rd objective, and Independent t-test for the 4th one. However, after the analysis, the researchers did the interview on 10 students to find out the reasons that they wanted to work for the government.

3.2 Hypotheses

Based on the literature review, the researchers have proposed eight hypotheses as follows:

Hypothesis 1

H01 (null): Environmental Factors do not influence students' career choice.

HA1 (alternative): Environmental Factors influence students' career choice.

Hypothesis 2

H02 (null): Opportunity Factors do not influence students' career choice.

HA2 (alternative): Opportunity Factors influence students' career choice.

Hypothesis 3

H03 (null): Personal Factors do not influence students' career choice.

HA3 (alternative): Personal Factors influence students' career choice.

Hypothesis 4

H04 (null): Expectation Factors do not influence students' career choice.

HA4 (alternative): Expectation Factors influence students' career choice.

Hypothesis 5

H05 (null): Male and female students are not differently influenced by Environmental Factors.

HA5 (alternative): Male and female students are differently influenced by Environmental Factors.

Hypothesis 6

H06 (null): Male and female students are not differently influenced by Opportunity Factors.

HA6 (alternative): Male and female students are differently influenced by Opportunity Factors.

Hypothesis 7

H07 (null): Male and female students are not differently influenced by Personal Factors.

HA7 (alternative): Male and female students are differently influenced by Personal Factors.

Hypothesis 8

H08 (null): Male and female students are not differently influenced by Expectation Factors.

HA8 (alternative): Male and female students are differently influenced by Expectation Factors.

3.3 Data Analysis

In Table 1, there were 281 respondents from 7 majors – 133 males and 148 females. Among these majors, the highest respondents are from Finance and Banking, Accounting and Finance, and followed by Management, Tourism and so on; however, Information Technology has the lowest respondents.

Table 1: Respondents by Gender and Major

Gender * Major Crosstabulation											
Count											
		Major									
		Fin & Bank	Acc & Fin	Manag	Mark	Touri	Bus Eco	IT	Eng	Law	Total
Gender	Male	27	13	31	15	25	6	8	4	4	133
	Female	43	57	14	5	15	3	0	5	6	148
Total		70	70	45	20	40	9	8	9	10	281

According to Table 2, 97 respondents- 49 males and 48 females- started thinking about their careers at High School; 64 at University in Year 1; 53 in Year 2; 30 in Year 3; 37 in Year 4.

Table 2: When Started Thinking about Career

Gender * When did you start thinking about Career? Crosstabulation

Count							
		When did you start thinking about Career?					Total
		H-S	Y1	Y2	Y3	Y4	
Gender	Male	49	28	22	15	19	133
	Female	48	36	31	15	18	148
Total		97	64	53	30	37	281

Based on Table 3, 70 respondents – 9 males and 61 females- will choose Accounting and Finance, followed by 57 in Other Careers, 56 in Finance and Banking, 35 in Tourism, and so on; however, only 1 respondent will choose English as her career. It is noticed that 57 respondents will choose other careers besides their majors. 35 respondents from Management, Information Technology, Accounting and Finance, Economic Business, and Finance and Banking will run their own business; however, other 22 respondents from Law, Information Technology, Accounting and Finance, and Finance and Banking will go to work for the government. Based on the interview with 10 students, 8 students thought that government jobs can provide them with job security, honor and influential position; moreover, they are proud to participate in social development. On the other hand, 2 students responded that government jobs can give them appropriate salary and pension benefits.

Table 3: Career Chosen upon Graduating**Gender * What Career will you choose upon graduating from NUM? Crosstabulation**

Count												
		What Career will you choose upon graduating from NUM?										
		Fin & Bank	Acc & Fin	Manag	Mark	Touri	Bus Eco	IT	Eng	Other	Law	Total
Gender	Male	23	9	15	11	26	8	7	0	2	32	133
	Female	33	61	9	6	9	1	0	1	3	25	148
Total		56	70	24	17	35	9	7	1	5	57	281

In Table 4, Accounting and Finance, and Business Economics did not change at all, but English changed -89%, followed by Law -50%, Management -47%, Finance & Banking -20% and so on. However, these changes went to Other 100%.

Table 4: Percentage Change of Chosen Major and Career Chosen

Majors	Chosen Major	Career Chosen	Percentage Change
Finance & Banking	70	56	-20
Accounting and Finance	70	70	0
Management	45	24	-47
Marketing	20	17	-15
Tourism	40	35	-13
Business Economics	9	9	0
Information Technology	8	7	-13
English	9	1	-89
Law	10	5	-50
Other	0	57	100
Total	281	281	

In Table 5: Information has the highest Mean at 3.66, followed by Counselors at 3.29, Parents at 3.28 and so on; however, Friends has the lowest Mean at 2.76.

Table 5: Mean of Environmental Factors

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Parents	281	3.2883	1.22715	.07321
Friends	281	2.7687	1.00350	.05986
Lecturers	281	3.1566	1.03356	.06166
Counselors	281	3.2918	1.03177	.06155
Other family members	281	3.1423	1.02174	.06095
Information	281	3.6690	1.06941	.06380

According to Table 6, students were asked to rate the Environmental Factors influencing their career choice on the 5 point likert scale, so the expected Mean for Environmental Factors influencing students' career choice is equal to 3. The t-test of the Environmental Factors had the p-value of .000, which is less than the established significant level of .05. As a result, the t-test accepted hypothesis HA1 with a rather high level of confidence. Therefore, there is sufficient evidence to conclude that Environmental Factors significantly influence students to choose their careers.

Table 6: One-sample Test of Environmental Factors

One-Sample Test						
Test Value = 3						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Env	5.097	280	.000	.21945	.1347	.3042

In Table 7, Subject Learnt has the highest Mean at 3.90, followed by Salary at 3.74, Relevant Experiences at 3.66 and so on; however, Working in a Family Business has the lowest Mean at 3.29.

Table 7: Mean of Opportunity Factors

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Salary	281	3.7402	1.04204	.06216
Job openings	281	3.5338	.86174	.05141
Relevant experiences	281	3.6655	1.00810	.06014
Job shadowing	281	3.6548	1.00980	.06024
Circumstances	281	3.4057	.90584	.05404
Location	281	3.4626	.98535	.05878
Subject learnt	281	3.9039	2.56794	.15319
Job placement	281	3.5053	.91465	.05456
Working in a family business	281	3.2989	1.02624	.06122

According to Table 8, students were asked to rate the Opportunity Factors influencing their career choice on the 5 point likert scale, so the expected Mean for Opportunity Factors influencing students' career choice is equal to 3. The t-test of the Opportunity Factors had the p-value of .000, which is less than the established significant level of .05. As a result, the t-test accepted hypothesis HA2 with a rather high level of confidence. Therefore, there is sufficient evidence to conclude that Opportunity Factors significantly influence students to choose their careers.

Table 8: One-sample Test of Opportunity Factors

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Opp	14.656	280	.000	.57454	.4974	.6517

In Table 9, Interest has the highest Mean at 3.93, followed by Career Research by Yourself at 3.73, Aptitudes at 3.72 and so on; however, Gender has the lowest Mean at 3.22.

Table 9: Mean of Personal Factors

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Grades	281	3.4662	.95605	.05703
Careers research by yourself	281	3.7331	1.88318	.11234
Gender	281	3.2206	1.05275	.06280
Choose major by yourself	281	3.6441	.96068	.05731
Aptitudes	281	3.7260	.99265	.05922
Interest	281	3.9359	1.04684	.06245

According to Table 10, students were asked to rate the Personal Factors influencing their career choice on the 5 point likert scale, so the expected Mean for Personal Factors influencing students' career choice is equal to 3. The t-test of the Personal Factors had the p-value of .000, which is less than the established significant level of .05. As a result, the t-test accepted hypothesis HA3 with a rather high level of confidence. Therefore, there is sufficient evidence to conclude that Personal Factors significantly influence students to choose their careers

Table 10: One-sample T-test of Personal Factors

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Per	15.400	280	.000	.62100	.5416	.7004

In Table 11, Opportunity to Apply Skill and Knowledge had the highest Mean at 3.84, followed by Employment Security at 3.72, Self-employment Opportunity at 3.71 and so on; however, Availability of Jobs had the lowest Mean at 3.50.

Table 11: Mean of Expectation Factors

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Availability of advancement	281	3.6370	.96172	.05737
Availability of jobs	281	3.5053	.90286	.05386
Employment security	281	3.7224	1.06293	.06341
Career flexibility	281	3.6263	.87783	.05237
Prestige association with the profession	281	3.6192	.92631	.05526
Ability to choose career specialization	281	3.6975	.86456	.05158
Self-employment opportunity	281	3.7117	2.04385	.12193
Opportunity to apply skill and knowledge	281	3.8434	.99123	.05913

According to Table 12, students were asked to rate the Expectation Factors influencing their career choice on the 5 point likert scale, so the expected Mean for Expectation Factors influencing students' career choice is equal to 3. The t-test of the Expectation Factors had the p-value of .000, which is less than the established significant level of .05. As a result, the t-test accepted hypothesis HA4 with a rather high level of confidence. Therefore, there is sufficient evidence to conclude that Expectation Factors significantly influence students to choose their careers.

Table 12: One-sample T-test of Expectation Factors

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Expectation	16.485	280	.000	.67037	.5903	.7504

Based on Table 13, the Sig. (2-tailed) value is .411. This value is larger than .05. Because of this, we can conclude that there is not a significant difference between the Mean of female students and the Mean of male students. As a result, t-test rejected hypothesis HA5. Thus, there is sufficient evidence to conclude that both groups of students are not differently influenced by the Environmental Factors.

Table 13: Independent Samples Test of Environmental Factors

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Env Equal variances assumed	.003	.960	.824	279	.411	.07108	.08628	-.09877	.24093
Equal variances not assumed			.824	275.716	.411	.07108	.08629	-.09879	.24096

Based on Table 14, the Sig. (2-tailed) value is .086. This value is larger than .05. Because of this, we can conclude that there is not a significant difference between the Mean of female students and the Mean of male students. As a result, t-test rejected hypothesis HA6. Thus, there is sufficient evidence to conclude that both groups of students are not differently influenced by the Opportunity Factors.

Table 14: Independent Samples Test of Opportunity Factors

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Opp Equal variances assumed	.556	.457	1.097	279	.274	.08610	.07849	-.06840	.24060
Equal variances not assumed			1.085	255.442	.279	.08610	.07933	-.07012	.24232

Based on Table 15, the Sig. (2-tailed) value is .133. This value is larger than .05. Because of this, we can conclude that there is not a significant difference between the Mean of female students and the Mean of male students. As a result, t-test rejected hypothesis HA7. Thus, there is sufficient evidence to conclude that both groups of students are not differently influenced by the Personal Factors.

Table 15: Independent Samples Test of Personal Factors

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Per Equal variances assumed	1.329	.250	1.489	279	.138	.12002	.08059	-.03862	.27866
Equal variances not assumed			1.506	275.855	.133	.12002	.07968	-.03684	.27688

Based on Table 16, the Sig. (2-tailed) value is .141. This value is larger than .05. Because of this, we can conclude that there is not a significant difference between the Mean of female students and the Mean of male students. As a result, t-test rejected hypothesis HA8. Thus, there is sufficient evidence to conclude that both groups of students are not differently influenced by the Expectation Factors.

Table 16: Independent Samples Test of Expectation Factors

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Expectation Equal variances assumed	.625	.430	1.465	279	.144	.11906	.08128	-.04094	.27906
Equal variances not assumed			1.475	278.790	.141	.11906	.08070	-.03979	.27792

According to Table 17, the four main factors – environment, opportunity, personal and expectation – influence students' career choice. However, the most influential factor is expectation because it has the highest Mean at 3.67 and then followed by personal and opportunity. On the other hand, environment also influences students in career choice, but it has less influence than the other factors.

Table 17: Mean of All Factors

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Env	281	3.2195	.72174	.04306
Opp	281	3.5745	.65713	.03920
Per	281	3.6210	.67597	.04032
Expectation	281	3.6704	.68167	.04067

4 Findings and Discussion

4.1 Years Started to Think About Careers

The study found that students started to think about their career choice at different levels. Among the 281 respondents, 97 respondents started thinking about their careers at High School; 64 at University in Year 1; 53 in Year 2; 30 in Year 3; 37 in Year 4.

4.2 Careers Chosen Upon Graduating

It is also found that students will have different career choices when they graduate from NUM. That is to say, Accounting and Finance, and Business Economics did not change at all, but English changed -89%, followed by Law -50%, Management -47%, Finance & Banking -20% and so on. By contrast, these changes went to Other 100%, in which some students will run their own business; however, other will go to work for the government. Based on the interview with 10 students, 8 students thought that government jobs can provide them with job security, honor and influential position; moreover, they are proud to participate in social development. On the other hand, 2 students responded that government jobs can give them appropriate salary and pension benefits.

4.3 Environmental Factors

The study found that the Environmental Factors, such as Parents, Friends, Lecturers, Counselors, Other Family Members and Information influence students' career choice since the Mean of most of the factors is higher than the test value at 3. However, the highest influences are Information, Counselors and Parents, but Friends had the least influence on students to choose their careers as its mean is lower than the test value a little bit. In general, the Environmental Factors have an influence on students' career choice based on the one sample t-test. In addition, they have no different influence on male and female students in choosing their careers based on the independent t-test. Therefore, this study differs from the findings of Michael Borchert (2002), who found that environmental factors not strongly influenced students in career choice. However, it is in line with the findings of Agarwala (2008), who found that the key individuals that could influence in career decision making are father, mother, teacher, sisters and brother, friends and relative. In addition, it is consistent with the study of Boyd and MacDowall (2003) who identify that all members of interpersonal information networks have significant influences on decisions. Whitley and Neil (1998) distinguish

in-school and out of school information flows and suggest that in-school information provided by teachers and career guidance people is more important, but that peers play a significant role in providing out-of-school information, especially among students of low socio-economic status. Also, this study supports that counselors can draw career preferences to the forefront, in reflecting student preferences, clarifying career preferences, summarizing and encouraging student career preferences, (Weiler, 1977). In addition, this study is similar to the findings of Jacqueline Korir & Wish Wafula (2012) who found that environmental factors such as external influencers influenced students in their career choice.

4.4 Opportunity Factors

It was found that the Opportunity Factors including Salary, Job Openings, Relevant Experiences, Job Shadowing, Circumstances, Location, Subject Learnt, Job Placement and Working in a Family Business influence students' career choice as the Mean of these factors is higher than 3 -the test value. On the other hand, the highest influences are Subject Learnt, Salary and Relevant Experiences; however, Working in a Family Business has the lowest influence. Generally, the Opportunity Factors significantly influence students' career choice based on one-sample t-test. Moreover, these factors had the same influence on both male and female students to choose their careers according to the independent t-test. Thus, this study supports the findings of Michael Borchert (2002), who found that opportunities influence students' career choice. Moreover, it goes along with the finding of Splaver (2000) that concluded that opportunity may influence how students have perceived their future in terms of the reasonable probability of a future in particular career fields. Moreover, this study is consistent with the findings of Sibson (2011), who found that salary and income were mentioned by some students in their open-ended responses. For those who provided an explanation, it related to their income being satisfactory to support their living expenses or needs: "the pay must be reasonable to support living needs in the future", "a good income which will allow me to support myself and live a good life" and "earn enough money to live comfortably". Only one student stated that having an "excellent income" was important. Also, the study is in line with the study by National Commission's Website (1989) that stated that relevant work experience has given students an upper hand in building a career. Experience rather than education seemed to carry more value in some career choices. In addition, it is similar to the finding of Kerka (1997) who stated that training to be portfolio workers, managing our skills as if we were our own job entity, may be the opportunities students will be faced with in the future. He stated that individuals should consider themselves a collection of attributes and skills, not a job. Furthermore, the study supports the

findings of Heyde & Jordaan (1979) who found that timing and location as opportunities are very important in fulfilling aspirations. Students have shown all the ambition, talent, and skill needed for a particular careers, but if the student has not capitalized on the right locale at the right point in time, his hopes for that productive career are reduced or nil. In addition, it is consistent with the findings of Supper (1957) who found that Psychological testing, one means of helping a student focus on an appropriate career choice, resulted in better employment records, as shown for example in the stability, promotions earnings, and employer ratings throughout the student's career. Also, the study is the same as the findings of Joann Deml, and Lia Reich (2001) who found that work internships and work experience provide students the chance to explore while also providing valuable experience along the way. In addition, this study is in line with the study of Jacqueline Korir & Wish Wafula (2012), who found that Opportunity Factors such as technical schools and job opening are influential in the choice of a career.

4.5 Personal Factors

The study found that the Personal Factors – Grades, Careers Research by Yourself, Gender, Choose Major by Yourself, Aptitudes and Interest influenced students' career choice since the mean of all the factors is higher than the test value at 3. Nevertheless, the highest influences are Interest, Career Research by Yourself and Aptitudes, but Gender had the lowest influence. Overall, Personal Factors have a significant influence on students' career choice based on one-sample t-test. Furthermore, they do not have any different influence on both male and female students in choosing their careers according to the independent t-test. Hence, this study supports the findings of Michael Borchert (2002), who found that students chose 'personality' as the most important in career choice factors, such as choosing their own high school courses, grades, and moving into non-traditional areas of work when it came to gender. It also goes along with Splaver (1977) stated that it is important for students to have a good understanding of themselves, their personality, if they are to make intelligent career plans. What they would like to be, and what they are like, are determining factors in their career. The personality factors to be considered include their mental abilities, special abilities, and interests. Self-knowledge is shown to be a domain with many pathways (Anderson, 1995). In addition, Jacqueline Korir & Wish Wafula (2012) found that Personal interest influenced students in the personal factors to take a hospitality career. This could be because interest developed in them while still in high schools. Furthermore, as to whether gender influences career choice or not, it does not support the study of Okafor, Amuche .C (2012), who found that Gender does not influence most students in career choice; however, these results differ from those of Hall (2010) who reports that individual's career choices are influenced by gender.

It was found that the Outcomes Expectation Factors, such as Availability of Advancement, Availability of Jobs, Employment Security, Career Flexibility, Prestige Association with the Profession, Ability to Choose Career Specialization, Self-employment Opportunity, and Opportunity to Apply Skill and Knowledge influenced students' career choice because the Mean of all these factors is higher than 3 – the test value. On the other hand, the highest influences are Opportunity to Apply Skill and Knowledge, Employment Security and Self-employment Opportunity, but Availability of Jobs had the lowest influence. In general, the Outcomes Expectation Factors significantly influence students' career choice according to one-sample t-test. Also, these factors have no different influence on both male and female students in choosing their careers based on the independent t-test. So, this finding supports the study of Kochung Edwards and Migunde Quinter (2011), who found that when students are making career choices, outcome expectations play a very influential role in their final decisions. These results are similar to those of Khami et al., (2008), Rodrigo et al (2005), Perrone et al., (2001) and Myburgh (2005) who also found out that outcome expectations influence individuals career choices. These similarities confirm that when students make career choice, their decisions are much influenced by what a particular career is likely to give in returns.

Finally, the study found that among the four main factors – environment, opportunity, personal and expectation – expectation is the most influential factor on students' career choice. Then it is followed by personal and opportunity factors. On the other hand, environment also influences students in their career choice, but it has less influence than the other factors. Therefore, this finding supports the study of Kochung Edwards and Migunde Quinter (2011) who found that when students are making career choices, outcome expectations play a very influential role in their final decisions.

5

Conclusion and Recommendations

Students started to think about their career choice at different levels. Among the 281 respondents, 97 respondents started thinking about their careers at High School; 64 at University in Year 1; 53 in Year 2; 30 in Year 3; 37 in Year 4. On the other hand, students will have different career choices when they graduate from NUM. That is to say, Accounting and Finance, and Business Economics did not change at all, but

English changed -89%, followed by Law -50%, Management -47%, Finance & Banking -20% and so on. On the contrary, these changes went to Other 100%, in which some students will run their own business; however, some will go to work for the government. Based on the interview with 10 students, 8 students thought that government jobs can provide them with job security, honor and influential position; moreover, they are proud to participate in social development. By contrast, 2 students responded that government jobs can give them appropriate salary and pension benefits.

Environmental Factors, such as Parents, Friends, Lecturers, Counselors, Other Family Members and Information influence students' career choice. However, the highest influences are Information, Counselors and Parents, but Friends had the least influence on students to choose their careers. In addition, they have no different influence on male and female students in choosing their careers.

Opportunity Factors including Salary, Job Openings, Relevant Experiences, Job Shadowing, Circumstances, Location, Subject Learnt, Job Placement and Working in a Family Business influenced students' career choice. On the other hand, the highest influences are Subject Learnt, Salary and Relevant Experiences; however, Working in a Family Business has the lowest influence. Moreover, these factors had the same influence on both male and female students to choose their careers.

Personal Factors – Grades, Careers Research by Yourself, Gender, Choose Major by Yourself, Aptitudes and Interest influence students' career choice. Nevertheless, the highest influences are Interest, Career Research by Yourself and Aptitudes, but Gender had the lowest Mean. Furthermore, they do not have any different influence on both male and female students in choosing their careers.

Outcomes Expectation Factors, such as Availability of Advancement, Availability of Jobs, Employment Security, Career Flexibility, Prestige Association with the Profession, Ability to Choose Career Specialization, Self-employment Opportunity, and Opportunity to Apply Skill and Knowledge influence students' career choice. On the other hand, the highest influences are Opportunity to Apply Skill and Knowledge, Employment Security and Self-employment Opportunity, but Availability of Jobs had the lowest influence. Also, these factors have no different influence on both male and female students in choosing their careers.

In conclusion, all the factors – Environment, Opportunity, Personal and Outcomes Expectation – influence students in their career choice based on the t-test which had the p-value of .000 for all factors. Furthermore, there is no different influence on both male and female students' career choice from all factors according to the independent t-test, which had the Sign. (2-tailed) value larger than .05 for all factors. In addition, among these factors, Expectation is the most influential factor on students' career choice

based on the Mean of all the factors. Then it is followed by Personal and Opportunity factors. On the other hand, Environment also influences students in their career choice, but it has less influence than the other factors. To sum up, Environment, Opportunity, Personal and Outcomes Expectation factors influence students in their career choice at different levels.

5.2 Recommendations

Based on the findings and discussion, it is recommended that the National University of Management should do as follows:

- Set up an inter-faculty team or develop online video clips to introduce career orientation to grade 12 students and high school graduates so that they know what career to choose;
- Develop a career counseling center to provide information to students and their parents;
- Keep Improving curriculums of each faculty to meet the market demand as students' career choice is influenced by the subjects that they have learnt;
- Counsel students on how to look for a part-time job in order to improve their knowledge learnt and to gain some relevant experiences so that they can get good jobs with expected salary upon graduating from NUM; and
- Encourage students to independently choose their careers based on their interest and aptitudes, and future job market.

In short, the gap between the graduates produced by the National University of Management and the labor market demand will be reduced if these recommendations are implemented.

5.3 Future Research

In order to generalize this study, future researchers should extend the sample size to other universities, study and compare specific majors, and use other statistic tools to improve the data analysis.

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DETERMINANTS OF ENTREPRENEURIAL INTENT AMONG GRADUATING STUDENTS AT NUM

Dr. SOK Seang⁵³

Abstract

Today, entrepreneur has become one of the most dynamic forces in developing a nation and reinforces the national economic growth. Young adults play a vital role in this area. They are trying something bold and starting a new business, and then these new businesses can create jobs, spur innovation, and grow local economy. This working paper seeks to analyze the factors that determine the entrepreneurial intent among graduating students at the National University of Management in Cambodia. The proposed conceptual model of this study includes the effects of entrepreneurial role model in family, educational support, opportunity recognition, pro-activeness, need for achievement, and risk-taking propensity on the entrepreneurial intent of the students. The overall research design is exploratory. Purposive sampling was chosen for data collection. A standardized questionnaire based on the literature was used to approach 250 students at the National University of Management. A total of 220 responses were usable. Regression analysis was used to analyze the data. All factors were assessed using established items scales from the literature. The results of this study found three factors: entrepreneurial role model in family, risk-taking propensity, and educational support which account for substantial variation in the levels of entrepreneurial intent. With the findings, this research study provides some insight into understanding the entrepreneurial intent among graduating students in the sampled area in Cambodia.

Key Words: Entrepreneurial Intent

⁵³ Director of English Department

1 Introduction

Nowadays, an entrepreneurial career is an exciting and reasonable career alternative. Many people have already developed an interest in starting a business of their own, buying an existing firm, joining a family enterprise, or taking part with others in a new venture or a small, rapidly growing firm (Berman, 1997). Entrepreneurial activity is seen as an engine of a nation's long-term economic growth (Romer, 1994). During the last recession in the US, while large corporations downsized millions of jobs, entrepreneurs started new companies, which helped keep unemployment at record-low levels (Baron and Shane, 2005).

Back to the late 1980s, Cambodia could be characterized as having a strong command-economy system. However, difficulties from over 20 years of civil wars and the inefficiency of the command-economy system had led the national economy to the brink of disaster. Faced with a low GDP, and more abundant land for agriculture, the Cambodian government initiated a strong effort to various reforms on its economy started in April 1989, when Plan Economy transformed to Free Market Economy in which private-owned enterprises were allowed to be established (Diep, 2005).

The Cambodian government has placed greater emphasis on promoting new business start-ups through introducing the series of economic reforms. The private sector has rapidly grown in terms of the number of businesses, capital, and employees. From the base of zero in 1989, the number of private enterprises had quickly risen to a total of 505,134 enterprises in which the number of SME establishment counted for 99.8% of the entire establishment, consuming 73% of national employment, and 58% of national production (EC, 2011).

Universities in many countries have followed the example of U.S. institutions and have instituted a wide range of entrepreneurship education efforts (Fayolle, 2000). The idea of becoming an entrepreneur is more and more attractive to students because it is seen as a valuable way of participating in the labor market with lots of flexibility in hand. The assessment of entrepreneurial intention among university students is a necessity in order to identify their level of entrepreneurial intention. This group of people is very crucial as the springboard or backup to the current entrepreneurs in Cambodia's economic development in the future. A majority of these students will immediately contribute more to the economic growth after they graduate, not as salary workers but as entrepreneurs.

The National University of Management (NUM) was established in 1983, and has been recognized as one of the leading public universities in business and management education in Cambodia. The university has produced a number of leading scholars, professionals and successful entrepreneurs for Cambodian society. Based on NUM statistics 2014, there are 18,521 students currently pursuing their study at all levels within 15 majors.

Entrepreneurial intent has proven to be a primary predictor of future entrepreneurial behavior (Katz, 1988; Reynolds, 1995; Krueger et al., 2000). Investigating what factors determine the entrepreneurial intent is a crucial issue in entrepreneurship research. Although entrepreneurial intention is an important field in entrepreneurship, the reasons and determinants of entrepreneurial intention still lacks empirical evidence (Choo & Wong, 2006; Davidsson, 1995). In order to fill this gap, this study aims to shed light on the antecedents of entrepreneurial intent among graduating students at the National University of Management in Cambodia.

2 Literature Review

This section reviews a substantial amount of literature which has been accumulated on entrepreneurial intent, entrepreneurial role model in family, educational support, opportunity recognition, pro-activeness, need for achievement, and risk-taking propensity variables.

2.1 Entrepreneurial Intent Defined

Entrepreneurial intent is the state of mind that directs and guides the actions of the entrepreneur toward the development and the implementation of new business concepts (Erikson, 1998). Personal profile such as experience, characteristics, personality and social context such as government deregulation of industries or redundancies may contribute in the formation of entrepreneurial intent (Bird, 1992). Previous researchers have proven that entrepreneurial intent is the primary predictor of future entrepreneur (Katz, 1988; Reynolds, 1995; Krueger et al., 2000). According to Krueger et al. (2000), entrepreneurial activity can be predicted more accurately by studying intention rather than personality traits or situational factors. The decision to set up a new business venture can be regarded as a planned behaviour and there is a strong relationship between intentions toward behaviour and actual act (Ajzen, 1991).

Krueger et al. (2000) considered the decision to become an entrepreneur as voluntary and conscious. Therefore, entrepreneurship may be viewed as a process that occurs over time (Gartner et al., 1994; Kyrö & Carrier, 2005). In this sense, entrepreneurial intent would be a necessary step in the evolving and—sometimes—long-term process of venture creation (Lee & Wong, 2004). The intent to start up, then, would be a previous and determinant element towards performing entrepreneurial behaviors (Kolvereid, 1996; Fayolle & Gailly, 2004). Katz and Gartner (1986) believed that intent includes a dimension of location: the entrepreneur's intention (internal locus) and intentions of other stakeholders, markets, and so forth (external locus).

2.2 Major Predictors of New Venture Creation

Many studies that have been conducted on determinants of entrepreneurial intention revealed many factors. However, this study focuses on six factors: entrepreneurial role model in family, perceived educational support, opportunity recognition, pro-activeness, need for achievement, and risk-taking propensity as they affect entrepreneurial intent.

2.2.1 Entrepreneurial Role Model in Family

Researchers who studied the influence of familial factors on entrepreneurial intention seem to focus on the modeling influence and the family history of entrepreneurial activities. For instance, the study of Carr and Sequeira (2007) revealed that exposure to family business constitutes important intergenerational influence on intentions to entrepreneurship. Also, McElwee and Al-Riyami (2003) found that children who grew up with entrepreneur parents had a greater propensity to choose an entrepreneurial career. Hence, self-employment experience was directly related with entrepreneurial intention of students (Raijman, 2001).

Other previous researches showed that role models are assumed to have an important impact on career development of young adult. (Van Auken et al., 2006; Krueger et al., 2000; Scherer et al., 1989b). According to Van Auken et al. (2006), active interaction between the role model and respondent can provide positive experiences that significantly influence career intentions and this influence can be especially strong during early adulthood. Scherer et al. (1989b) suggested that studies have shown that between 35–70 percent of entrepreneurs had entrepreneurial role models. Researchers also proved that the role model(s) in the family will strength the entrepreneurial intention among the young adult (Aizzat et al., 2009; Raijman, 2001; Van Auken et al., 2006). Raijman (2001) found that individual with close family members in the business world were 2.1 times as likely to wish to open a business than those with no relatives in the business world, and that the close family members who own businesses may provide access to relevant information, markets and other necessary resources for business formation.

Research in the entrepreneurship (e.g., Shapero & Sokol, 1982; de Wit & van Winden, 1989) has found that the employment status of the parent may influence the children's choice on whether to become self-employed. Cooper and Dunkelberg (1984) reported 47.5% of 1,394 entrepreneurs had parents who owned a business. Jacobowitz and Vidler (1982) found that 72% of mid-Atlantic state entrepreneurs had parents or close relatives who were self-employed. Shapero and Sokol (1982) reported that 50 to 58% of company founders in U.S. had self-employed fathers (at a time when self-employed were only 12% of the workforce). Waddell (1983) found that 63 percent of the female entrepreneurs in his study had fathers who started their own businesses and 36 percent had self-employed mothers. Attempting to explain the phenomenon, many authors have suggested that role models are important in the decision to start a business (Cooper & Dunkelberg, 1984; Cooper, 1986; Krueger, 1993; Shapero & Sokol, 1982; Waddell, 1983). Cooper (1986) reported that firm founders were influenced by role models in their decision to become entrepreneurs. Brockhaus and Horwitz (1986) conclude that, “. . . from an environmental perspective, most entrepreneurs have a successful role model, either in their family or the workplace” (p. 43).

Parental role models and experience led to the perception to be an entrepreneur (Scherer et al., 1989a). Scherer et al. (1989a) revealed that up to 65 percent of entrepreneurs had one or more entrepreneurial parents and the role model performance was not as important as having a role model. Father is the most significant role model in the family who influence the students' desire to own a business (Van Auken et al., 2006). Previous studies also found that siblings provide essential supports, information and advices, and as role models in the decision-making and career development process of young adult (Schultheiss et al., 2002). Another study done by Aizzat et al. (2009) in Malaysia suggested that the existing of 'successful' entrepreneurs among family member is positively related to entrepreneurial intention. They also proposed that the number of role model (family, friends or colleagues) was positively related to entrepreneurial intention.

Aldrich et al. (1997) assert that parents can provide two sorts of capital: (a) “entrepreneurial capital, encompassing the traditional notion of “human capital” but focusing specifically on attitudes, values, skills and emotions that are relevant to business ownership” (p.8), and (b) financial capital, such as passing on an existing business or making loans and gifts enabling the business start-up. In order to examine which resources were provided, Aldrich et al. (1997) interviewed 229 small business owners. They found that children of self-employed did benefit from higher financial and physical capital. They found only weak support for their hypothesis that entrepreneurial capital is more important for the children of self-employed than financial and physical capital. These results can be contrasted with Lye's (1996) findings that exchanges of emotional support and companionship have been shown to be frequent, whereas exchanges of practical assistance are rare.

Entrepreneurial parents provide both interest, critical experience (Bandura, 1991) and entrepreneurial and financial capital (Aldrich et al., 1997). Parents function as carriers of values, emotions and experiences towards entrepreneurship. Knowing that they can get what they need (e.g., motivation, encouragement, vicarious experience and capital, etc.) from their entrepreneurial parents, individuals will likely have more confidence to judge their perceived capabilities in relation to the attainment of others. Parents are persuasive as role models because the child can assume close similarity. Those whose parents are entrepreneurs seem to have more confidence in being entrepreneurial.

2.2.2 Educational Support

Franke and Lüthje (2004) proposed that academic context is an important part of the students' environment, as universities are in a position to shape and encourage entrepreneurial intentions. University activities of initiation, development and support somehow "trigger" the intentions of students to become entrepreneurs and prompt them toward more ambitious start up plans (Franke & Lüthje, 2004). Schwarz et al. (2009) found that a positive perception of university actions to foster entrepreneurship will leads to a stronger willingness to start up an own business in the future. They also stated that only the university environment emerges as an intent predictor. University course on entrepreneurship and small business management as well as incubators located on campus appear to be a central role in waking students' enthusiasm and interest in business ownership (Schwarz et al., 2009).

Previous studies also revealed that the supportive university environment is one of the factors influence the students' interest in becoming an entrepreneur in the future (Autio et al., 1997; Turker & Selcuk, 2009). If a university provides adequate knowledge and inspiration for entrepreneurship, the possibility of choosing an entrepreneurial career among young people might increase (Turker & Selcuk, 2009). Clark et al. (1984) studied a medium sized American university and found that almost 80% of the students who enrolled in an introductory entrepreneurship course were considering to start up their own business, and 76% stated that the entrepreneurship course had a very strong effect on their decision to found a new business.

A lot of empirical research also done on education enhances entrepreneurial efficacy of students as well as encouraging and supporting them to start-up their own business (Fiet, 2000; Segal, et al., 2005). Education can enhance entrepreneurial efficacy of students through learning activities, business plan development, running a real small business (Fiet, 2000), and increasing their desirability to start-up a new venture (Segal, et al., 2005). In Zaidatol (2009) study also stated that entrepreneurship related courses and training are needed to increase the university students' entrepreneurial intention and entrepreneurial efficacy.

It is obvious that professional education in universities is an efficient way of obtaining necessary knowledge about entrepreneurship. Although, Wang and Wong (2004) in their study said “the entrepreneurial dreams of many students are mainly hindered by inadequate preparation focused on their personality characteristics, they also pointed out the fact that the entrepreneurial dreams of many students are hindered by inadequate preparation;”...their business knowledge is insufficient, and more importantly, they are not prepared to take risk to realize their dreams.” Therefore, academic institutions might play critical roles in the encouragement of young people to choose an entrepreneurial career.

2.2.3 Risk-taking Propensity

According to Brockhaus (1980), the propensity for risk taking is defined as the perceived probability of receiving the rewards associated with success of a proposed situation, which is required by an individual before he will subject himself to the consequences associated with failure, the alternative situation providing less reward as well as less severe consequences than the proposed situation.

Such a definition might best describe the situation that faces the potential entrepreneur when he decides to establish a new business venture. For entrepreneurs, risk is a central element in a variety of decision contexts, including those dealing with entry into new ventures or new markets (Timmons 1994), and new product introductions (Devinney, 1992). According to Burch (1986), “The antithesis of the entrepreneur is a person who never loses because he or she never puts himself or herself at risk.”

The literature on entrepreneurship has often portrayed the entrepreneur as a risk-taker with expectation of receiving a profit as reward for this risk-bearing (Palmer, 1971). McClelland (1961) demonstrated that certain personality characteristics, such as willingness to take risks, usually associated with the entrepreneurial role. His later work (e.g., McClelland, 1967) found that extreme risk or complete safety did not provide entrepreneurs with an incentive. He theorized that entrepreneurs function best in situations offering moderate risk of failure, presumably because they believe that such risk can be reduced by increased effort or skill. Finding that entrepreneurs work no harder than others on routine tasks or tasks that do not deviate from traditional methods, he posited the entrepreneur as a moderate risk-taker. Webster (1977) also concluded that entrepreneurs are moderate risk-takers, but pointed out that this characteristic does not differentiate them very much from other kinds of managers, a point that was reinforced by Sexton and Bowman (1985).

Empirical studies on risk-taking behavior among entrepreneurs have reported weak and mixed findings, as discussed in the previous sections. Realizing that research examining the risk-taking propensities of entrepreneurs and managers has produced conflicting findings and no consensus, which is holding the progress of entrepreneurship field, Steward and Roth (2001) did a meta-analysis concerning risk propensity differences between entrepreneurs and managers. Results indicate that entrepreneurs have a higher risk propensity than that of managers. This same study also shows that large differences exist between entrepreneurs who are growth-oriented and those who only focus on producing family income. Following this study (Steward & Roth, 2001), Miner and Raju (2004) did a meta-analysis using another group of studies not included in the Stewart and Roth (2001). Their results showed that entrepreneurs (and those with a growth orientation) are more risk avoidant.

Begley and Boyd (1987), Hull et al. (1980) determined that organization founders exhibit a stronger risk-taking propensity than non-entrepreneurial individuals based on results of a comparison of means that showed statistically significant results. No correlation matrix or regression coefficient between the two variables was provided. Forlani and Mullins (2000) found a positive relationship between risk propensity and new venture choices, reporting a regression coefficient of $\beta = 0.26$ that was statistically significant. However, they also found that entrepreneurs tend to choose ventures with low degrees of variability, while being more willing to accept downside risk ($\chi^2 = 34.67, p < .01$). Simon et al. (2000), on the other hand, found that enterprising individuals start ventures not because they knowingly accept high levels of risk, but because they do not accurately perceive the risk involved in venture creations.

2.2.4 Need for Achievement

In an interview with Forbes, McClelland (1961) stated, “We’ve spent twenty years studying just this [why one businessman succeeds and another fails], twenty years in the laboratory doing very careful research, and we’ve isolated the specific thing. We know the exact type of motivation that makes a better entrepreneur. Not necessarily a better head of General Motors; I’m talking about the man who starts a business.” He went on to say that the specific characteristic is the individual’s need for achievement. With evidence showing that the rate of economic growth of a number of different countries over the period from 1925 to 1950 was significantly correlated with the degree to which need for achievement themes were found in stories in widespread use in children’s books in the respective cultures, McClelland (1957) argued that high achievement motivation should be associated with successful entrepreneurship.

Since the pioneering work of McClelland (1961), the need to achieve (n ach) has been argued by many researchers (Sexton & Bowman, 1985; Decal & Lyons, 1979) to be

associated with entrepreneurial behaviors. Often these researchers argue with the logic that high achievers set challenging goals and value feedback as a means of assessing goal accomplishment, and compete with their own standards of excellence and continuously seek to improve their performance. However, there has also been a great amount of research which has found only weak association between the need for achievement and entrepreneurship behavior. For example, Hull et al. (1980) found that need for achievement was a weak predictor of prospective entrepreneurs. Just like risk-taking propensity, need for achievement also has produced varying findings from the entrepreneurship research. Begley and Boyd (1987), Hornaday and Aboud (1971) compared entrepreneurs to non-entrepreneurs and the results of the difference of means, which showed statistically significant results, and thus determined that organization founders exhibit a stronger need for achievement than non-entrepreneurial individuals.

2.2.5 Opportunity Recognition

Much of the previous research (e.g., Kirzner, 1979; Timmons, et al., 1987) consider opportunity recognition to be the core of entrepreneurship. Entrepreneurs are often characterized by their ability to recognize opportunities (Bygrave & Hofer, 1991) and the most basic entrepreneurial actions involve the pursuit of opportunity (Stevenson & Jarillo, 1990). However, opportunity recognition has been an under-researched area of entrepreneurship (Venkataraman, 1997). Timmons (1994) described opportunities in terms of “fit” among three key elements of entrepreneurship—the entrepreneur, available resources, and the opportunity (or business concept) itself.

However, most of the definitions for entrepreneurial opportunity are problematic. For instance, Shane (2000) adopted Casson’s (1982) definition of entrepreneurial opportunities as “those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at greater than their cost of production.” This requires that entrepreneurial opportunities generate profit. For those firms that never turn a profit, if we are to use the above definition, we must assume that no opportunity existed for the founding entrepreneurs. Another example, Timmons (1994) argues that an opportunity “has the qualities of being attractive, durable, and timely and is anchored in a product or service which creates or adds value for its buyer or end user” (1994:87). However, the very use of the terms attractive, durable, timely, and window of opportunity can only be applied post hoc, after the first movers (1) have developed a market and there is some data to support future opportunities or (2) have become successful (Singh, 2000).

Previous research has had at least two different camps on whether opportunity recognition is the result of a deliberate search or a ‘discovery’ process. Herron and

Sapienza (1992) believe that it results from an active search of the entrepreneur. Kirzner (1973) on the other hand considered it a discovery process without pre-planning. Bhawe (1994) suggested there were two types of opportunity recognition: one in which the decision to venture preceded the recognition of an opportunity, consistent with an active search for an opportunity, and one in which the opportunity was ‘discovered’ prior to the decision to venture. For both of the two types, the alertness and capability to recognize the opportunity is essential.

To successfully recognize an opportunity, entrepreneurs must somehow gather, interpret, and apply information about specific industries, technologies, markets, government policies, and other factors necessary to the project in question (Ozden & Baron, 2007). Archdvili et al. (2003) suggests that such information plays a crucial role in both current and subsequent pursuit of the opportunity. Shane (2000) also suggests that relevant information is essential in recognizing an opportunity. Similarly, Busenitz (1996) note that some entrepreneurs succeed in identifying the opportunity; they gather and process information differently—perhaps more effectively than other people. Baron (2006) believes that entrepreneurs are able to recognize opportunities because they have a superior pattern of cognitive structures that help them identify the opportunities.

2.2.6 Pro-activeness

Pro-activeness has been defined as a forward-looking perspective characteristic of a marketplace leader that has the foresight to seize opportunities in anticipation of future demand (Lumpkin & Dess, 2005). Used as a firm-level construct, pro-activeness often refers to a firm’s efforts to seize new opportunities, monitor trends, identify the future needs of existing customers, and anticipate changes in demand or emerging problems that can lead to new venture opportunities (Lumpkin & Dess, 1996). Pro-activeness involves not only recognizing changes but also being willing to act on those insights ahead of the competition (Lumpkin & Dess, 1997). Such a forward-looking perspective is important for companies that seek to be industry leaders or change the very nature of competition in their industry, as pro-activeness is especially effective at creating competitive advantages because it puts competitors in the position of having to respond to successful initiatives (Lumpkin & Dess, 2005).

Lumpkin and Dess (1997) suggest that pro-activeness and competitive aggressiveness are distinct concepts with unique definitions. Trying to be consistent with Miller and Friesen’s (1978) view of pro-activeness as shaping the environment by introducing new products and technologies, and with Venkatraman’s (1989) definition of pro-activeness as “seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of life cycle”

(Venkatraman, 1989:949). Lumpkin and Dess (1997) emphasize pro-activeness as a forward-looking perspective characteristic of a marketplace leader that has the foresight to act in anticipation of future demand. In contrast, competitive aggressiveness stresses the intensity of a firm's efforts to outperform industry rivals and is often characterized by a strong offensive posture directed at overcoming competitors and may be quite reactive as when a firm aggressively enters a market that a rival has identified.

Based on the distinctions discussed above, pro-activeness could be treated as a response to opportunities whereas competitive aggressiveness can be treated as a response to threats. These distinct roles are noted by Chen and Hambrick (1995:457) who suggest that "a firm should be both proactive and responsive in its environment in terms of technology and innovation, competition, customers and so forth. Pro-activeness involves taking the initiative in an effort to shape the environment to one's own advantage; responsiveness involves being adaptive to competitors' challenges."

Moving from a firm-level construct to an individual-level construct, pro-activeness in this study will be defined as an individual's forward-looking perspective characteristic of a potential entrepreneur that has the foresight to seize opportunities to create a new venture or engage in entrepreneurial projects in a existing firm. This forward-looking perspective will help the potential entrepreneur envision the benefits of being engaged in entrepreneurial activities. Actually, Kickul and Gundry (2002) found some association between pro-activeness and entrepreneurial activity.

3 Methodology

3.1 Proposed Conceptual Model for This Study

According to Bird (1988), intentionality can be defined as a state of mind directing a person's attention, experience and action towards a specific goal or a path to achieve something. Therefore, entrepreneurial action can also be classified as an intentional behavior, or intention is a predictor of planned entrepreneurial behavior (Krueger, 1993). Shapero (1982) indicated that the entrepreneurial intention stems from the perception of feasibility and desirability of a person, and this path is affected by the cultural and social context. Therefore, the researcher proposed a conceptual model to analyze the entrepreneurial intent of university students which is shown in Figure 1.

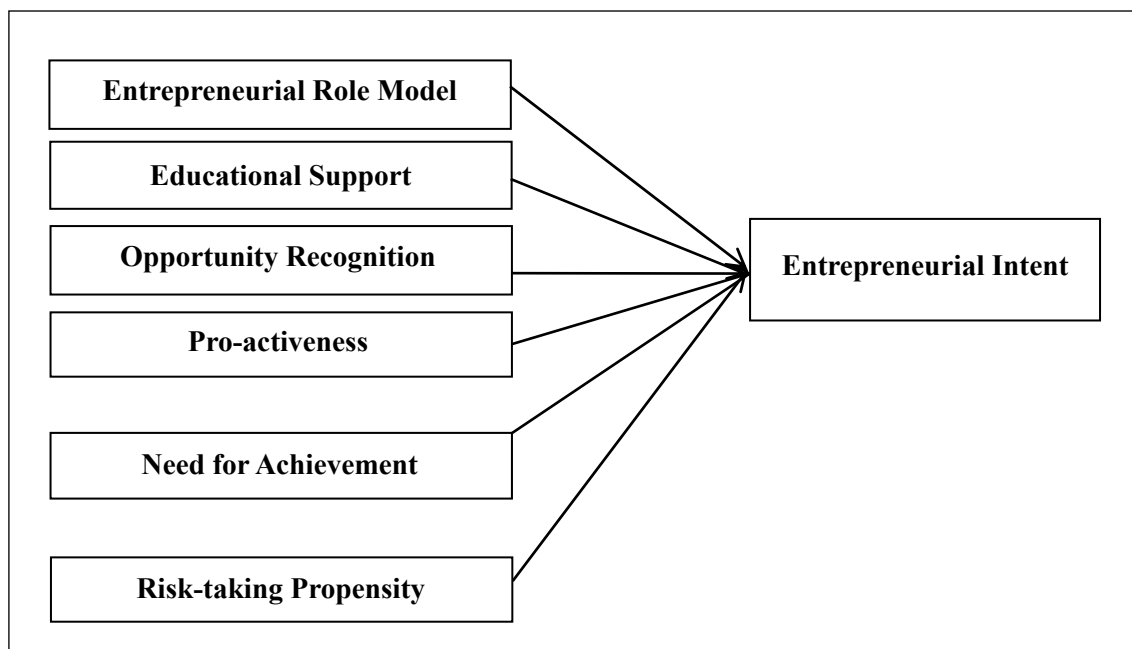


Figure 1: Proposed conceptual model developed for this study

3.2 Variable Measurement

The data were gathered using a survey questionnaire. A set of demographic questions were posed, as well as well-established measures of entrepreneurial role model, educational support, opportunity recognition, pro-activeness, need for achievement, risk-taking propensity and entrepreneurial intent. The measures selected have been well-established measures pertinent to the areas of interest, and have been used in past research on entrepreneurial intent.

Entrepreneurial Intent

This study adopted Entrepreneurial Intent used by Wu (2009) to elicit information on the entrepreneurial intent of the students. The instrument consists of eight items with 7-point response format, the higher the score, the higher the entrepreneurial intent. Sample items include: (1) I will start my own business in the near future, (2) I am enthusiastic about starting my own business, (3) With enough resources, I would have set up my own company. The pilot study shows a coefficient alpha of .89, which indicates a high reliability.

Entrepreneurial Role Model in Family

This study adopted Entrepreneurial Role Model in Family used by (Tung et al., 2011) to ask participants whether their close family member, i.e. father, mother, brother or sister is an entrepreneur. The instrument consists of four items which include: (1) “Is your father an entrepreneur?”; (2) “Is your mother an entrepreneur?”; (3) “Is your sister an entrepreneur?”; and (4) “Is your brother an entrepreneur?” As noted, entrepreneurial role model in family was recoded into five groups: no entrepreneur, coded as 0; one entrepreneur, coded as 1; two entrepreneurs, coded as 2; three entrepreneurs, coded as 3; and four entrepreneurs, coded as 4.

Educational Support

This variable was measured by three items (Gelard & Saleh, 2011) which include: (1) “The education at my university encourages me to develop creative ideas for being an entrepreneur”; (2) “My university provides the necessary knowledge about entrepreneurship”; (3) “My university develops my entrepreneurial skills and abilities.” Participants will rate these items on a seven-point Likert scale, with 1 = strongly disagree to 7 = strongly agree. The pilot study shows a coefficient alpha of .77, which indicates an acceptable reliability.

Risk-taking Propensity

Items to assess this variable were derived from Wu (2009). Participants were asked to indicate where they would rate themselves on the scale from 1 to 7. Sample items include: (1) I always avoid dangerous situations – I always seek adventure; (2) I would never make a high risk investment – I am willing to try anything once. The pilot study shows a coefficient alpha of .84, which indicates a high reliability.

Opportunity Recognition

This variable was measured by six items (Wu, 2009) which relate both to the ability to recognize opportunities (e.g., I can recognize new venture opportunities in industries where I have no personal experience) and to alertness to opportunities when they exist (I have a special alertness or sensitivity toward new venture opportunities). Participants rated these items on a seven-point Likert scale, with 1 = strongly disagree to 7 = strongly agree. The pilot study shows a coefficient alpha of .86, which indicates a high reliability.

Pro-activeness

This variable was measured by five items (Wu, 2009) which include: (1) “I enjoy facing and overcoming obstacles to my ideas”; (2) “Nothing is more exciting than seeing my ideas turn into reality”; (3) “I excel at identifying opportunities”; (4) “I love to challenge the status quo”; and (5) “I can spot a good opportunity long before others can.” Participants will rate these items on a seven-point Likert scale, with 1 =strongly disagree to 7 = strongly agree. The pilot study shows a coefficient alpha of .79, which indicates an acceptable reliability.

Need for Achievement

Items to assess this variable were derived from Wu (2009). Participants were asked to indicate where they would rate themselves on the scale from 1 to 7. Sample items include: (1) I seldom compete with others – I frequently engage in competitive activity where winning or doing better than someone else is the primary concern; (2) I just do enough work to get by – I always do more than what’s expected of me. The pilot study shows a coefficient alpha of .82, which indicates an acceptable reliability.

3.3 Research Design and Data Collection

The overall research design is exploratory. Purposive sampling was chosen for data collection. Data for this research were collected by means of an interview questionnaire. The target population of this research is the final year students both undergraduate and post graduate at the National University of Management.

Based on NUM statistics 2014, there are 18,521 students currently pursuing their study at all levels within 15 majors. Data collection was conducted in March-April 2014. A total of 250 surveys were distributed to students majoring in Management, Accounting, Finance, Marketing, and IT. Among 250 surveys, 236 were returned. After checking data in the surveys, 16 cases were not usable due to incomplete data. As a result, a sample of 220 students in which 137 were master students, and 83 were bachelor students was used for data analysis in this study (a response rate of 88%).

Roscoe (1975) suggests a series of general rules in determining acceptable sample sizes for research. He proposes that for any research intending on conducting multiple regression analysis, a sample size ten times that of the number of variables must be obtained. Therefore, a sample size of 220 obtained the sampling frame is considered adequate for the purpose of this study.

3.4 Data Analysis

One standard multiple regression analysis was used to determine the effects of the independent variables on the dependent variable. Significance levels were established at the $p < .05$. All data analyses were carried out using the Statistical Package for the Social Sciences (SPSS 16.0). The regression equation was as follows:

$$ENI = \beta_0 + \beta_1 (\text{Entrepreneurial Role Model}) + \beta_2 (\text{Educational Support}) + \beta_3 (\text{Risk-taking Propensity}) + \beta_4 (\text{Need for Achievement}) + \beta_5 (\text{Opportunity recognition}) + \beta_6 (\text{Pro-activeness}) + \varepsilon$$

Description of Variables	Variable Labels	Variable Measurement Scales	Authors
Dependent Variables			
Entrepreneurial Intent	Intent	Scale	Wu (2009)
Independent Variables			
Entrepreneurial Role Model in family	Model	Numerical	Tung et al. (2011)
Educational Support	Edu-sup	Scale	Gelard & Saleh (2011)
Opportunity Recognition	Opp-rec	Scale	Wu (2009)
Pro-activeness	Pro-act	Scale	Wu (2009)
Need for Achievement	N-ach	Scale	Wu (2009)
Risk-taking Propensity	Risk	Scale	Wu (2009)

Table 1: Description of Variables

3.5 Survey Construction

With respect to internal and external validity, the study instrument utilizes established scales and questions which have been used by many previous researchers. The data were gathered using a survey questionnaire. A set of questions were posed, as well as well-established measures of entrepreneurial role model in family, perceived educational support, opportunity recognition, pro-activeness, need for achievement, risk-taking propensity, and entrepreneurial intent. The measures selected have been used in previous researches on entrepreneurial intent and has been conducted a pilot study.

Authors Constructs	Wu (2009)	Gelard & Saleh (2011)	Tung et al. (2011)	Coefficient alpha
Entrepreneurial Intent	8 items			0.89
Entrepreneurial Role Model in Family			4 items	N/A
Educational Support		3 items		0.77
Opportunity Recognition	7 items			0.86
Pro-activeness	6 items			0.79
Need for Achievement	7 items			0.82
Risk-taking Propensity	7 items			0.84

Table 2: Question Items Adapted From Multi-Authors

3.6 Pilot Study

To assure that the measures have a reasonable reliability, the researcher conducted a pilot study on fifty graduating students within five majors at the National University of Management. A reliability analysis was done. As a result of the data, all items had high coefficient alpha reliability, so there was no change made to the items.

4 Results and Discussion

4.1 Descriptive Findings

Age of Students

Table 3 reports the number and percentage of age of students in the sample. There was a wide range in the ages of the respondents from under 25 to 44 years. The greatest number of respondents (56.8%) fell within the 25-34 years' category, followed by the under 25 years' category with 40.5% of the sample. The lowest number of respondents (2.7%) fell within the 35-44 years' category.

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
Under 25 years	89	40.5	40.5	40.5
25-34 years	125	56.8	56.8	97.3
35-44 years	6	2.7	2.7	100.0
Total	220	100.0	100.0	

Table 3: Age of Students in the Sample

Marital Status

Table 4 provides the number and percentage of marital status of students in the sample. Those surveyed were predominantly single (73.6% of the sample), whereas married accounted for only 26.4% of respondents.

Marital Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	162	73.6	73.6	73.6
	Married	58	26.4	26.4	100.0
	Total	220	100.0	100.0	

Table 4: Marital Status of Students in the Sample

Gender

Table 5 demonstrates the number and percentage of gender of respondents in the sample. The greatest number of respondents (67.3%) fell within the male category, followed by the female category with 32.7% of the sample.

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	148	67.3	67.3	67.3
	Married	72	32.7	32.7	100.0
	Total	220	100.0	100.0	

Table 5: Gender of Students in the Sample

Majors

Table 6 provides the number and percentage of majors of students in the sample. There were diverse distributions for respondents such as Management (26.4%), Marketing (16.8%), Finance (30.5%), Accounting (18.6%), and IT (7.7%).

Majors					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Management	58	26.4	26.4	26.4
	Marketing	37	16.8	16.8	43.2
	Finance	67	30.5	30.5	73.6
	Accounting	41	18.6	18.6	92.3
	IT	17	7.7	7.7	100.0
	Total	220	100.0	100.0	

Table 6: Majors of Students in the Sample

Types of Students

Table 7 demonstrates the number and percentage of types of students in the sample. The greatest number of respondents (62.3%) fell within the master students category, followed by the bachelor students category with 37.7% of the sample.

Types of Students					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor Students	83	37.7	37.7	37.7
	Master Students	137	62.3	62.3	100.0
	Total	220	100.0	100.0	

Table 7: Types of Students in the Sample

Entrepreneurial Role Model in Family

Table 8 demonstrates the number and percentage of entrepreneurial role model in the sample. The greatest number of respondents (62.3%) fell within the “no entrepreneur” category, followed by the “one entrepreneur” category with 32.7%.

Role Model					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No entrepreneur in family	137	62.3	62.3	62.3
	One entrepreneur	72	32.7	32.7	95.0
	Two entrepreneurs	11	5.0	5.0	100.0
	Total	220	100.0	100.0	

Table 8: Entrepreneurial Role Model in Family of Students in the Sample

4.2 Multiple Regression Analysis

The results of the multiple regression analysis on entrepreneurial intent are presented in Table 9. The R^2 indicated that altogether, the six independent variables explained 52.9 percent of the variance in entrepreneurial intent. However, none of the variables in the run exceeded the variance inflation factor of ten, so issues related to collinearity were not a concern (Kanetkar, 2001).

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.728 ^a	.529	.516	.71577

a. Predictors: (Constant), Educational Support, Need for Achievement, Opportunity Recognition, Pro-activeness, Risk-taking Propensity, Role Model

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	122.800	6	20.467	39.949	.000 ^a
	Residual	109.125	213	.512		
	Total	231.925	219			

a. Predictors: (Constant), Educational Support, Need for Achievement, Opportunity Recognition, Pro-activeness, Risk-taking Propensity, Role Model

b. Dependent Variable: Entrepreneurial Intent

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.230	.305		4.034	.000		
	Role Model	.868	.105	.496	8.293	.000	.617	1.621
	Opportunity Recognition	.049	.053	.049	.938	.349	.801	1.249
	Pro-activeness	.029	.055	.028	.518	.605	.779	1.284
	Need for Achievement	.008	.052	.007	.146	.884	.849	1.178
	Risk-taking Propensity	.182	.057	.190	3.214	.002	.631	1.585
	Educational Support	.127	.055	.131	2.306	.022	.687	1.455

a. Dependent Variable: Entrepreneurial Intent

Table 9: Output of Entrepreneurial Intent Factor Run

The findings showed that entrepreneurial role model(s) in family had a significant positive effect ($\beta=0.868$, $p<.01$) on the amount of entrepreneurial intent. This finding is consistent with the results of previous research (Aizzat et al., 2009; Raijman, 2001; Van Auken et al., 2006; Scherer et al., 1989a). Students who had entrepreneurial role model(s) in family were more likely to have higher levels of entrepreneurial intent than were students who had no entrepreneurial role model(s) in family. The close family members who own businesses support and assist them by providing motivation, encouragement, vicarious experience and capital, access to relevant information, markets and other necessary resources for business formation. Specifically, each standard deviation change in the number of entrepreneurial role model in family represented 86.8 percent of one standard deviation change in the level of entrepreneurial intent. As the number of entrepreneurial role model(s) in family increased, the level of entrepreneurial intent increased.

Risk-taking propensity had a significant positive effect on the level of entrepreneurial intent ($\beta=.182$, $p<.01$), consistent with previous research findings (Forlani & Mullins, 2000; Begley & Boyd, 1987; Hull et al., 1980). Students who had more risk-taking propensity were more likely to have higher levels of entrepreneurial intent than were students who had less risk-taking propensity. For most entrepreneurs, risk is part of a strategic process in new venture development to pursue their dreams and a central element in a variety of decision contexts such as entry into new ventures or new markets, new product introductions, the uncertain nature of consumer and competitive responses. Specifically, each standard deviation change in risk-taking propensity represented 18.2 percent of one standard deviation change in the level of entrepreneurial intent. As risk-taking propensity increased, the level of entrepreneurial intent increased.

Educational support had a significant positive effect on the level of entrepreneurial intent ($\beta=.127$, $p<.05$), consistent with the results of previous research (Schwarz et al., 2009; Autio et al., 1997; Turker & Selcuk, 2009). Students who had more educational support were more likely to have higher levels of entrepreneurial intent than were students who had less educational support. Education at university enhances students' entrepreneurial efficacy such as opportunity seeking, resource assembling, and leading the business to success through attitude, knowledge and skills. It also can enhance entrepreneurial efficacy of students through learning activities, business plan development, running a real small business, and increasing their desirability to start-up a new venture. Specifically, each standard deviation change in perceived educational support represented 12.7 percent of one standard deviation change in the level of entrepreneurial intent. As perceived educational support increased, the level of entrepreneurial intent increased.

5

Conclusion

5.1

Conclusion

Having studied the factors contributing to entrepreneurial intent among 220 students at the National University of Management, the results of this study found three factors: entrepreneurial role model in family, risk-taking propensity, and educational support. The three factors accounts for substantial variation in the levels of entrepreneurial intent. These results are consistent with other previous research findings.

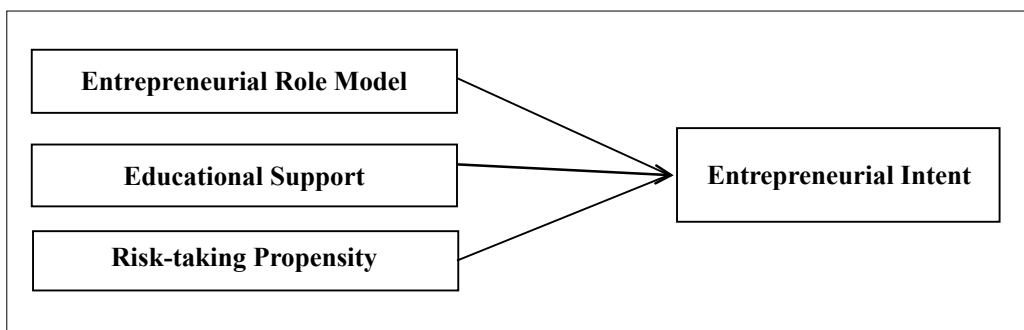


Figure 2: Revised proposed conceptual model of the study

5.2

Implications of the Study

This study has several implications for students, parents, universities, and the government on how to cultivate entrepreneurial intent among university students through a clearer picture of how intentions are formed or molded to start a business. To promote entrepreneurial intent among university students, here are some suggestions:

- Students should use the three factors as a checklist for evaluating themselves if they want to start up a business in the near future. They should also consider other factors such as opportunity recognition, pro-activeness, need for achievement as mentioned in this study.

- Parents should support and fulfill what their children need to be entrepreneurs (e.g., motivation, encouragement, experience, capital, and other necessary resources for business formation). Moreover, these findings should be used as a checklist in order to cultivate entrepreneurial mindset among their children, too.
- Universities should equip students with necessary skills needed to be entrepreneurs through planning and developing a more effective entrepreneurship education curriculum. They should also develop various activities and programmes that will reinforce the positive attitudes towards entrepreneurship through enhancing students' entrepreneurial efficacy such as opportunity seeking, resource assembling, and leading the business to success, especially through inviting entrepreneurs to share their successful experience, developing a business plan, running a real small business, and increasing their desirability to start-up a new venture.
- The government should form a mechanism to support young adults who want to be entrepreneurs via setting up a free public telephone line for consultation, intervention, advice on business plan, fund raising, incubating, etc.

5.3 Limitations and Future Research

This research faced a few limitations. The samples are limited to the students from the National University of Management only. Samples from other higher institutions should be taken to test this model in future to provide better understanding of the entrepreneurial intention of young Cambodian adults. Future research can include other variables such as resources available, financial support and facilities or use other sources of modeling to build the entrepreneurial intent of students without parents who are business owners.

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QUESTIONNAIRE

Student: _____

Phone: _____

Marital Status: _____

Age: _____

Gender: Male ☐ Female ☐

Pursuing: Master ☐ Bachelor ☐

Major: _____

Date: _____

Part A: Entrepreneurial Role Model in Family *Check the most appropriate answer.*

	Statement	Circle the box you decide
1	Is your father an entrepreneur?	Yes <input type="checkbox"/> No <input type="checkbox"/>
2	Is your mother an entrepreneur?	Yes <input type="checkbox"/> No <input type="checkbox"/>
3	Is your brother an entrepreneur?	Yes <input type="checkbox"/> No <input type="checkbox"/>
4	Is your sister an entrepreneur?	Yes <input type="checkbox"/> No <input type="checkbox"/>

(Tung et al., 2011)

Part B: Below are statements with which you may agree or disagree. Using the 1 – 7 scale below, indicate your agreement with each item by circling the appropriate number.

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Disagree
- 4 = Neutral
- 5 = Agree
- 6 = Moderately Agree
- 7 = Strongly Agree

Opportunity Recognition (Wu, 2009)

	Statement	Circle the box you decide
1	I have a special alertness or sensitivity toward opportunities.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
2	I would describe myself as opportunistic.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
3	"Seeing" potential new business opportunities comes very naturally for me.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
4	I enjoy just thinking about and/or looking for new business opportunities.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
5	I often think of new business ideas when I am totally relaxed, doing something unrelated to business.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
6	While going about routine day-to-day activities, I see potential opportunities all around me.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
7	I can recognize potential opportunities where I have no personal experience.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7

Educational Support (Gelard and Saleh, 2011)

	Statement	Circle the box you decide
1	The education at my university encourages me to develop creative ideas for being an entrepreneur.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
2	My university provides the necessary knowledge about entrepreneurship.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
3	My university develops my entrepreneurial skills and abilities.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7

Educational Support (Gelard and Saleh, 2011)

	Statement	Circle the box you decide
1	I will start my own business in the near future.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
2	It is has been my intent to start my own business.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
3	Starting my own business is an attractive idea to me.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
4	I am enthusiastic about starting my own business.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
5	It is desirable for me to start my own business.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
6	I spent a lot of time thinking about owning my own business.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
7	Owning my own business is the best alternative for me.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
8	With enough resources, I would have set up my own company.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7

Need for Achievement (Wu, 2009)

	Statement	Circle the box you decide	Statement
1	I seldom compete with others.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I frequently engage in competitive activity where winning or doing better than someone else is the primary concern.
2	I strive for more ordinary success.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I strive for unique, extraordinary, and creative accomplishments which are marks of success
3	I concentrate more on short-term and daily tasks.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I set difficult and long-term goals for myself which I attempt to reach.
4	I just do enough work to get by.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I always do more than what's expected of me.
5	I put little time and effort into my work.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I plunge into tasks with all my heart.
6	I am not motivated to succeed.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I want to be the very best of myself.
7	I shirk my duties whenever possible.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I continue until everything is perfect.

Pro-activeness (Wu, 2009)

	Statement	Circle the box you decide	Statement
1	I typically respond to actions which competitors initiate.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I typically initiate actions which competitors respond to.
2	I am never the first to introduce anything new.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I am always the first to introduce something new.
3	I typically seek to avoid competitive clashes, preferring a “live-and-let live” posture.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I typically adopt a very competitive, “undo-the competitors” posture
4	I have a strong tendency “follow the leader” in many things.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I have a strong tendency to be ahead of other competitors in many things.
5	I believe that unfortunate events occur because of bad luck.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I believe that my success depends on ability rather than luck.
6	I always do things at the last minute.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I am always prepared.

Risk-taking Propensity (Wu, 2009)

	Statement	Circle the box you decide	Statement
1	I have a strong proclivity for low risk projects (with normal and certain rates of return).	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I have a strong proclivity for high risk projects (with chances of very high returns).
2	I believe that, owing to the nature of the environment, it is best to explore it gradually via timid, incremental behavior.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I believe that, owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the one's objectives.
3	When confronted with decision-making situations Involving uncertainty, I typically adopt a cautious, "wait and- see" posture in order to minimize the probability of making costly decisions	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	When confronted with decision-making situations involving uncertainty, I typically adopt a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.
4	I always avoid dangerous situations.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I always seek adventure.
5	I would never make a high risk investment.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I am willing to try anything once.
6	I always stick to the rules.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I know how to get around the rules.
7	I would never go hang-gliding or bungee-jumping.	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	I enjoy being reckless.

DETERMINANTS OF THE INTERNET ADOPTION AMONG SMALL AND MEDIUM ENTERPRISES (SMEs) IN CAMBODIA Phang, CHHAY, DBA Candidate

Mr. CHHAY Phang⁵⁴, DBA Candidate

1 Introduction

The adoption of Internet technologies by the small business sector is important for its survival and improving the ability of small businesses to compete with larger organizations. It also enables the small business to operate on an international scale (Berisha-Namani, 2009). Many researches in developed country reveal that Internet technologies provide a cost-effective way for small organizations to market their business, launch new products, improve communications, gather information, and identify potential business partners (Berisha-Namani, 2009; Poon & Jevons, 1997; Samiee, 1998).

Even though the Internet has many benefits in business activities and there are strongly supports from several agencies such as NIDA, ADB, the International Finance Corporation - Mekong Private Sector Development Facility, German Organization for Technical Cooperation (GTZ), to fund for training course and self-study workbooks in Khmer on production management, marketing, human resource and operations management (“ASEAN SME POLICY INDEX 2014 TOWARDS COMPETITIVE AND INNOVATIVE ASEAN SMES,” 2014). In addition to the supporting from above agencies, the government has also allocated some amounts in the budget to support R&D in this area. Nevertheless, the number of users of Internet is still low comparing to neighboring countries. According to special report on Asia Internet Use broadcasted by Internet World stated on June 30, 2012 revealed that percentage of Internet users in Cambodia is 4.4% of the population is too low to compares to Lao is 9.0% of its population (“Asia Internet Usage Stats Facebook and Population Statistics,” 2012).

If the factors impacting on users’ likelihood that a technology will be adopted or not adopted were clear, then it could be possible to evaluate the likelihood of success of a producer’s new technology. The objective of the study is to determine factors affected the adoption of Internet among SMEs in Cambodia by using Technology Acceptance Model (TAM) as framework of the research.

⁵⁴ Mr. CHHAY Phang Dean of the faculty of IT

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Literature Review

The research on Internet adoption has been focused by many researchers in various fields, approaches and with different theories. As a consequence, the literature on Internet adoption is broad and ranging from education to banking industries, for example, Lai and Ulhas (2012) used the theory of Technology Acceptance Model (TAM) to study collaboration using wikis; Goh and Liew (2009) used TAM to study electronic library; Sa'nchez, Hueros, and Ordaz (2013); and Camarero, Rodri'guez, and Jose (2012) used TAM investigated E-learning behavior. Beside educational industry, some authors also use TAM to investigate in marketing and management field, for example, Alam, Ali, and Jani (2011) used TAM to investigate factors affect E-commerce; Pinho and Soares (2011); and Lorenzo-Romero, Constantinides, and Alarco'n-del-Amo (2011) use TAM to investigate factors affect adoption of social network; Kamarulzaman (2007) use TAM to investigate factors affect travel shopping; Nguyen and Barrett (2006) use TAM to investigate exporting firms. Additionally, TAM is also used in studying of manufacturing industry, for example, Wang and Lin (2012) use TAM to study factors influence the adoption of mobile value-added services. Notably, TAM serves as popular framework for investigating in banking industry, for example, Giovanis, Binioris, and Polychronopoulos (2012); Kesharwani and Bisht (2012); Chong, Ooi, Lin, and Tan (2010) used TAM to study factors affect adoption of Internet banking, while Akturan and Tezcan (2012); Koenig-Lewis, Palmer, and Moll (2010) used TAM to investigate factors influence mobile banking adoption.

A part from TAM, some authors used theory of planned behavior (TPB) and the theory of reasoned action (TRA) to investigate factors influence adoption of Internet, for example, Scannell, Calantone, and Melnyk (2012) used TPB to investigate factors affect Internet adoption in manufacturing industry, while Chen and Lu (2011) used TPB to model e-coupon proneness. Meanwhile Yoh (2003) used TRA to investigate factors influence Internet shopping.

Even though several theories were used to investigate in technology acceptance, statistical technique seems likely to be common, structural equation modeling (SEM) has seen to be a popular approach for the study of Internet adoption. In a rear occasion, some authors preferred to use another approach, for example, Alam et al. (2011); Chong et al. (2010); Goh and Liew (2009) used multiple regression approach for investigating their studies.

3 Technology Acceptance Model

A number of studies of IT adoption have been reported in the literature such as theory of reasoned action (TRA) (Fishbein and Ajzen, 1975) as cited in (Wang, Wang, Lin, & Tang, 2003), technology acceptance model (TAM) (Davis, 1989), theory of planned behaviour (TPB) (Ajzen, 1991). Among IT models, TAM has a strong base in theory and been supported by a large number of empirical studies (Lucas and Spittler, 1999) as cited in (Saadé & Kira, 2006). Several other studies also have provided evidence for TAM e.g. (Igarria, Zinatelli, Cragg, & Cavaye, 1997). Moreover, the two main constructs in TAM, perceived usefulness and perceived ease of use which have been hypothesized to be fundamental determinants of user acceptance of IT, can be widely applied (Adams, Nelson, & Todd, 1992).

TAM was developed to predict individuals' computer acceptance. There are two beliefs that are especially important in explaining why people accept or reject IT according to TAM. Firstly, people tend to use or not to use an IT application to the extent they believe it will help them to perform their job better (Davis, 1989). Davis refers to this as perceived usefulness, which is defined as the degree to which a person believes that using a particular system would enhance his or her job performance.

Secondly, even if potential users believe that a given application is useful, they may, at the same time, believe that the system is too hard to use, and that the performance benefits of usage are out-weighed by the effort involved in using the application. Therefore, another construct, perceived ease of use, which is defined as the degree to which a person believes that using a particular system would be free of effort, is proposed. Davis postulates that high levels of perceived usefulness and perceived ease of use predict attitude, which in turn, intentions, and then explain adoption (see Figure 3.1)

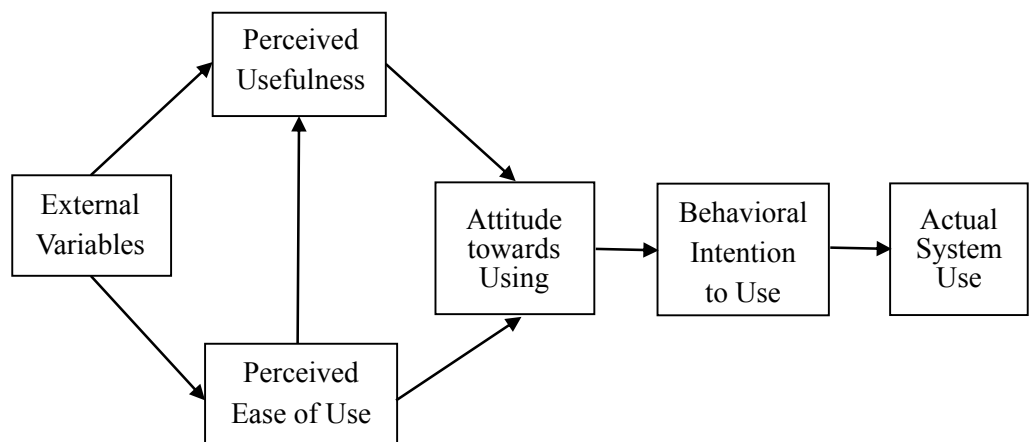


Figure 3.1 Technology Acceptance Model (Davis, 1993; Davis & Arbor, 1989; Davis, 1986)

Original TAM (see figure 3.1), proposed by Devis (1986), is an influential extension of Ajzen and Fishbein's theory of reasoned action (TRA). TAM uses TRA as a theoretical basis for specifying the causal linkages between the two key features: perceived usefulness and perceived ease of use, and users' attitudes, intentions and actual computer adoption behavior. TAM is considerably less general than TRA, but it can be readily extended to apply to any type of technology. Therefore, TAM seems likely to be fitted for this study.

4 Research Framework

TAM theory was adopted for the current study with slight modification from the original model to adapt to current situation. The proposed model was formed as shown in Figure 4.1

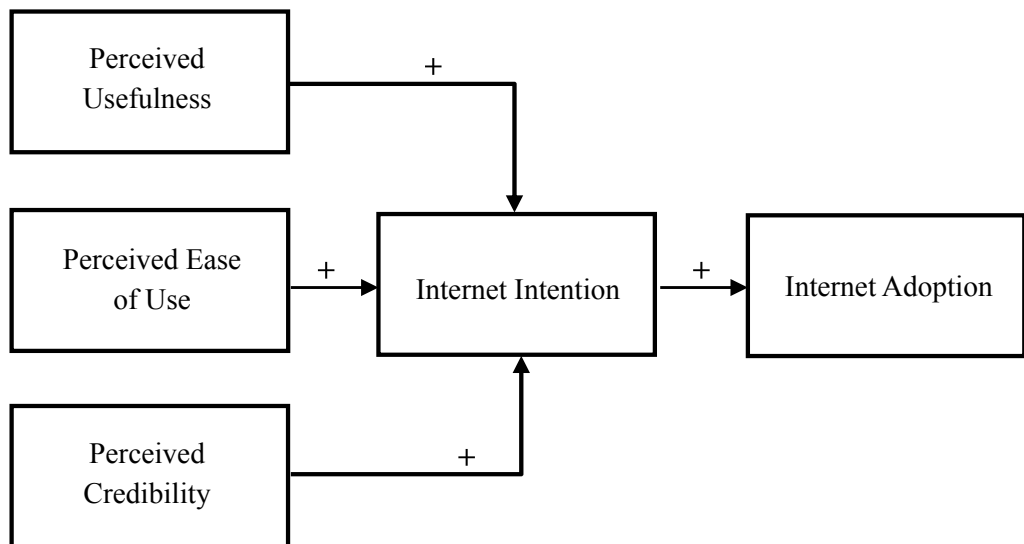


Figure 4.1 A Proposed Model for Internet Adoption in SME in Cambodia

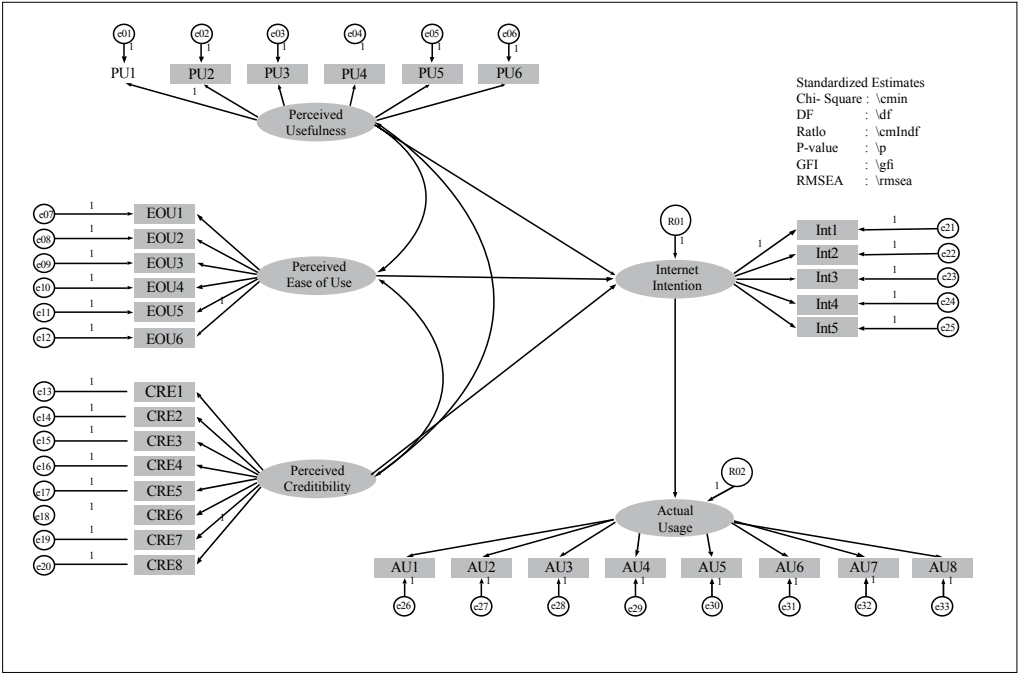


Figure 4.2. Hypothesized Model

Operational Definitions of Research Variables

Perceived usefulness (PU) is defined as the extent to which a person believes that using particular system will enhance his or her job performance (Davis, Bagozzi, & Warshaw, 1989). There are six items adopted from previous studies in TAM model (Davis, 1989; Davis et al., 1989; Hsu & Lu, 2004; Moon & Kim, 2001; Yu, Ha, Choi, & Rho, 2005) to measure the perceived usefulness variable.

Perceived ease of use (PEU) is defined as to which a person believes that using a particular system will be free of effort (Davis et al., 1989). Based upon the previous research (Davis, 1989; Davis et al., 1989; Hsu & Lu, 2004; Moon & Kim, 2001; Yu et al., 2005). There are six items in the perceived ease of use construct were adapted from Chuttur (2009).

Perceived credibility (CRE) refers to security and privacy. Security is defined as the protection of information or systems from unsanctioned intrusions or outflows, while privacy is the protection of various types of data that are collected (with or without the knowledge of the users) during users' interactions with the internet (Hoffman, Novak, & Peralta, 1999). Eight items were adapted from Sentosa, Nejatian, Piaralal, and Faisal (2011), to measure perceived credibility construct.

Intention (INT) is an indication of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior (Bagozzi, Baumgartner, & Yi, 1992). Based on the literature (Suh & Han, 2003; Yu et al., 2005), five items were used to measure the construct of behavior intention.

Adoption or Actual Usage (AU) is the manifest, observable response in a given situation with respect to a given target. Single behavioral observations can be aggregated across contexts and times to produce a more broadly representative measure of behavior (Ajzen & Fishbein, 1980 as cited in Wang et al., 2003). Eight items were adapted from Sentosa et al. (2011), with slight modification to measure the construct of actual usage behavior.

Research Hypothesis

Based on the proposed model, there are nine *alternative hypotheses* using for the current study.

H1: There is significantly positive relationship between perceived usefulness and internet intention.

H2: There is significantly positive relationship between perceived ease of use and internet intention.

H3: There is significantly positive relationship between perceived credibility and internet intention.

H4: There is significantly positive relationship between intention and internet adoption.

There remain three hypotheses in the study; those are assumed to be a mediator between the three exogenous and internet adoption (endogenous):

H5: Intention mediates the relationship between perceived usefulness and adoption.

H6: Intention mediates the relationship between perceived ease of use and adoption.

H7: Intention mediates the relationship between perceived credibility and adoption.

5 Research Methodology

Survey method concerns with the present and attempts to determine the status of the phenomena under investigation such as survey testing method, analytical survey. The survey method currently is most popular one in conduct research (Mouly, 1970, cited in Singh (2006)). Survey questionnaire is main tool of this research. It is a closed-ended form with 7-liker scale adapted from Wang et al. (2003), 1 means that strongly disagree, and 7 means that strongly agree. A sample size of 500 SMEs locate in Phnom Penh

Capital were chosen randomly, and based on systematic method with 5 SMEs as skip interval. After three months had been elapsed, 405 valid responses were obtained from the survey, then the data screening process was conducted, 16 responses were dropped, remaining 369 responses were also check the Cronbach's coefficient alpha, (α) to see the questionnaire reliability. The values of the α of the five constructs range from 72.% to 80.7%.

The reliability of a scale indicates how free it is from random error (Pallant, 2005) (i.e., lucky in guessing). Its values range from 0 to 1, with higher values indicating greater reliability. The Cronbach's coefficient alpha, (α) for current study was obtained with a repetition of the same questionnaire with 50 SME owners or top managers. Table 3.2 reveals that all Cronbach's alphas for the five constructs are larger than 0.70. These figures indicate that the questionnaire is acceptable for conducting the research.

Table 4.2 Summary Cronbach's Alpha for the Five Variables

Variables	Cronbach's alpha
Perceived Ease of Use	72.5%
Perceived Usefulness	76.1%
Perceived Credibility	73.6%
Internet Intention	80.7%
Internet Adoption	71.5%

6 Data Analysis Technique

Descriptive Statistics

Frequency and percentage were used to measure the percentage of returned questionnaire and also used to describe the respondents' profile such as the profile of SME companies, type of business, size of business, number of employee.

Measurement Model

Structural equation modeling (SEM) can be thought of as the union of confirmatory factor analysis (CFA) and path analysis, in which CFA procedures are used in testing the (convergent) validity of the indicator variables (Meyers, Gamst, & Guarino, 2013). To conduct CFA process, it requires some of fit indices confirm its validity. There are dozens of model fit indices described in the structural equation modeling (SEM), and new indices are being developed all the time. The fitness indices for current study are followed the guidance provided by Hu and Bentler (1999), and Kline (2005) (see Table 6.1).

Table 6.1 Goodness of Fit Indices

Test	Index Values (30 items)
χ^2	$p > .05$
χ^2/df	< 2.00
GFI	> 0.90
SRMR	.05
RMSEA	< 0.08
CFI	> 0.95

Structural Model

The structural model is akin to path analysis in that it looks for the causal relationship between the variables of interest in the theory (Meyers et al., 2013). To evaluate the coefficients of each path, the same of fit indices used in measure model were used in this process.

Evaluation of Significance of Mediation Variable

Several methods to test statistical significance of mediated models have been proposed. For current study, Sobel test (Sobel, 1982) is seen useful for this regard.

7 Model Diagnostics

Hendry's approach argues that a good model is consistent with the data and with theory. Hendry's approach also suggests the extensive use of diagnostic test to ensure the statistical adequacy of the model (Gilbert , 1986) as cited in Brooks (2008). There are three assumptions to be checked in the current study. Firstly, model diagnostics can be checked through Standardized Residual (SR) if any value of SR exceeds absolute value of 4.0 suggests problem (Hair, Balck, Babin, Anderson, & Tatham, 2006; Paswan, 2009). Secondly, the normality was also conducted, the covariance residuals should not greater than the critical ratio (cr) of 2.58. Finally, multicollinearity also be check through value of average variance extracted (AVE). In principle, if AVE values is greater than its corresponding correlation square; a conclusion can be reached that no problem of collinearity was present.

8 Suggestion for future research

Future research should investigate other underpinning TAM theory such as TAM2 (Venkatesh & Davis, 2000) or/and extend TAM (Hong, Thong, & Tam, 2006), and Use TAMs to investigate in specific type of SME rather than general one. Include degree of knowledge of SEM owners and culture because knowledge and culture variations may have significant different effects on IT adoption.

Practical Implication

The study's findings outline and describe how the dominant factors affect actual usage of internet by SMEs. By considering usefulness, ease of use, and perceived creditability in the stage of product development, the product could be well-accepted by end-users and partners.

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THE STUDENT'S PERCEPTION OF SERVICE QUALITY: A CASE OF NATIONAL UNIVERSITY OF MANAGEMENT (NUM), PHNOM PENH, CAMBODIA

Dr. UNG Veasna⁵⁵

Abstract

This paper examines the relationship between perceptions of service quality and student satisfaction. A structured questionnaire was self administered to 386 respondents in National University of Management (NUM) that is a leading business and management school in the Cambodia. The research also presents an enhanced approach to using augmented SERVQUAL tool (tangibility, reliability, assurance, responsiveness, empathy) and additional three dimensions (reputation, guidance, and accessibility & affordability) concerning services quality for measuring student satisfaction. An empirical data analysis was conducted and the estimated results show that seven dimensions (assurance, tangibility, responsiveness, reputation, guidance, accessibility and affordability, and empathy) have a significant, positive impact on the overall satisfaction of NUM students, with reputation, assurance, and accessibility and affordability dimension being the most important predictor of NUM student's satisfaction.

Keywords: Service Quality, Student Satisfaction, NUM-SerQual, National University of Management (NUM), Phnom Penh, Cambodia.

⁵⁵ Dr. UNG Veasna is Chair of Tourism and Hospitality Faculty, and research member in National University of Management, Phnom Penh, Cambodia. E-mail: ung_veasna@yahoo.com

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Introduction

In the economy of many countries emphasize on vital role of service industries. Providing quality service is a bridge to success, and confirmed by many experts that service quality trends to the most powerful competitive shaping marketing and business strategy in 21st century's world of global competition. Growing profitability, and competitive advantage by generating repeat sales, positive word-of-mouth feedback, customer loyalty and competitive product differentiation are the results in service quality since the 1980s (Adullah, 2006), and it also positively associated with financial performance (Hallowell, 1996), customer satisfaction (Hanaysha et al., 2011; Stauss & Neuhaus, 1997; Soderlund, 1998) and customer retention (Keaveney, 1995). Profit and non-profit organizations are concerned about service quality and consumer satisfaction in new era. For service providers and researchers are interesting in knowing about consumers' expectations and perceptions of service quality. It is a good way to attract, serve and keep customers (Sukwadi et al., 2011).

Moreover, satisfaction with the consumption experience is an evaluative response towards the consumption experience: that is, it is an attitude (Athiyaman 2000). Anderson and Mittal (2000) confirmed that highly satisfied customers also help to spread the positive word-of-mouth recommendations and in effect become walking, talking advertisements for providers whose service has pleased them, thus lowering the cost of attracting new customers. Satisfied customers tend to buy more, to be less price conscious, and to generate the positive word-of-mouth recommendations, thus contributing to profit. On the contrary, highly dissatisfied customers spread a faster negative word-of-mouth.

Quality in education institution is vital and be determined by focusing on students' needs and expectations can be satisfied (Tan & Kek, 2004). Meanwhile, higher education also adopted directly the concepts of service quality (Zafiroopoulos, & Vrana, 2008; Jain et al. 2010; Morales, and Caldereon, 1999), and educational services quality, student satisfaction are also interested in universities (Legčević, 2009). Understanding the student's expectation is important because they have become more discriminating in choosing colleges and universities in high competitive atmosphere (Jain et al. 2010). Student's desire may involve satisfaction in higher educational institutions (Awan, 2010) and their needs would have to be satisfied by the parties involved, such as the need to acquire a valuable educational experience and good service quality (Yunus, et al. 2010). The student's evaluation of the consumption experience: student satisfaction will impact on her overall attitude which in turn could result in repeat purchase and/or post-purchase communications about the product/service (Bolton and Drew 1991), satisfied students would attract more students through word-of-mouth communications

(Alves & Raposo, 2010). Furthermore, student's satisfaction builds self-confidence which leads students develop useful skills, acquire knowledge, and become more confident found by psychologists (Letcher and Neves, undated). So service quality and student satisfaction in universities are the cornerstone for success in any organization, and are perceived as key point in acquiring and sustaining competitive advantage, attracting the students, brand image in university as well as improving living standard of staffs in organizations.

Sukwadi et al., (2011) indicated that some identifications of the service quality and an assessment of student satisfaction of education provided to students are performed by many HE institutions. Moreover, several studies involved service quality attributes were conducted. Currently, several researchers have explored the subjects with varying perspectives and using different methodologies in which SERVQUAL perhaps is very popular instruments to measure service quality. This model initially developed by Parasuraman et al. (1985) and later further refined by Parasuraman et al. (1988). Some authors have used the augmented SERVQUAL technology by incorporating other relevant dimensions. Since its inception, the SERVQUAL model has been widely used in a large variety of service sectors, including HE sector. Recent published studies on HE sector have been carried out for many developing and developed countries, which include, among others, Taiwan (Sukwadi et al.,2011); Pakistan (Malik et al.,, 200X); Malaysia (Abu Hasan et al., 2008, Ilhaamie, 2010); India (Singh and Khanduja, 2010); UK (Barnes, 2005); Greek (Zafiropoulos and Vrana,2008) and Singapor (Tan and Kek, 2004).

This objective of research is to examine the influence of NUM SerQual dimensions on student satisfaction in the National University of Management (NUM) in Cambodia. Specifically, the purpose of this study is also to measure and evaluate the service quality in the NUM, and multiple regression analysis was conducted. The study also investigates the factors that contribute most significantly to NUM student's satisfaction. A good understanding of these determining factors is critically important for the NUM's managers in developing an effective strategy to improve student satisfaction. Research questions thus need to be formally formulated and vigorous analysis are required to systematically answer the questions before any sound managerial implications can be provided.

2 Literature Review

In today's world of global competition, the most powerful competitive weapon for shaping marketing, business strategy and success in organization emphasizes on service quality (Abdullah 2006). Researched by Parasuraman et al., (1988) in service sector analysis from the consumer's perspective, the most well known tool is probably SERVQUAL technology yielded a useful concept of ten potentially overlapping dimensions. The authors defined service quality as the gap between consumer expectations and perceptions. These ten original dimensions are tangibles (refers to appearance of physical facilities, equipment, personnel and communications materials); reliability (refers to ability to perform the promised service dependably and accurately); responsiveness (refers to willingness to help customers and provide prompt service); competence (refers to possession of the required skills and knowledge to perform the service); courtesy (refers to politeness, respect, consideration, and friendliness of contact personnel); credibility (refers to trustworthiness, believability, honesty of the service provider); security (refers to freedom from danger, risk or doubt); access (refers to approachability and ease of contact); communication (refers to keeping customers informed in language they can understand and listen to them); and understanding the customer (refers to making the effort to know customers and their needs), which was later created by these academics. As pointed out by Barnes, 2006, the SERVQUAL instrument represents a multi-item scale that can be used for measuring expectations and perceptions of service quality - as perceived among consumers. Extensive statistical analysis revealed significant correlations between certain dimensions depicted in the original concept in developing the research instrument. In their later studies, Parasuraman et al. (1988, 1990) reduced the original ten potentially overlapping dimensions to five testable dimensions such as tangibles, reliability, responsiveness, assurance and empathy. This model has been conducted extensively within both practitioner and academic research for assessing service quality. The initial concept presented by Parasuraman et al., (1985) is more and more useful for focusing the importance of the potential service gap between customer expectations and perceptions in service organizations in over the last fifteen years.

However, based on Sureshchandar et al., (2001); Baumann et al., (2007), in particular operationalization of expectations, reliability of instruments' difference score formulation and scale's dimensionality across industrial settings, the SERVQUAL model also face some criticisms on the theoretical and operational grounds. In the light of these criticisms, Buttle (1996) commons some future research directions; one of which is to continue to investigate the relationships among service quality, customer satisfaction, buying behavior, customer retention, behavioral intention,

word-of-mouth communications and market share. Despite SERVQUAL model being criticized, it is more popular, and has been used for studies of service-providing organizations in many countries. SERVQUAL models are considered as significantly for quality concept (Nyeck et al., 2002). And Ahmed (2010); Khan et al., (2011) also pointed out that it was used and widely accepted by researchers and academicians in study of service quality model given by Parasuraman et al. (1988) and it also has been used to evaluate service quality provided by more high education institution such as in UK (Barnes, 2006); in Pakistan (Ahmed et al., 2010; Khan et al., 2011); in Malaysia (Hanaysha, et al., 2011; Mosahab, et al., 2010; Ilhaamie, 2010); in Brazil (Oliveira, 2009); in Greek (Zafriopoulos and Vrana, 2008); and in India (Singh and Khanduja, 2010).

Aligning to education quality in high education sector, students and institutions create strong ties together ; therefore, schools have to focus on students for own financial benefits and in turn, students emphasize on institutes to absorb knowledge and help to forge meaningful employment and also are one of the most important stakeholders. Students' concern for quality and measuring the quality of service provided to students are also interested for various researchers (Ahmed et al., 2010). Meanwhile, Service quality in educational sector covers a variety of educational activities both inside and outside the classroom such as classroom based activities, faculty member/student interactions, educational facilities, and contacts with the staff of the institution and defined on the basis of students overall evaluation on the services they received which is part of their educational experience (Hanaysha, et al., 2011). As cited by Hanaysha, et al., (2011), Ahmed, et al. (2010) noted that service quality is a key performance measure in educational excellence and is a main strategic variable for universities to create a strong perception in student's mind in relation to attraction, satisfaction and retention of students and it has direct impact on funding, job security and viability of educational institute. The service and education quality lead students to make decision for selection of university (Veloutsou et al. 2004). Generally, comparing what students want or expect against what they are really getting cannot separate from evaluating and judging the service quality to be satisfactory (Hanaysha, et al., 2011).

With the purpose of improving service quality provided to students in educational institutes, we should conduct through student satisfaction survey (Low 2000). And one of the prime priorities in education sector focus on student satisfaction in which leads to competitive advantage and word of mouth marketing for educational institutions (Ahmed et al., 2010). Satisfaction of students depends on teaching staff, enrolment and course organization and leads students to intent to return to schools, helps university to improve and keep its reputation, and increasing number of students (Navarro et al. 2005), intentions of further studies in the same institute, using ancillary services and lastly willingness to recommend others (Blackmore et al., 2006), direct bearing on performance of student (Chambel and Curral, 2005),

In more recent study, Khan et al. (2011) determined the dimensions of service quality in Pakistan, they found that service dimension of empathy carries the heaviest weight in explaining student satisfaction, followed by responsiveness, reliability and assurance, but Ahmed (2010) found that tangible, empathy and responsiveness contribute significantly to student satisfaction. For Malaysia's high education sector, Hasan et al. (2008) showed that high educational institutes, empathy, assurance, tangibles, responsiveness and reliability dimensions are found to be the significant predictors of overall student satisfaction, with empathy dimension making the most contribution.

3 Research Methodology

3.1 Data Collection

Assessment of service quality in the National University of Management (NUM), a questionnaire is designed and distributed randomly to target respondents, who are studying in the NUM of Phnom Penh, Cambodia. This study adapted and used the most popular SERVQUAL instrument in service organization, developed by Parasuraman et al. (1985, 1988). The questionnaire includes the five widely-used dimensions (tangibility, reliability, responsiveness, assurance, and empathy) and three additional dimensions of service quality (reputation, guidance, and accessibility & affordability), following Sohail & Shaikh (2004); Barnes (2006); and Lim & Tang, (2000), respectively.

The questionnaire is classified into three major parts. The first part of the questionnaire contains respondents' perceived performance. The second part captures the information related to overall satisfaction. Respondents were asked to respond to each item on the widely used five-point likert-type scale, ranging from 5 being very satisfied to 1 representing very dissatisfied. This scale is often used for measuring student satisfaction and other related-satisfaction variables by researchers Sukwadi et al., (2011); Hanaysha, et al., (2011); Legčević (2009); and Zafiroopoulos & Vrana (2008). The third part of the questionnaire is used to get the demographic information of the respondents.

Roscoe (1975) suggests a series of general rules in determining the acceptable sample size for research, and proposes that for any research intending to conduct a multiple regression analysis, a sample size should be 10 times as large as that of the number of variables. In order to produce the best estimates possible, the collection of a reasonably large data set has to be made from the population. To this end, 400 questionnaires were administered to the students of all faculties and all time of study in the National University of Management. The field research took place during May–June 2014 at NUM, Phnom Penh, Cambodia.

3.2 Analytical Techniques

All data collected are fed into statistical packages, in particular the Statistical Package for the Social Sciences (SPSS 20.) and/or STATA 12.1 for analysis. The statistical analysis of data includes descriptive statistics (frequency, mean, and standard deviation), and multiple regression analysis and other necessary testing to obtain the best possible results. To avoid reporting misleading results from the estimation of the regression model, several diagnostic tests are needed. These tests include multicollinearity checks, heteroskedasticity test and model specification test, known as Ramsey (1969)'s RESET test. Usually, before presenting econometric results, we carry out several tests, such as those heteroskedasticity in which the Breusch and Pagan (1979) test for heteroskedasticity (Verbeek, 2004; Wooldridge, 2006). The multicollinearity check is made through values of variance inflation factor (VIF), which has been shown to be equal to $\frac{1}{1 - R^2}$, where R^2 is obtained from the multiple correlation coefficient of an explanatory variable regressed on the remaining explanatory variables. In order to obtain stable estimated slope parameters, VIF should be lower than five (Studenmund, 2006).

Reliability check is to be carried out in order to assess the degree to which data collection method will yield consistent findings; similar observations would be made or similar conclusions reached by other researchers. In order to test the reliability of the instrument used, the reliability coefficient Cronbach's alpha is used. It is generally agreed that Cronbach's Alpha should exceed 0.70 to be reliable (Hair et al., 2010).

3.3 Model Proposed

Student satisfaction and service quality are the "corner stone" for any profit and non-profit organization and is in the heart of all students in universities. In light of discussion in the review of related literature, following among others Lim & Tang (2000); Sohail and Shaikh (2004); Barnes (2006); Hasan et al., (2007); Ilhaamie, (2010); Singh and Khanduja (2010); Khan, et al., (2011); Hanaysha, et al., (2011); and Sukwadi et al.,(2011) the relationship between service quality and student satisfaction can be modeled.

This model consists of a dependent variable, student satisfaction, and seven explanatory variables: tangibility, responsiveness, assurance, empathy, reliability, reputation, guidance and accessible & affordability. The current study augmented SERVQUAL model which has been developed and used extensively in assessing and measuring NUM services. This study is of particular interest since, to the best of knowledge, no research was undertaken with respect to the determining factors influencing student satisfaction in National University of Management in Cambodia.

Proposed Research Model (named NUM-SerQual)

$$\begin{aligned} \text{OSS} = & \beta_0 + \beta_1 \text{Reliability} + \beta_2 \text{Assurance} + \beta_3 \text{Reputation} + \beta_4 \text{Tangibility} \\ & + \beta_5 \text{Empathy} + \beta_6 \text{Responsiveness} + \beta_7 \text{Guidance} \\ & + \beta_8 \text{Accessibility} + \epsilon \end{aligned}$$

Where OSS denotes Overall Student Satisfaction, and ϵ is error term, which is assumed to be normally distributed

4 Empirical Data Analysis and Discovery

The purpose of this study was to assess students' satisfaction of service quality in NUM in relation to student's perception. This research will present the results of survey questionnaires and commence with an analysis of the quantitative data.

4.1 Profile of NUM students

Of the 386 respondents were male and 51%; 49% female respectively, and the sample also reveals that 87.3% of the respondents are bachelor degree, followed by master degree (12.7%); nearly 27% of respondents study in first year, followed by 26.8%, 26.2%, and 20% in second year, third year and fourth year, respectively. Moreover, major of finance and banking is 32.4%, followed by major of management 28.2%, accounting 11%, economic 7.5%, tourism 5.7%, information technology 4.9%, law 3.1%, marketing 2.8%, and English 1.8%, respectively. With respect to students' preferences to choose NUM for study, the majority of the respondents seem to prefer NUM by public university (nearly 66.3%), followed by favorite major (49.6%), recognized certificate (47.7%), suitable fee (44%), long-term experiences (39.1%), good lecturers (35.2%), good leadership (21.8%), near house university (20.7%), communication with other universities (16.3), easy to find jobs (13%), enough materials (12.4%), large-space (11.4%), and staff friendly (3.6%), and other (11.4), respectively. This may be due to their beliefs that this university is likely a brand name from state university, favorite major, recognized certificate and suitable fee and thus pointing to lower risks of closing university.

The average score of performance of service quality in NUM

The results of this research noted that perceived performance scores in Table 1 are on average greater than three, which is above the mid-point on the five-point scale. This clearly indicates that NUMs' students generally rated NUMs' performance in terms of service quality favorably although some items remains below the mid-point.

Depend on table 1. NUM students feel to be satisfy the dressed and appear neat of staff/lecturers; knowledgeable about university area to answer student's questions of staff/lecturers; enough and good lighting in classrooms; security and safety during studying; good communication skills of staff/lecturers; easy access to library; and affordable charges for service rendered by NUM (mean of those attributes are more than 3). In contrast, attributes of hygienic bathrooms and toilets; availability of room service; helps students to find jobs while they are studying and after graduating; and space for cashier counter; do not satisfy the students (mean of both attributes are less than 3). These findings, however, have to be checked against more rigorous examinations, such as the use of multivariate analysis, which incorporates all the attributes that may affect NUM students satisfaction derived from service quality delivered by their most used NUM.

Table 1 reports the average NUM-SerQual's each attribute score. Raw scores for the perceived level of excellence is on the five-point scale for attributes.

	N	Mean	Std. Deviation
The university has up-date classroom equipment	386	3.04	1.031
The university's classrooms are visually appealing	386	3.18	.926
University instructors/staffs are well dressed and appear neat	386	3.88	.756
The appearance of the classrooms of the university is appropriate for the type of service offered	386	3.20	.844
Has hygienic bathrooms and toilets	386	2.26	1.071
Lighting in classrooms is enough and good	386	3.61	.926
Appearance of buildings and grounds is attractive	386	3.32	.958
When they promise to do something by certain time, they do so	386	3.37	.886
They provide their service at the time they promise to do so	386	3.42	.871
They have knowledgeable about university area to answer my questions	386	3.70	.813
They are well-trained experienced	386	3.42	.951
They have good communication skills	386	3.56	.837
Accurate information about Services	386	3.35	.966
Has timely housekeeping services in classroom and ground	386	3.11	1.078
University's staffs are willing to provide help promptly	386	2.84	.954
University staff is ready to provide service	386	2.99	.978
Staffs willingness to help	386	3.46	.897
They are friendly	386	3.35	.986

	N	Mean	Std. Deviation
They are consistently courteous with me	386	3.34	.864
They has ability to instill confidence in students	386	3.44	.817
They give special attention to the students	386	3.26	.858
University has availability of room service	386	2.44	1.148
They understand the students' requirements	386	2.96	.915
They listen carefully to student's Complaints	386	3.04	1.045
They are willing to handle special Requests	386	3.23	.966
They have students' best interest at heart	386	3.23	.987
University give my security and safety during studying	386	3.66	.944
University has study tour for students	386	2.97	1.093
University is equipped with modern facility such as LCD projector and Air conditioner	386	3.34	1.113
University helps students to find jobs while they are studying and after graduating	386	2.83	1.159
University provides computer science, information technology and internet for students	386	3.02	1.122
University equipped with E-library	386	3.40	1.038
The university is innovative	386	2.97	.901

	N	Mean	Std. Deviation
University's involvement in community	386	3.20	.843
Degree to which curriculum is up to date	386	3.34	.880
Suitable career guidance	386	3.22	.926
Suitable academic guidance	386	3.37	.822
Guidance on personal matters	386	2.97	.898
Guidance on cultural issues	386	3.37	.950
Affordable charges for service rendered	386	3.54	1.153
There are adequate parking facilities	386	3.17	1.047
Adequate space for cashier counter	386	2.93	1.036
Suitable tuition fees	386	3.47	.900
Easy access to library	386	3.56	1.028

Table 2 reports the results of reliability checks for both dependent and explanatory variables. Cronbach's alpha values for all variables are high, exceeding the 0.7 cut-off recommended by Hair et al (2010). As can be also seen from table 2, Cronbach's alpha estimated for tangibles scale was 0.822; reliability scale was 0.821; responsiveness scale was 0.835; assurance scale was 0.793; empathy scale was 0.865, reputation scale was 0.807; Guidance scale was 0.857; accessibility& affordability scale was .775; and overall student satisfaction scale was 0.818, respectively. As the Cronbach's alpha in this study was higher than 0.7, the constructs were therefore deemed to have an adequate reliability (Hair et al., 2010). Based on estimated reliability coefficients, it is apparent that the NUM-SerQual scale is good reliable instrument.

4.3 Reliability Check

Table 2: Reliability checks for individual variables

NUM-SerQual Dimensions	No. of Obs.	Cronbach's Alpha	No. of item
Tangibility	386	0.822	8
Reliability	386	0.821	7
Responsiveness	386	0.835	3
Assurance	386	0.793	3
Empathy	386	0.865	10
Reputation	386	0.807	3
Guidance	386	0.857	4
Accessibility & affordability	386	0.775	5
Overall student satisfaction	386	0.818	3

4.4 The Empirical Model

$$OSS = \beta_o + \beta_1 Tangibles + \beta_2 Reliability + \beta_3 Responsiveness + \beta_4 Assurance + \beta_5 Empathy + \beta_6 Reputation + \beta_7 Guidance + \beta_8 Accessibility \& affordability + \varepsilon$$

Where OSS denotes Overall Student Satisfaction, and ε is error term, which is assumed to be normally distributed

The cross-sectional data used for the analysis is from a survey of 400 students. Yet, following cleaning process, a sample of 386 observations is considered to be usable for the analysis. The data set contains detailed information on the explanatory variables--tangibles, reliability, responsiveness, assurance, empathy, reputation, guidance and accessibility & affordability--which are included in the model presented above. And before presenting econometric results, the researcher reports several tests such as those for multicollinearity, based on variance inflation factor (VIF), heteroskedasticity and Ramsey (1969)'s regression specification error (RESET) for functional form misspecification.

Table 3: Estimation results with usual standard errors

Variable	Coefficients	Std. Error	T statistics	Sig.	Tolerance	VIF
Constant	.008	.136	-	-	-	-
Reliability	.044	.054	0.81	0.420	.407	2.459
Responsiveness	.137	.045	3.04	0.003	.361	2.772
Assurance	.156	.045	3.45	0.001	.425	2.354
Reputation	.165	.050	3.28	0.001	.348	2.871
Guidance	.138	.046	2.99	0.003	.402	2.486
Accessibility &affordability	.154	.040	3.82	0.000	.530	1.887
Tangibility	.105	.053	1.97	0.050	.415	2.408
Empathy	.110	.064	1.72	0.086	.256	3.908

Table 4: Estimation results with robust standard errors

Variable	Coefficients	Robust Std. Error	T statistics	Sig.	Tolerance	VIF
Constant	.008	.152	-	-	-	-
Reliability	.044	.065	0.81	0.420	.407	2.459
Responsiveness	.137	.052	3.04	0.003	.361	2.772
Assurance	.156	.048	3.45	0.001	.425	2.354
Reputation	.165	.057	3.28	0.001	.348	2.871
Guidance	.138	.050	2.99	0.003	.402	2.486
Accessibility & affordability	.154	.046	3.82	0.000	.530	1.887
Tangibility	.105	.056	1.97	0.050	.415	2.408
Empathy	.110	.067	1.72	0.086	.256	3.908
R = 0.816, R ² = 0.666, Adjusted R ² = 0.659 Std. Error = 0.433, F = 94.127, P = .000			Ramsey RESET Statistic F(3, 372) = 0.32 (P-value = 0.809) Special case of White Test Statistic 82.020 (P-value = 4.4e-04) Breusch-Pagan statistic: 18.76 Statistic (P-value = .0162)			

The following multiple regression equation was formed

$$\begin{aligned}
 \text{OSS} = & .008 + .137 \text{ Responsiveness} + .156 \text{ Assurance} + .165 \text{ Reputation} + .138 \text{ Guidance} \\
 & (.136) \quad (.045) \quad (.045) \quad (.050) \quad (.046) \\
 & \{.152\} \{.052\} \quad \{.048\} \quad \{.057\} \quad \{.050\} \\
 & + .154 \text{ Accessibility \& affordability} + .105 \text{ Tangibility} + .110 \text{ Empathy} \\
 & (.040) \quad (.053) \quad (.064) \\
 & \{.046\} \quad \{.056\} \quad \{.067\}
 \end{aligned}$$

a Dependent Variable: Overall Student Satisfaction

b. Independent Variable: Tangibility, Empathy, Responsiveness, Reliability, Assurance, Reputation, Guidance, and Accessibility & affordability.

Table 4 presents the estimation results, along with test statistic. As can be seen from this table, VIF values for all independent variables are much less than 5, implying that multicollinearity issues are of no concerns. Overall student satisfaction is regressed on eight service quality dimensions—tangibility, reliability, responsiveness, assurance, empathy, reputation, guidance, and accessibility & affordability.

It is found that the special case of White test statistic of 82.020 with p-value of 4.4 is statistically insignificant at any conventional significance level, suggesting no heteroskedasticity in the data set. But it is found that the Bruch pagan test statistic of 18.76 with p-value = 0.016 is highly significant at less than the 1% significance level, pointing to a clear evidence of heteroskedasticity presence in the data set. Moreover, the Ramsey RESET test statistic of .32 with p-value of 0.809 are statistically insignificant at any conventional significance level, suggesting model fit in the data set.

Based on table 3 above, the eight dimensions explain 66.6 percent of the variation of the overall student satisfaction, which is statistically significant at less 1% significance level (F-value = 94.127 with P-value < 0.01). To identify which dimensions of service quality contribute most significantly to the overall student satisfaction, a regression using z-scores is run to obtain standardized coefficients or beta coefficients. Therefore, explanatory variables with higher standardized coefficients contribute more significantly to the dependent variable.

The estimation results suggest that the regression model is statistically significant and that the eight service quality dimensions exert a positive effect on the overall student satisfaction, except reliability dimension which lacks statistical significance (table3). The highest estimated standardized coefficient on reputation dimension of 0.165 implies that the dimension makes the greatest contribution to NUM student satisfaction, followed by the service quality dimensions of assurance (0.156), accessibility & affordability (0.154), guidance (.138), responsiveness (.137), empathy (.110) and tangibility (.105). These findings indicate that reputation has been the most important predictor of overall student satisfaction in the National University of Management.

It means that a unit change in the response rate of NUM in Cambodia for reputation item, *ceteris paribus*, leads to an estimated change in their overall satisfaction of about 0.165. And followed by assurance is also highly significant at less than 1%. The estimated coefficient of about 0.156 implies that, holding other factors fixed, a unit change in the response rate of NUM for assurance leads to a positive change in their

overall satisfaction of about 0.156. And also followed by dimension of accessibility & affordability, guidance, and responsiveness, respectively, is also highly significant at less than 1%. The estimated coefficient of about 0.154, 0.138, and 0.137, respectively, implies that, holding other factors fixed too, a unit change in the response rate of NUM for accessibility & affordability, guidance, and responsiveness, respectively, leads to a positive change in their overall satisfaction of about 0.154, 0.138, and 0.137, respectively.

Moreover, the dimension of tangibility is significant at 5%, and the estimate coefficient of 0.105, showed that a unit change in the respond rate of tangibility leads to positive change in student satisfaction of 0.105 in the term of other factors fixed. But the factor of empathy is significant at 10%. The estimated coefficient of about 0.110 implies that, holding other factors fixed, a unit change in the response rate of NUM for empathy leads to a positive change in their overall satisfaction of about 0.110.

The result of hypothesis testing is presented in Table 5 below:

<i>Table 5: Summary of Hypotheses Testing Hypotheses</i>	Result
H1: Tangibility dimension is significantly positively associated with student satisfaction	Support
H2: Reliability dimension is significantly positively associated with student satisfaction	Not Support
H3: Responsiveness dimension is significantly positively associated with student satisfaction	Support
H4: Assurance dimension is significantly positively associated with student satisfaction	Support
H5: Empathy dimension is significantly positively associated with student satisfaction	Fail to reject
H6: Reputation dimension is significantly positively associated with student satisfaction	Support
H7: Guidance dimension is significantly positively associated with student satisfaction	Support
H8: Affordability & accessibility dimension is significantly positively associated with student	Support

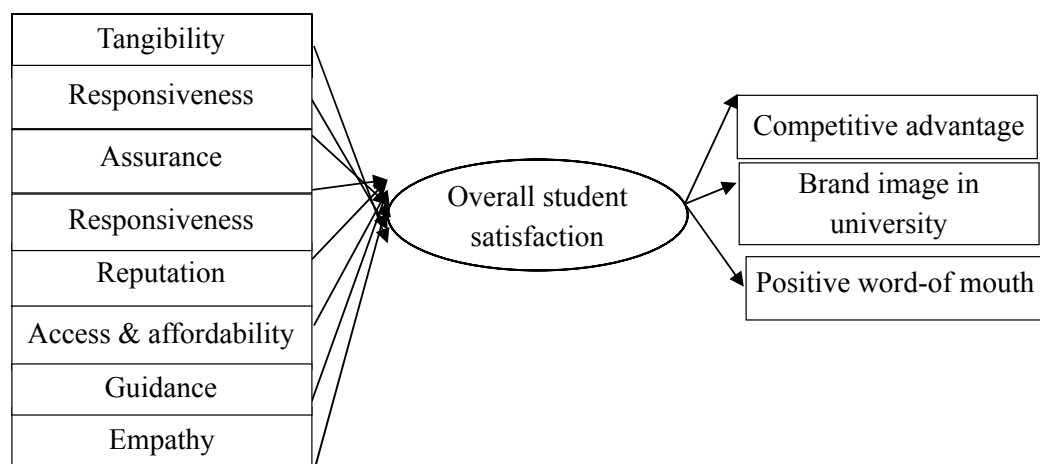
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Implications and further research

The empirical study began with detailed descriptions of service quality dimensions of augmented SERVQUAL model and addressed the research questions with respect to service quality dimensions that may influence NUM student satisfaction in Phnom Penh, Cambodia. It also seeks to identify the dimensions that contribute most significantly to overall student satisfaction. The purposes of the study are to identify the relationship between NUM-SerQual dimension and the overall satisfaction of students who are studying in NUM in Phnom Penh, Cambodia. Cross-sectional data was used and survey questionnaires were distributed randomly to 400 respondents; but after rounds of verification only 386 are usable.

Using multiple regression analysis, the study shows that seven dimensions reputation, assurance, accessibility and affordability, guidance, responsiveness, tangibility at significant level 5% and empathy at significant 10% have a significant, positive impact on the overall satisfaction of NUM students, with reputation dimension being the most important predictor of NUM student satisfaction. The findings of the study indicate that the seven dimensions of SERVQUAL cannot be replicated fully to education sector. Another dimension, reputation, accessibility & affordability, and guidance, may be equally important. The results present a number of managerial implications and recommendations for university management, while contributing to the improvements of service quality, with application to education sector in Cambodia.

Figure 1: Effects of service quality dimensions on student satisfaction, competitive advantage, brand image in university and positive word-of-mouth recommendations.



The special attention of NUM should be paid to the most important trigger of NUM students satisfaction, NUM management should focus on significant predictors such as reputation (innovative, up-to-date of degree of curriculum, and community activities); assurance (lecturers/staff should be friendly, and consistently courteous with students, and ability to instill confidence in students); accessibility & affordability dimension (affordable charges for service rendered on motor and school fee, accessible location premises, accessible location for fee payment of students, and easy to access library to search materials); guidance (on suitable career, suitable academic, personal matters, and cultural issues); responsiveness (willingness of NUM staffs/lecturers should provide help promptly, ready to provide service, and willingness to help students). On the other hand, NUM has been facing more challenges in both public and private high educational institutes and also suffer from new equipment change environment in Cambodia and globalization that require NUM to be interesting in tangibility dimension that is corner-stone for offering service quality. NUM should has up-dated classroom equipment, visually appealing classrooms, well dressed and appear neat of instructors/staffs, the appearance of the classrooms of the university should be appropriate for the type of service offered, hygienic bathrooms and toilets, lighting in classrooms, equip of LCD, AC in class room, and appearance of buildings and grounds. However, NUM organization should not ignore of the factor of empathy (refers to special attention to the students, availability of room service, understand the students' requirements, listen carefully to student's complaints, willing to handle special requests, having students' best interest at heart, give my security and safety during studying, offer study tour for students, and helping students to find jobs while they are studying and after graduating) that it is also good factor for contribute to improve of service quality and meet the some students' suggestions.

Moreover, students also have additional suggestions for NUM in order to improve service quality and meeting their satisfaction. Students have expressed the need for more restrictions on school uniform, especially given professor's knowledge to the students will further suggestions for research to students and made them even more. Moreover, the students expressed the professor increasing attention to the students, especially the knowledge transfer they have quality, high efficiency and further enhance relationship with students. Sanitation problems in the NUM bathroom and room: students have expressed the need for regular cleaning bathroom, especially his study because this affects the student's learning. In addition, students have expressed the need for additional air conditioning cleaning and curtain, wall, LCD projectors and enough paper bottles. Maintaining safe vehicles and items with particular aspects may well get it straightened. Suggestions for the appropriate use of words to get enough information to students and good adherence. And students have expressed the need for internet system to increase the convenience to the student's research. And finally, students have expressed the need for more internships to students from different provinces.

However, this research has few limitations. First, the researcher lack of editors for helping review this article. Secondly, the researcher has limited knowledge of English language writing skill. Third, researcher is so hard to access new articles of creditable scholarly journals in the world. The results of the study, therefore, may be applied with NUM only. The future research may be conducted in other universities and other geographical area of Cambodia or universities in ASEAN members and should expand dimension that apply in high education institute or develop new model in university. Future research may be conducted through qualitative methods such as focus group, in-dept interview.

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THE IMPACT OF OPERATIONAL MANAGEMENT ON ACADEMIC QUALITY PERFORMANCE TO LABOR MARKET AT NATIONAL UNIVERSITY OF MANAGEMENT, CAMBODIA

Dr. TAN Saroeun⁵⁶

Abstract

Abstract. The work was proposed to determine the procedure of operation management tools, which were operating at the National University of Management, Phnom Penh, Cambodia related a positive academic quality performance to the labor market. The operation Management including educational management, academic curriculum, academic staff, supporting staff, facility, student assessment, and external collaboration. To attain the outcomes of their relationship between independent variables and the dependent variable, the multiple regressions were operated with data gathered from 385 sample size. The stratified sampling, which was used for choosing the data surveyed divided into 3 strata: stratum (1) Year 4 undergraduate students, (2) Master students and (3) Alumni. The respondent questionnaire and raw data were scanned by remaining only 306 respondents for regression analysis data used.

To operate multiple regression, Cronbach Alpha was conducted by testing 56 items to define reliability. The result of the test was very high (0.931). Another way, the assumption test was also operated such as the normal distribution, homoscedasticity, and outlier data screening to find whether two variables are a linear relationship or not. Its result confirmed that most of points on a graph are clustered in a straight line.

The outcomes found that there are only 7 independent variables, management, academic staff, supporting staff, facilities, student assessment, and collaboration were a positive relationship with academic quality performance to labor market (dependent variable) at the National University of Management. However, the curriculum is not significant; i.e., it is a negative relationship with academic quality performance because of the curriculum nature, characteristics, always hidden in the course syllabus, academic staff, laboratory, workplace practice, and so on. Other factors; time limitation in the survey, the bias of the weekend class survey, and conditions of working with wrong discipline in the study.

Keywords: operational management (tools); Management, curriculum, academic staff, supporting staff, facilities, student assessment, and external collaboration and Academic quality performance

⁵⁶ Dr. TAN Saroeun Deputy Director of Graduate School of Studies, NUM

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Problem Statement

The social scientists can predict one country will be achieved in social development in next 5 to 10 years through focusing on education sector; especially higher education that is the story of the study provides and equips the young people with a diversity of specializations for the labor market as well as social economic development.

The history of Cambodia education divided into three periods. Traditionally, Cambodian education classrooms operated in the WATS (Buddhist monasteries) and was educated exclusively to only the male people. The course education oriented literature, the religion basics and other skills for daily life like carpentry, artistry, craft work, constructing, playing traditional music instruments etc..

The second phase, the ‘traditional’ education was gradually changed when Cambodia was under a French colony (1853-1963). The French introduced to prepare Cambodia education into a formal education system influenced by a Western educational model, which was developed through the independence period (1960s), and mixed along the traditional education.

The third phase was during the civil wars, the education system fell into a chronic crisis and was completely destroyed during the Khmer Rouge regime in 1970s. After that education was restored between 1980s-1990s. (www.bookbridge.org/2012/03/) (cited on 29/10/2014)

1.1 Background of Problem

In this circumstance, it reveals higher education institutions which take on significant parts in the assurance of the genuine character of the young people who are trained the correct skills for the right job in the labor marketplace. For Cambodia education situation, students have remained some problem to ensure the advantages of educational instruction. For higher education, (Sam, 2012) the high rate of graduate students is unemployment due to some skills being didn’t link with the labor marketplace. And some skills are not clear in training; some are over numbers for the market requirement, such as business, economics, and IT.

All these key obstacles, due to universities have no specific arrangement of specialized skill ranks and career paths for which are promoted and increased pay for quality work life, the both academic staff and alumni labor market. Further, at that place is also weak in research facilities which tools for academic’s quality performance in theory, practice

of literal work, such as laboratories, computer skilled labs and other academic database. (Kwok et al., 2010)

Stand on the above challenges, the Ministry of Education, Youth and Sport has set some policies and schemes to insure a beneficial quality in teaching, particularly higher education. “The vision is to prove and prepare human resources of the very highest character and ethics in order to develop a knowledge-based society within Cambodia”. (Education Strategic Plan, 2009-2013, cited on 10/11/2013)

Adverting to the vision and strategy and policies of MoEYS and the actual state of affairs of the labor market. “ To build the capacity of human resources in terms of knowledge, skills, ethics, creativity, innovation and entrepreneurship to maximize the long term development of Cambodian society and economy in the globalization context”. (Cambodia Ministry of Education, Youth and Sport (2010), p.2)

Based on the above vision, National University of Management has set some strategy for action plan in operating operational management in order to improve academic quality performance to achieve the above vision. Till now, the National University of Management has not attained the whole action plan for its mission and vision yet. Referring to survey outcomes⁵⁷ ; there were 1135 (37%) unemployed and 1723 (63%) employed, including 320 (19%) part time worked, and 882 (51%) worked in mismatches, i.e., they are working in wrong study disciplines.

1.2 Research Questions

Is there relationship between operation management and academic quality performance toward labor market at National University of Management?

2 Objectives of Study

- To assess the efficiency of the relationship between operational management and academic quality performance toward the labor market at the National University of Management.
- To examine the existing policies and strategy of the operation management at National University of Management,
- To provide the implication, conclusion and recommendation.

⁵⁷ NUM report survey on the graduate sample size of 3060, (August, 2014)

3 Hypothesis

In this study, we propose the basis of limited evidence for the boundary of further investigation. The supposition is divided into the null hypothesis and the alternative hypothesis.

- Null Hypothesis: There is no positive relationship between operation management and academic quality performance toward the labor market at the National University of Management.
- Alternative Hypothesis: There is a positive relationship between operational Management and academic quality performance toward the labor market at the National University of Management.

4 Literature Review

The literature review aimed the model compliance, operation management and academic quality performance. To find some theory to support the model, some subdivisions were taken, such as the theoretical and conceptual framework, model decision as well as analysis of themes of the study under the National University Management's operational management factors impact on academic's quality performance to labor market, such as educational management, academic curriculum, academic staff, instructional materials, infrastructure and facilities, and student assessment.

4.1 Theoretical and Conceptual Framework

The key element of improving quality of higher education has set for a long time to use research and assessment higher education to check the quality in order to enhance their institutions' quality. The Protocol⁵⁸, which was addressing quality management in higher education, this model has suggested that the demands and satisfaction of the stakeholders should be fulfilled through data analysis for their quality improvement. The model stresses that there are three sorts of stakeholders on whom the HEIs should be centralized, such as scholars, academic staff, and employers. The pursuit is the specific feature of six approaches.

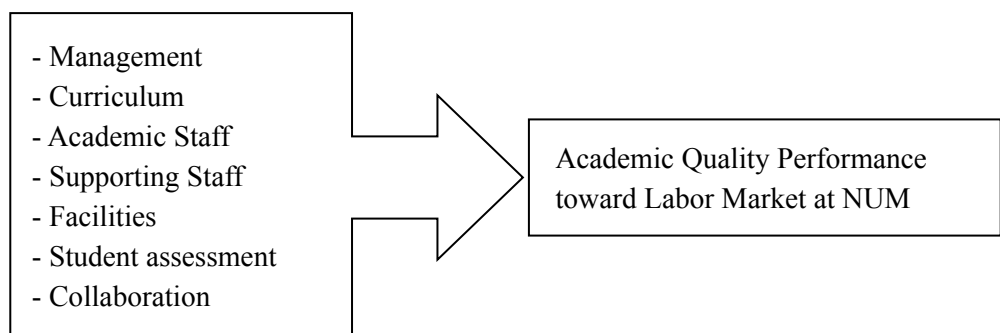
⁵⁸ Model provided by Hungary Ministry of Education, 2001

1. A clear focus on designing, implementing and sustaining a quality management organization.
2. Organizational *quality policy* has to be developed, disseminated and improves continuously.
3. The *determination of desired learning outcomes* highlights the goals of the course or program and their relations to students' needs.
4. *Design of curricula should be continually breaking and improving* in a reactive *Manner*, informed by feedback from a spacious assortment of stakeholders.
5. The aim of instruction/learning processes requires processes and activities to plan, critique and improve methods of instruction and scholarship, instruction materials, and students' learning environment.
6. *Design of student evaluation expects processes and natural processes to intent, review* and improve the examination of students, the scrutiny of student learning and the intercourse on examination of educational objectives and to utilize the evaluation results.

Besides this, the policies of the Cambodian Ministry of Education, Youth and Sports, 15 criteria of AUN's assessment program level and 9 criteria of ACC's full accreditation assessment were referred to employ as the model combined for this present survey.

4.2 Model Decision

Referring to the above models and real situations of the National University of Management's operation management, and real labor market in Cambodia; there are some key factors which can push improving academic quality performance, including educational management, academic curriculum, academic staff, supporting staff, facilities, student assessment, and collaboration. These genes are considered as variables in research for finding positive relationships between operational management and academic quality performance toward labor market, i.e. improving quality of student learning results, and then the labor market will be known.



Source: Protocol, (2001), AUN, (2011) and ACC, (2011)

4.3

Educational Operational Management and Academic Quality Performance

Operational management is related through implementing a measure by step strategic planning which has set from top management and faculties. Consequently, Okumbe (1999) Hesse emphasized that cognitive operations of management in pushing and maintain academic machinery to orient better student learning outputs, i.e. it involves organizing, managing and evaluating processes that are involved with routine activities by changing the inputs into a committed quality of outputs (Hanagan, 2002). The main inputs of academic machinery, (Wanda, 1995). They are included teachers, classroom resources, school plants, school management, class size, library facilities, and extra-curriculum expenditure.

4.3.1

Educational Management and Academic Quality Performance

A higher education institution needs quality management (principles) to make it more efficient and to improve quality (Trow, 1994), and to ensure that it provides a skilled, knowledgeable workforce. Another study produced by Van Vught (1996) also maintained that what is required in higher training is adequate quality management; the processes and mechanisms are instruments to help higher education institutions to perform their quality management purposes.

H₁: There is a positive relationship between management and academic quality performance.

4.3.2

Curriculum and Academic Quality Performance

The course of study is an academic guideline tool which interprets stakeholders' desires and marketable skills for teaching, and learning programs. According to Tibor Csizmadia (2006) has addressed that the EFQM model requires market research activities before designing curriculum which inputs from stakeholders (staff, employers, state-of-the-art in the playing area, government, society) Besides this, ISO 9001 also asks the establishments to design curricula according to students' input, to produce and continually update the curriculum and to follow benchmarking activities. Another study made by Altonji (1995) has highlighted that school curriculum has been induced to rely on labor market demands. To a greater extent than the past two decades, curriculum is more vitally important to the professional instructor. The curriculum has become a soul of the teacher in education, so teachers need to know its identification and produce it. (Print, 1993, p. 110)

H₂: There is a positive relationship between curriculum and academic quality performance.

4.3.3 Academic Staff and Academic Quality Performance

Academic staff plays significant roles in academic quality performance. Thus, teachers, lecturers or instructors are good qualify in both academic and experiential teaching methods. Referring to Mulkeen et al (2005) has remarked that recent research in the USA revealed quality the teacher as the greatest value variable in influencing student achievement. The other study by Kinungu-Kirindiriza (1989:3) has reported that a teacher competence in clear proficiency in subject teaching, clear course syllabus preparation, keeping order in the classroom, encouraging pupil participation in the lesson, punctuality, discipline, participation in extra-curriculum activities, unity, and participation in community affairs.

H₃: There is a positive relationship between academic staff and academic quality performance.

4.3.4 Supporting Staff and Academic Quality Performance

Besides academic staff, Support staff can attend and support academic performance in a good tone. Referring to Howes, A., Farrell, P., Kaplan, I; and Moss, S. (2003) has notified that academic quality performance can't be smoothly controlled by only good qualified teachers, but supporting staff has a positive impact on the caliber of education, including workload, classroom, academic administration, counseling academic problems... etc..

H₄: There is a positive relationship between supporting staff and academic quality performance.

4.3.5 Infrastructure and Facilities and Academic Quality Performance

Similarly, human resource; infrastructure and facilities are acting as the vital roles in academic quality performance, such as science labs, computer laboratories and other facilities that relates to learning theory practice for improving pupil reading results. According to Okebukola (2006), Educational quality is the dimension of preparation of teachers, such as the adequacy and accessibility of textiles and facilities needed for effective teaching and learning issues, which can refer to the job challenges. Another study made by Jegede et al (1992) has reported that the settlement that can solve for the poor performing students inexact science, is to equip laboratory facilities as against a consistent increase in the number of students and to develop teachers and staff in research lab works.

Instructional material means “content that conveys the essential knowledge and skills of a subject in the public school curriculum through a medium for conveying information to a student, such as a book, supplementary materials, a combination of a book, workbook, and supplementary materials, computer software, magnetic media, DVD, CD-ROM, computer course ware, on-line services, or an electronic medium, for contributing to the learning process through electronic means, including open-source instructional material”.(Education code, sec. 31.002, July 2011) www.statutes.legis.state.tx.us/Docs, (cited on 9/11/13)

As for Balogun (1982) has posited that no effective science teaching program can exist without equipment for teaching because facilities enable the learners to acquire problem-solving skills, cognition and scientific positions. Other scholars, (Wilcockson (1994), Lawal (1995), Ajayi (1996), and Suleiman (1996) have variously identified the importance of facilities in educational activity-learning fields. He continues that absence or poor (and or deteriorating) quality of educational facilities can affect poor academic performance as well.

Referring to Earthman (2002) has stated that old school facilities make noise levels and thermal environment which caused an impact on teacher effectiveness and student performance. According to Akande (1985), has remarked that learning and teaching can occur through one’s interaction with one’s environment which refers to facilities that are available to facilitate students learning outcomes.

H₅: There is a positive relationship between infrastructure and facilities and academic quality performance.

4.3.6 Student Assessment and Academic Quality Performance

The review of interrogation method and improvement of the connectedness between students and examination methods (the ISO standards required). The excel model is not entirely based on the study program, but including final theses or research tasks. Moreover, examination quality is processed under monitoring by quality standards, principles of test substance and procedures by a test committee. (Prof. Dr. W. H. M. Zijm, (2006, p. 84)

H₆: There is a positive relationship between student assessment and academic quality performance.

4.3.7 Educational Collaborative and Academic Quality Performance

Educational collaboration has established to assure that the program will match the employment needs of the labor market. According to Cantor (2002), Roberts (2002), Ohio Board of Regents (2000), Salter (1999), Kisner et al (1997), and Payne & Williams-Foster (1997) have emphasized educational collaboration clarify academic mechanism improvement, including joint creation of the curriculum of an existing plan, developing existing materials and installations, and reform personnel assignment to learning and teaching development for the fitting labor market.

Another researcher, Hall (2004) has remarked that extensive collaboration between universities and industries to secure transfer of scientific knowledge that leads to successful technical innovation and economic growth of the three decades in the USA.

H₇: There is a positive relationship between collaboration and academic quality performance.

4.4 Academic Quality Performance toward Labor Market

According to Reeves and Bednar (1994, p. 419), Harvey & Green, (1993); and Harvey, (1997) have remarked various ways in which quality has been defined as value for money, conformance to specifications, fitness for purpose, and meeting and/or exceeding customers' expectations.

CHEPS, (2011, p. 6) has addressed that course development and revisions in bilateral agreements with employers and/or several professional bodies, putting up career services or activities for alumni, all are what higher education foundations are behaving themselves in improving pupil reading results.

5 To Study Existing Academic Policy and Strategy of the National University of Management in Present and Future.

The National University of Management established in 1983. Till now NUM has trained hundred thousands of potential staff who have been working for public and private organizations till now. For the evolution of globalization, NUM has been reforming its operational management to be consistent with both local and global markets, especially ASEAN economic community market in 2015.

To best be achieved the challenges, the National University of Management has set a vision of “Excellence in Academics” and delegation for the faculties’ action plan execution to raise quality of pupil learning outcomes toward students’ abilities improvement through research expansion, facilities equipped plan, human resource strengthen, teaching and learning services reformed and collaboration with outside collaborators. (The policy of the roles and duties of faculties, dean and vice dean, 2012).

In the present action NUM has six faculties, one school graduate of studies and one department of speech communication. The six faculties, including Management, Tourism and Hospitality, Economics, Finance and Accounting, Law, and Information Technology. Each faculty plays significant roles in the action plan of academic performance, such as a teacher recruitment evaluation, instruction courses or chapter reformed proposal, teaching method technique advisory, teachers requirement examination, and labor market information gathering for update course outlines to propose to the University Council of program growth in order to orient efficient student learning outcomes, i.e. The student learning issues are effectively expanded in skills, attitude, and knowledge for consistency with the University’s vision and missionary post and the real situation both, local and Asean labor market needed

6 Significance of the study

After this, the present study, its outcome will provide some benefits for the National University of Management as the following:

1. To reform the administrative system toward better organization for academic help,
2. To reform academic curriculum closer to labor market,
3. To strengthen better teachers’ competency through teaching plan and more laboratory equipped,
4. To enhance abilities of more skillful students for labor competition,
5. To be capable to arrange full accreditation SAR⁵⁹ for Accreditation Committee of Cambodia External Assessment and other external assessment Authorities,
6. To participate ASEAN’s enrollment segmentation in 2015,
7. To increase the National University of Management’s reputation in leading local and regional level recognized.

⁵⁹ Self-Assessment Report

7 Methodology

7.1 Sample size and Sampling

There are 103 higher education institutions in Cambodia; the present work is limited to the National University of Management in Phnom Penh. The sample size of the present survey is limited to 385⁶⁰ only and the sample respondents are selected from both internal and external stakeholder categories. Stratified sampling method is adopted in selecting respondents who are picked from 100 master program students who a former of NUM bachelor degree and also are working for organization, another 85 from an undergraduate program, students who are working for organization, 100 for full time and part time teachers and 100 NUM alumni who are working at private and NGOs sectors. While the students and alumni are interviewed on some categories, such as academic program, academic staff, teaching materials, facilities, student learning assessment, and collaboration. Meanwhile the questionnaires for teacher interviewed will focus on Administrative management, academic program, academic staff, teaching materials, facilities, student learning assessment and collaboration.

Table 7.1. Show Strata of Sample Size

No	Stratified	Characteristics	Sample size
1	Undergraduate BBA	Year 4 Students	85
2	Undergraduate BBA	Work for Private and NGOs sectors	100
3	Undergraduate MA	Work for private and NGOs sectors	100
4	Alumni	Work for private and NGOs Sectors	100
	Total		385

⁶⁰ Cochran (1963), $n_p = \frac{z^2 pq}{e}$

Sample sizes which are determined when the population is unknown.

7.2

Sources of Data and Procedure of Collection

The data for the present study is gathered both from primary and secondary sources. Principal data are gathered with the supporter of structured questionnaires. A piece of the categories is administered to obtain comprehensive information about administrative management, academic plan, academic staff, holding staff, facilities, student assessment, and collaboration.

Also, particular care is dedicated to collecting information from the sample respondents about the troubles confronted by them while they learned and are learning at NUM. Some linked scale questions, nevertheless, be included so as to sustain knowledge on the individual respondents' specific and personal opinions. Further, published and unpublished data from several secondary sources are accumulated for their role in this work. Information pertaining to this study is assembled from different governmental as well as specific HEI, National University of Management. Several provisions and policies of the government with regard to the evolution of higher education is collected from the Ministry of Education, Youth and Sport, Royal Government of Cambodia. Further, various publications of the Accreditation Committee of Cambodia and Asean University Network, World Bank, Asian Development Bank and other international and national organizations will be consulted.

7.3

Statistical Tools

After the collection of data the same is computed and tabulated keeping the objective of the study in mind. The interrelationship among the data forms the basis for tabulation. Sample statistical calculations, such as Multiple Regression are used wherever required. Further, relevant empirical information is interpreted in the form of pie and bar diagrams.

8

Research Instrument

Research Instrument is used for strata of respondents. The purpose of using the questionnaire is for collecting data of independent variables and dependent variables to calculate the relationship the both sides.

8.1 Questionnaire design

In the present study, the research is based on the questionnaire which is divided three parts:

First part: general form which loads the questions (nominal data) for personal data of the respondents.

Second part: the questions which develop the 7 independent variables by using 7 linkert-scale (1.Strongly disagree to 7. Strongly agree)

Third part: the dependent variable was prepared more detail into the outcomes of 7 independents given the academic quality performance at the National University of Management.

9 Reliability

Because of the needs of Multiple Regression data, the linked scales at 7 levels were arranged for data collecting. Cronbach's Alpha (α) which is a step of internal consistency is applied. In the playing area to test for being reliable items of the questionnaire in research instruments for the study, the internal consistency of the legal document is computed by using Cronbach's alpha coefficient. The effect of test Cronbatch's Alpha is 0.931 with very high reliability in total 56 questionnaires and 8 points (7 IVs and 1 DV). All items have strong to very strong total correlation, and alpha would go up over 0.70. Thus the researcher retained all of them.

N0	Variables	Items	α	Evaluation ⁶¹
1	Management	6	0.810	Good
2	Curriculum	7	0.709	Acceptable
3	Academic Staff	7	0.812	Good
4	Supporting Staff	8	0.910	Good

⁶¹ Sakaran(2000) Cronbatch Alpha's Evaluation

5	Facilities & Infrastructure	8	0.886	Good
6	Student Assessment	6	0.697	Acceptable
7	External Collaboration	7	0.924	Good
8	A.Q. Performance	7	0.740	Acceptable
Total Cronbach's Alpha		8	0.935	Good

10 Information Analysis and Result

A total of 385 sample sizes that were chosen to answer the questionnaires levels, but there were only 315 respondents who filled all questionnaires in variables. Then test for detecting data outliers was operated and found 9 data numbers in the column were truly abnormal for inspection to remove away. Thus, there were only 306 sample data chosen for depth psychology. The same is computed and tabulated keeping the objective of the study in mind. The interrelationship among data forms the basis for tabulation. Sample statistical calculations, Multiple Regression with SPSS are used wherever needed.

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + e$$

Y = Academic's Quality Performance toward Labor Market in NUM

X1 = Educational Management

X2 = Academic Curriculum

X3 = Academic Staff and Services

X4 = Supporting Staff and Services

X5 = Infrastructure and Facilities

X6 = Student Assessment

X7 = Educational Collaboration

$$AQPM = b_1 \text{ Management} + b_2 \text{ Curriculum} + b_3 \text{ Aca.Staff} + b_4 \text{ Sup.Staff} \\ + b_5 \text{ Facilities} + b_6 \text{ Assessmen} + b_7 \text{ Collaboration} + e$$

Before data analysis, data are divided into two sections, one part show about frequency; such as sex, work organization, teaching, and workplace experience and Software application used. Second parts from 8 variables, seven are the predictor variables (Management, Curriculum, Academic Staff, Supporting Staff, Facilities, Student Assessment, and Collaboration) and one criterion variable (academic quality performance toward labor Market).

10.1 Assumptions

It is a piece of data screening, which ensures the result of multiple regression analysis to conform to the desire. The two main statistical assumptions for Multivariate data analysis are normality, homoscedasticity, multicollinearity and outlier data screening.

10.1.1 Normal Distribution Test

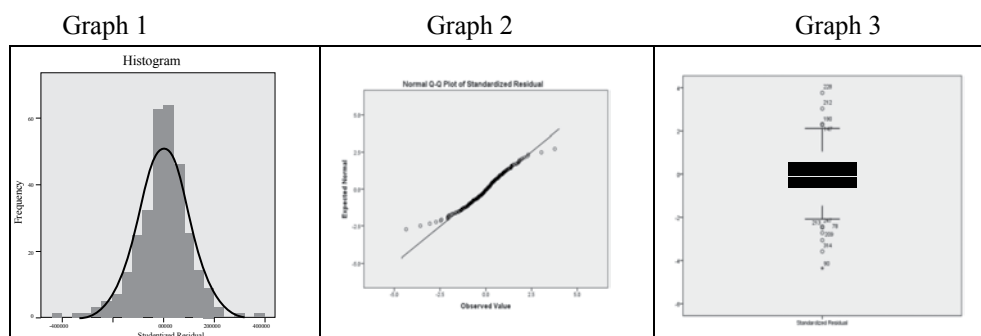
Test normality conducted by two ways: statistical approach and graphical approach

1. Statistical approach

Because of the sample size is over 50 cases, Kolmogorov-Smirnov test is performed. The null hypothesis for test normality test states that the residuals are normally distributed. The probability of studentized and standardized residuals as ($p = .002$ & $.003$) $> .001$. Thus, the center point is really at zero.

2. Graphical Approach:

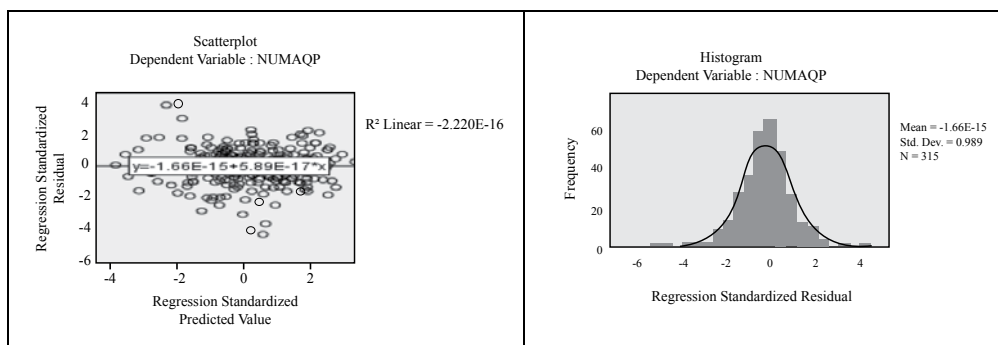
The distribution of values for metric variable that compares with a normal curve is tested with histograms, normality plots, and boxplot.



The first Graph, the histogram shown that the standardized residual is the center of zero, and the line draws as normality (bell curve). The second, the plots are closely the straight-line, so it is normally distributed. The third graph is a boxplot, the median line is located almost at the center of the box, so it is normally distributed.

10.1.2 Homoscedasticity

Before, Another one for test assumption is a scatter spot. The scatter plot is tested to find a linear relationship exist between the predictors variable (IV) and criterion variables (DV).



The scatter result shows two variables are a linear relationship because most of points on a graph are clustered in a straight line, and the histogram shows that it grows too close to a normal distribution, as a bell curve. Thus the measured variables are appropriately broken down by using Multiple Regression.

10.1.3 Multicollinearity

The present multicollinearity checked indicates that VIF value of each predicted variable is less than 5 ($VIF < 5$), and a tolerance is larger than 0.20 ($\text{tolerance} > 0.20$)⁶². (O'Brien R.M. (2007) However, there are curriculum and supporting staff are not significant in relationship with academic quality performance because t value is less than 2 ($t\text{-value} < 2$) and p value is larger than 0.05 ($p\text{ value} > .05$). Therefore, the outlier data screening tested.

10.1.4 Outliers Data Screening

This data screening method is used in SPSS and AMOS to find D^2 (Mahalanobis) to check the numbers of data that is abnormal data. The abnormal data always appear when p_1 is less than 0.05⁶³. It is shown that some data numbers run out of the rating scales (1-7 and IV replies are not consistent with DV's). It is truly abnormal and then check them carefully. After removing out 9 data numbers from the list of data in SPSS, the effect of multiple regressions has changed closely casual model in test assumption by follow only 306 sample size.

⁶² infra, p.219

⁶³ infra, p.220

10.1 Frequency Distribution of Demographic analysis

The present survey, data is broken down in frequency distribution based on gender, workplace, training, employment experience, and Software application used of 306 respondents.

Table 10.2. Shown about the personal data of the respondents

Variables		Frequency	Percent
Gender	male	175	57.20
	Female	131	42.80
	Total	306	100
Organization	Local	185	60.50
	International	19	6.20
	NGOs	24	7.80
	4 year students	78	25.50
	Total	306	100
Education	Undergraduate	120	39.30
	Bachelor	75	24.50
	Master	111	36.30
	Total	306	100
Work Experience	Jobless	79	25.80
	Below 5 years	124	40.50
	5 year	23	7.50
	Above 5 years	80	26.10
	Total	306	100

10.1.1 Frequency Distribution of Gender Respondents

Table 10.1 relates the demographic information of the respondents. The demographics reveal a gender division of the respondents, the bulk of the respondents were 175 males equal 57.20% that represents a large portion of the sample group. Still, there were only 131 equal 42.80% females.

10.1.2 Frequency Distribution of Respondents' Organization

This study was only aimed at the organizations where the respondents are working. The main reason for the information evidences to adjust the operational management of NUM. Most respondents who are running for local organizations were 185 equal 60.50%. Withal, 19 equal 6.20% were international organizations and 24 equal 7.80% were from NGOs. Others 78 that equals 25.50% were unemployed undergraduate and master students.

10.1.3 Frequency Distribution of Respondents' Education

This effect is presented in table 10.3 oriented demographics' education of respondents who reflects their abilities to adjust the questionnaire's meaning in respond. As analyzed the demographic, education, it was also identified that bigger part of respondents' education was 120 undergraduate that are equal 39.30%. Whereas 75 respondents that was 24.50 % were bachelor degree and 111 (36.30%) questionnaires was Master degree.

10.1.4 Frequency of Respondents' Work Experience

In the table 10.4 revealed work experiences after qualification was also registered in the report. Range of below 5 years of work experiences identified which fell majority of the respondents were 124 (40.50%), by comparison the respondents who has 5 years of work experience were only 23 (7.50%). However, the rank of above 5 years increased larger of part of 80 respondents that was 26.10%.

10.3 Multiple Regression Analysis after Data Screening

The statistical data analysis for 306 sample size shown the multiple regression outcomes as the following:

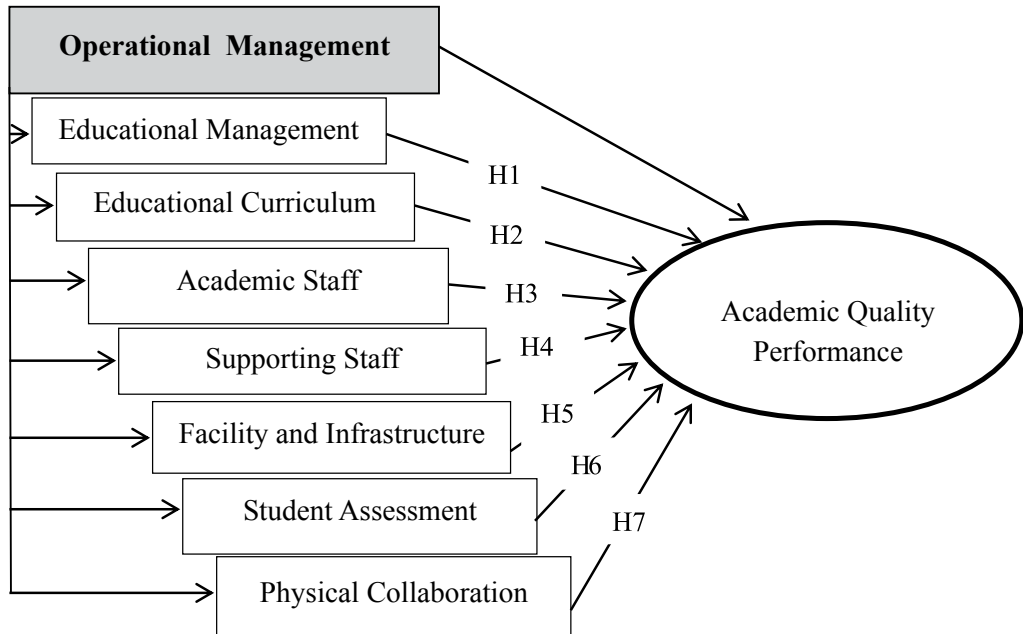
- The Multiple R for the relationship between the set of independent variables and the dependent variable is 86,30%, which would be characterized as very strong as using the rule of thumb⁶⁴.
- R-square provides a reading of the explanatory ability of the regression model. It is used for measuring correlation and indicates the proportion of variation in standards variables, the dependent variable explained by the assemblage of independent variables for 74.50 %.
- The adjusted R Square value arranged a number of variables in the regression model for 74 %
- Established in the result of data, $F = 125.275$, and $p\text{-value} < .001$ which indicates that this is significant. As F value is large, it makes us determined that the outcome .

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.314	.175		-1.799	.073
	Management	.135	.055	.117	2.434	.016
	Curriculum	-.009	.053	-.008	-.164	.870
	Lecturers	.132	.052	.116	2.528	.012
	Staff	.137	.056	.129	2.448	.015
	Facilities	.156	.055	.153	2.810	.005
	Assessment	.222	.053	.205	4.211	.000
	Collaboration	.284	.040	.310	7.021	.000
a. Dependent Variable: NUMAQP						

⁶⁴ Source: SW388R7 Data analysis & Computer II, Slide p.17

10.4 Hypothesis Testing

After the results of multiple regression was already analyzed, the results were checked to find a positive relationship between each independent variable with dependent variable or not.



1. H_1 : Impact of Educational Management on Academic Quality Performance

The regression analysis result is significant with Beta value is 0.117 as t-value = 2.434 at p-value is $0.016 < 0.05$. So the null hypothesis is rejected, and educational management really impacts positively on the academic quality performance toward labor market. As many researchers, have already studied, include Trow (1994) has highlighted that quality management is necessary needs in a higher education institution because it ensures to give a skilled, knowledgeable hands. Another study produced by Van Vught (1996) has also maintained that what is required in higher training is adequate quality management; the processes and mechanisms are instruments to help higher education institutions to perform their quality management purposes.

2. H₂: Impact of Curriculum on Academic Quality Performance

The curriculum plays significant role in educational operation management; however, the statistical data analysis shows the outcomes as insignificant relationship with academic performance because beta value is -0.008, t-value is $-0.164 < 2$, and p-value is 0.870. Thus, the null hypothesis is accepted.

In general, the curriculum is an input that is not an active and is hidden. It can best be achieved due to other elements to use it. It is paralleled some previous researchers' ideas, including Barnett (2000) has remarked that "curricula in higher education are to a large degree 'hidden Curriculum'... They take on certain patterns and relationships, but those patterns and relationships will be hidden from all concerned, except as they are experienced by the students".

Harden (2001) has assembled on this concept "a curriculum is a sophisticated blend of educational strategies, course content, learning outcomes, educational experiences, assessment, the educational environment and the individual students' learning style, personal timetable and the program of work".

3. H₃: Impact of Academic Staff on Academic Quality Performance

This Hypothesis is can be analyzed by regression, impacts positively on the academic quality performance toward labor market due to beta value is 0.116 as t-value = 2.528 and a p value is $0.012 < 0.05$. Therefore, Academic Staff is not only significant, but the studies also prove by Mulkeen et. al (2005) has commented that the research in the USA, the determining student achievement is good qualified teachers who are the most significant variable. This is consistent with Troy (2002) has addressed that teachers hold on significant functions in contributing to achieve their schools through their implementing commitment. Almost every country surveyed by OECD's Teaching and Learning International Survey (TALIS) "Fundamental changes to the status quo can cause uncertainties that trigger resistance from stakeholders; and without the active and willing participation of teachers, most educational reforms fail".

4. H₄: Impact of Supporting Staff on Academic Quality Performance

Result of hypothesis 4, the supporting staff is significant with Beta value is 0.129 as t-value of 2.448 at p value is $0.015 < 0.05$. Therefore, the null hypothesis is not accepted, it is consistent with Peter at, al. (2009) has remarked, that in good quality academic affairs; supporting staff really take on substantial roles in supporting academic affairs, including quality teaching and educational governing body to lubricate smoothly student academic quality performance.

5. H₅: Impact of Facilities on Academic Quality Performance

As the survey result of Regression analysis earlier that predictor variable, facilities and infrastructure has a beta value of 0.153 as t-value = 2.810 at p-value $0.005 < 0.05$. Therefore the statistical analysis proves that hypothesis 5 in supporting of academic quality performance toward labor market like other researchers, Wilcockson (1994) and Lawal (1995) have found that the absence or poor (and or deteriorating) quality of educational facilities can affect poor academic performance also, the importance of facilities affect quality improvement in educational activity-learning fields. According to Balogun (1982) has posited that no effective science teaching program can exist without equipment for teaching because facilities enable the apprentice to acquire problem-solving skills, cognition and scientific positions.

6. H₆: Impact of Student Assessment on Academic Quality Performance

The Student Assessment is also related positively with academic quality performance to the market. Adverting to the result of data analysis, Bata value is 0.205, at t-value is 4.211 by p-value of $0.00 < 0.001$. So Hypothesis H6 is not only supported criterion variable, but are likewise indicated by Educational Accreditation Authority, AUN (2011, p. 23) has interpreted that student assessment is one of the significant constituents of higher education which its operation shows the learning effects of a profound effect on students' future.

7. H₇: Impact of Collaboration on Academic Quality Performance

The previously mentioned regression result reveals that there is a substantial relationship between Collaboration and academic quality performance toward market, i.e. beta value of 0.310, at t-value is 7.021 by p-value of $0.000 < 0.05$. As other researchers have already studied, referring to SQW Consulting (2008, p.7) remarked that collaboration of HEIs mean best practice that “reveal to the building of efficient relationships between HEIs and partners at all tiers of the psychiatric hospital. In many events, partners played an active role in contributing to an HEI's own internal quality assurance processes”. Bringing up to Lee (2000) has also addressed that the faculties that collaborate with the industry really contribute and communicate knowledge and technology for the industry and further, that industry is complementary recognized their own academic research for grad students and lab equipment, and by presenting them with information for their own inquiry.

11

Implication of Study

The results of the study found will be useful for the dean of faculties as well as the rector of the National University of Management and other higher education Institutions to understand how they can conduct better operation management to enhance the academic quality performance strategy. The research also obsoletes how the academic quality performance can best be achieved by under the influence of the important factors, educational management, academic staff, supporting staff, facility and infrastructure, student assessment, and collaboration appearances. These appearances are used for external criteria training for assessments by Asean University Network, Accreditation Committee of Cambodia and the Cambodia Ministry of Education, Youth and Sport to strengthen and improve academic quality at higher education institutions in Cambodia.

Referring to the findings, the best academic quality performance is really closely related to the above appearances that have acted as independent variables. Therefore, Deans and the rector of the National University of Management have to know these factors. First, the education management really administers in good academic administrations, teaching and learning techniques, academic assessment, checking quality and other administrative services. Second, academic staff and supporting staff are sources of human resources for the key that pushing better quality in student learning outcomes. Third, Facilities and external collaboration really play a vital role to turn the classes' theories into workplace practice for actual skills. The last factor is the proper student assessment strategy that the measurement is consistent with the student learning outcomes and teaching activities for the specific student's skill ability in the labor market.

However, one independent variable, curriculum is not significant in the relationship with academic quality performance. The such result findings at NUM due to its nature of curriculum aspects that stay hidden, and it needs to assemble with other components for taking an action. As other previous researchers, Garcia-Barbero (1995) and Barnett (2000) have underlined that curricula are hidden from all concerned, except they are experienced by the students. Moreover, their outcomes are assembled a number of components, including course content, teaching strategies and methods, student assessment, and learning outcomes which are consistent with each other to ensure efficiency in learning facilitation.

12 Limitation of Result Study

Even though the researcher tried to prepare the research proposal in more detail, the research process still meets some challenges by a few limitations.

First, the researcher encountered with the time constraint of NUM research series policies. This challenge has provoked the data collection techniques, operating in uncovering every stratum of stratified sampling.

The program class cycles at the National University of Management have been divided into two study time; the regular program class cycles, Mornings (7:00-10:00) , Noons (10:30-13:30), Afternoon (14:00-17:00) , and Evenings(5:30-20:30) ; and the Special program class cycles; Saturday (7:00-11:30 and 14:17) and Sunday(7:00-11:30). The majority of data was collected from the Saturday and Sunday classes' respondents who are working for private, NGOs and public sectors of 74.5% employed. Therefore, the data collected can be biased in responding against their own situations.

Second, The research result on 3060 graduates who have studied at the NUM found that in the among 1723 employed, There are 882 (51%) works in wrong disciplines (mismatch of specialization studies). In among master program students of 372 employed, there are 103 (25.90%) worked in mismatch also.

The above problem has caused too many students enrolled in Business administration related course program, such as Management, Accounting and Finance, Marketing, economics and Tourism which cause the same skills to flood into the labor market.

The third, The National University of Management as well as the other higher education institutions has constructed an academic curriculum program by only benchmarking; they have seldom built curriculum by program mapping, i.e. the result of a labor market survey for program curriculum constructed to define the target of the supply and demand of the right skills needed in the labor market for the present and future.

Finally, the course curriculum that has been prepared for teaching methods focus too much on theory and not enough on practical facilities (such as science laboratories, computer laboratories, and factories or industries) for better student learning outcomes, the real knowledge, attitude and skills. Furthermore, the program curriculum elements, including course content, student learning outcomes, teaching strategies and methods, and student assessment are not consistent with each other in the course syllabus or course plan of teaching, so the student learning outcomes cannot be achieved in skill

orientation. These are the reasons why the program curriculum cannot appear the real shapes for the respondents.

13 Conclusion

According to the detail research design, the questionnaires were validly prepared for primary data collecting. The primary data have to go through three assumptions before analyzing in SPSS software to process multiple regression to produce output information.

The major findings from the statistical analysis data indicates that 6 independent variables of operation management; educational management, academic staff, supporting staff, infrastructure and facilities, student assessment, and collaboration; have explained the academic quality performance scoring significantly, that is, they have a positive relationship with academic quality performance. However program curriculum is not inserted is not positively related to academic quality performance. Hence, the result of the present study has reflected the main findings on how different the students' attribution on the experienced academic performance and labor market situations.

Based on the empirical study; all independent variables, management, curriculum, academic staff, supporting staff, facilities, student assessment, and external collaboration have to support academic quality performance. As shown in the literature review, most of the previous researchers accepted by providing each independent variable statement to support on the academic quality performance through other evidences as empirical and conceptual theories.

In conclusion, the research study is successfully remarked that educational management, academic staff, supporting staff, facilities, student assessment, and external collaboration play significant role in an operational plan for the rector, deans, and other academic heads who need to improve academic quality performance to labor market; however the academic stakeholders consider in the context of curriculum that relates to other elements in learning and teaching outcomes. To explicate this situation, the study will implement further exploration in the next research series of NUM.

14 Suggestions and Future Research

14.1 Suggestions

Adverting to the reality and evidences from data analysis result, the National University of Management has been established by some suggestions to solve the challenging in its operational management of academic quality performance as follows:

1. NUM's faculties should construct curriculum by program mapping, including build team market research to discover what the stakeholders 'needs of the labor market and propose a course teaching to fit their needs.
2. The curriculum should prepare into the both sections, class theory and class practices,
3. To expanse MOU with potential private or relevant sectors for the student internship, site visit, guest speaker, or work practice at the external physical plants, including factories, companies, NGOs, and others.
4. NUM faculties should promote the results of the market research to the students to be easy by preparing themselves to please the market situation needs.
5. The faculties should urge all teachers to prepare the course teaching plan for the student learning outcome orientation clearly; knowledge, attitude and skills. To achieve the result of the curriculum, the student learning outcomes, teaching strategies and methods, and student learning outcomes are consistent with each other.
6. Formulate Advisory structure for skills and market situation for the students' advice.
7. The NUM should build software laboratories for the program to support theory classes and make clear the student learning outcomes.

The above suggestions can make NUM resolve the curriculum program context and it will help to reform NUM in more potential higher education in academic quality performance to labor market the both local and regional.

14.2 Future Research

To solve the problem which the National University of Management encountered, the researcher will carry out more researching on how to prepare a program curriculum mapping at NUM.

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Appendix A

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	.065	315	.002	.975	315	.000
Studentized Residual	.065	315	.003	.973	315	.000

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.276	.179		-1.545	.123		
	Management	.182	.055	.158	3.314	.001	.395	2.531
	Curriculum	-.019	.040	-.020	-.476	.634	.502	1.991
	Lecturers	.144	.050	.129	2.901	.004	.451	2.219
	Staff	.041	.056	.038	.735	.463	.328	3.051
	Facilities	.258	.052	.254	4.959	.000	.341	2.936
	Assessment	.171	.051	.158	3.355	.001	.405	2.470
	Collaboration	.270	.041	.296	6.533	.000	.438	2.283
a. Dependent Variable: NUMAQP								

2. Outlier Data Screening : This data screening method is used in SPSS and AMOS to find D^2 (Mahalanobis) with $p \leq 0.001$ is abnormal data that are carefully monitored before removing them

Table. Show the Example of Mahalanobias

Observation number	Mahalanobis d-squared	p1	p2
190	34.368	.000	.000
6	25.379	.001	.000
15	23.838	.002	.000
12	22.229	.005	.000
268	21.630	.006	.000
232	20.995	.007	.000
3	20.050	.010	.000
267	19.680	.012	.000
276	19.139	.014	.000
213	18.640	.017	.000
34	17.946	.022	.000
279	15.939	.043	.001
296	15.358	.053	.005

If the p1 value column is less than 0.05, it is shown that some data numbers define out of the rating scales (1-7), it is truly abnormal and then remove them . After removing out 10 data numbers from the list of data in SPSS, the effect of multiple regressions has changed closely casual model in test assumption as following.

AN ANALYSIS OF HUMAN CAPITAL AND ECONOMIC GROWTH OF CAMBODIA USING CO-INTEGRATION AND ERROR CORRECTION MODEL

Dr. CHHUN Rady⁶⁵

Abstract

This paper aims at investigating the relationship between human capital and economic growth in Cambodia economy using time-series data the period 1995 - 2011 obtained from the World Bank and Asian Development Bank. In order to achieve the objective, the co-integration technique and error correction method are applied. Multivariate cointegration results revealed that there exists a cointegrating in the estimated process. This means that these variables are linked together in achieving their steady state equilibrium in the long run. The study shows that there is a positive relationship between human capital and economic growth in the long run at 1 percent significance level in the Cambodia economy. In addition, the gross fixed capital also has positive impacts on economic growth in the long run at 1 percent. Therefore, the schools and universities must improve the quality and increase the amounts of students with building their infrastructures effectively by supporting from the government to promote the economic growth in the future.

Keywords: Human capital, economic growth, Cambodia

⁶⁵ Dr. CHHUN Rady is Chair of IT Department (FN)

1

Introduction

To achieve a high and sustainable rate of economic growth is the important objectives of a sound macro-economic policy in each country. Howitt (2005) stated that human capital is widely accepted as an important determinant of economic growth. The accumulation of human capital is responsible for sustained growth, and education is the main channel through which the human capital accumulates (Lucas, 1988). Education-focused human capital is one of the key variables included in empirical growth models. Moreover, Todaro and Stephen (1982) stated that education and health are the basic objectives of development; they are important ends in themselves. Health is central to well-being, and education is essential for satisfying and rewarding life: both are fundamental to the broader notion of expanded human capabilities that lie at the heart of the meaning of development.

In most of these studies, the concept of human capital or those of education and health are central issues. Nobel Laureate Becker (1992) states, “Human capital analysis assumes that schooling raises earnings and productivity mainly by providing knowledge, skills, and a way of analyzing problems”. The growth models with human capital, consider human capital as an input in the production function, which, just like physical capital, can be accumulated by investment in schooling. Krueger and Lindahl (1998) that the level of schooling and education is positively correlated with economic growth. The education has a high intrinsic economic value since the investments in education led to the formation of human capital, which is one of the cause of economic growth (Dikens et al, 2006). Boldin et al, (1996) showed that higher education had a significant impact on the economic growth for Argentina. In this paper we examine the short- and long-run relationships between human capital and economic growth in cambodia over the period 1995-2011, using cointegration test and error correction models (ECM).

Literature Review

In general, the concept of human capital is semantically the mixture of human and capital. In the economic perspective, Boldizzoni (2008) stated that ‘the capital refers to factors of production used to create goods or services that are not themselves significantly consumed in the production process and the meaning of capital in the economic perspective’. The human is the subject to take charge of all economic activities such as production, consumption, and transaction. Therefore, human capital means one of production elements which can generate added-values through inputting it.

According to Youndt et al.(2004), the human capital can be closely linked to knowledge, skills, education, and abilities. Rastogi (2002) conceptualizes the human capital as ‘knowledge, competency, attitude and behavior embedded in an individual’. The investment of physical capital may show the same effectiveness with that of human capital on education and training (Little, 2003). Rosen (1999) say the human capital as ‘an investment that people make in themselves to increase their productivity’. Moreover, human capital is ‘an amalgam of factors such as education, experience, training, intelligence, energy, work habits, trustworthiness, and initiative that affect the value of a worker’s marginal product’ (Frank & Bemanke, 2007). Sheffin (2003) states that the human capital is ‘the stock of skills and knowledge embodied in the ability to perform labor so as to produce economic value’. Becker (1993) argues that there are different kinds of capitals that include schooling, a computer training course, expenditures on medical care. Becker considers education and training to be the most important investment in human capital. In addition, Doucouliagos (1997) has noted human capital as a source not only to motivate workers and boost up their commitment but also to create expenditure in R&D and eventually pave a way for the generation of new knowledge for the economy and society in general. By the way, Romer (1990) refers to the human capital as a fundamental source of economic productivity and the investment of human capital affects national economic growth on the above-mentioned impacts as well.

According to Romer (1990), when firms are involved in R&D, it results in technological change and enhances total factor productivity (TFP) which becomes the immediate cause of economic growth. In a study of 98 countries during the period from 1960 to 1985, Barro (1991) stated that the rate of output growth is strongly related to the initial quantity of human capital. Levine and Renelt (1992) verified the results of Barro concerning the effect of human capital on the rate of real growth of output per capita, by using the initial rate of high school education as an indicator for human capital. In addition, Chaudhary et al. (2010) founded that real gross domestic product, gross fixed capital formation, employed labor force and human capital index were positively correlated with each other and found statistically significant. Labor force participation had positive but human and physical capital had inverse relation with growth. Using error correction model short run analysis showed that labor force participation with two years lag was positively and significantly related with growth. Levine and Renelt (1992) perform sensitivity analysis on the observed correlation between long run growth and policy variables in cross-country analysis. Their results suggest that regression that displays a positive relationship between human capital and economic growth. Thirwall (2000) concluded that the major sources of growth in developing countries is increased factor inputs, aided by improvements in the quality of labor through health improvement and education. Besides, in examination the impact of human capital on economic growth, using five variants of the original Solar Model linking physical capital,

labor and human capital proxies by total enrolment in educational system to real Gross Domestic Product (Uwatt, 2002). The result showed that physical capital exerted a positive and very statistical impact on economic growth. On human capital variable, it was human capital from primary school education that was statistically very significant on economic growth of the Nigerian economy. Additionally, De Meulemeester and Rochat (1995) test for Granger causality between higher education enrollments and economic growth. Their findings suggest unidirectional short-run Granger causality running from higher education enrollments to economic growth. In studying “The impact of education on economic growth in Turkey” study the relationship between the average rate of school enrolment and the average economic growth rate in Turkey during 1923-2007 using ARDL model. Their results suggest a cointegration between the enrollment rate and real income. The relationship between real income and school enrolment rate is a bilateral Granger casualty which shows that education has led to economic growth in long-run in Turkey and vice versa (Beskaya et al., 2010) and investigated the effect of human capital on economic growth during 1960-2006 in India, using Lucas’s growth model. The results show despite investments on physical capital which did not have a significant and positive effect in the short and long-run, investments on human capital can affect India’s per capita GNP in a significant and positive way in the long-run (Halder and Mallik, 2010).

Theoretical Model

Since the objective of this paper is to analyze the impact of human capital (HC) on economic growth in Cambodia, we use an aggregate production function (Y) which incorporates *HC* and other relevant variables in the model. This approach, based on an endogenous growth model which uses the Cobb-Douglas production function as the aggregate production function of the economy, is given by the following equation:

$$Y = A.K^{\alpha} . L^{\beta} . H^{\gamma} \quad (1)$$

Y is output “A” is technological progress, “K” is capital stock, “L” is labor force, and “H” is used for human capital. Human capital is amount of student enrolment at higher education and labor force is amount of total employed.

Equation (1) given above, is used to develop the econometric model to determine the impact of human capital on economic growth. In accordance to statistical economics and economics characteristics, an appropriate model to explain equation (1) is through following non-linear model:

$$\ln Y = \ln A + \alpha K + \beta L + \gamma H \quad (2)$$

It is from equation (2) that we develop the econometric equation in the next section and use it to assess empirically the relationship between human capital and economic growth. Theoretically, a positive correlation is expected between growth in output on one hand and increases in capital stock, labor force, and human capital on the other hand.

EMPIRICAL ANALYSIS

The Empirical Model

Base on the equation (2), we can rewrite the equation as follows:

$$\begin{aligned} \ln GDP_t = & \beta_1 \ln HE_t + \beta_2 \ln EE_t + \beta_3 \ln GFC_t + \beta_4 \ln HC_t + \beta_5 \ln LB_t \\ & + \varepsilon_t \quad (3) \end{aligned}$$

Where: “GDP” is gross domestic product, “HE” is health expenditure, “EE” is education expenditure, “GFC” is gross fixed capital formation, “HC” is human capital (amount of student enrolment at higher education), and “LB” is Labor force (total amount of employments).

Equation (3) is estimated using annual data spanning the period 1995 to 2011. The data were obtained mainly from various issues of the World Bank and Asian Development Bank (September 2013).

EMPIRICAL RESULTS

1. Unit Root Test

The first step is to test for the order of integration of each variable by using ADF (1979) test that is based on inclusion of both intercept and linear time trend and it is also performed without the trend term. We estimate the following equation:

$$\Delta Y_t = \alpha_o + \beta Y_{t-1} + \sum_{j=1}^p y_j \Delta y_{t-j} + u_t \quad (4)$$

(With inclusion of an intercept trend)

$$\Delta Y_t = \alpha_o + \alpha_1 t + \beta Y_{t-1} + \sum_{j=1}^p y_j \Delta y_{t-j} + u_t \quad (5)$$

(With both intercept and deterministic time trend)

Where

$$\Delta Y_t = y_t - y_{t-1}$$

u_t is stochastic error terms

The ADF test uses the following hypothesis:

$H_0: \beta = 0$; (Y_t is Non-Stationary)

$H_a: \beta < 0$; (Y_t is Stationary)

The results of the ADF test are reported in the table given below. First the property of the data is checked at level and then first difference is taken to make it stationary. The results of ADF show that all variables are stationary therefore most appropriate technique for the analysis is co-integration as summarized in Table 1.

Table 1 ADF test

Unit Root Test for Human Capital and Economic Growth

Using Augmented Dickey Fuller Test

Variable	Only Intercept	With Trend and Intercept
LnGDP		
Level	1.525	-2.539
	(0.9976)	(0.3090)
1 st Difference	-0.960	-3.659**
1 st Difference	(0.7675)	(0.0252)
LnHE		
Level	-1.285	-2.456
	(0.6358)	(0.3500)
1 st Difference	-2.511	-5.516***
	(0.1128)	(0.0000)
LnEE		
Level	-1.573	-0.813
	(0.4100)	(0.9646)
1 st Difference	-4.772***	-2.288
	(0.0001)	(0.4405)

Variable	Only Intercept	With Trend and Intercept
LnHC		
Level	-0.573	-2.385
	(0.8769)	(0.3874)
1 st Difference	-3.503**	-3.695**
	(0.0079)	(0.0227)
LnLB		
Level	2.698	-0.322
	(0.9991)	(0.9890)
1st Difference	-1.222	-3.849**
	(0.6643)	(0.0487)
LnLB		
Level	-1.058	-1.395
	(0.7315)	(0.8624)
1st Difference	-2.739*	-4.403***
	(0.0676)	(0.0022)
Rejection of hypothesis of a unit root ***at 1%, ** at 5%, * at 10%		

2. Test for Co-Integration (Johansen Test)

After testing for stationarity of our series, we therefore test for cointegration of the variables in our model to see whether there exists an equilibrium relationship between the variables. Regression of one time series variable on one or more time series variable often can give spurious results (Wooldridge, 2012). One way of controlling this problem is by testing if the time series are cointegrated. If a group of variables are individually integrated of order one, their linear combination might be stationary. We used Johansen test for co-integration where we estimated an OLS regression.

Table 2

Unrestricted cointegration rank test (Trace)				
H_0	H_1	Trace Statistic	5% critical value	1% critical value
$r = 0$	$r > 1$	159.8008	94.15	103.18
$r \leq 1$	$r > 2$	96.0750	68.52	76.07
$r \leq 2$	$r > 3$	46.7840	47.21	54.46
$r \leq 3$	$r > 4$	20.6378	29.68	35.65
$r \leq 4$	$r > 5$	9.5731	15.41	20.04
$r \leq 5$	$r > 6$	0.2253	3.76	6.65

Starting with null hypothesis of no cointegration ($r = 0$ and $r \leq 1$) among the variables, the trace statistic are 159.8008 and 96.0750 which exceeds the 95 per cent critical values, so we reject the null hypothesis. The null hypothesis of $r \leq 2$, $r \leq 3$, $r \leq 4$, and $r \leq 5$ cannot be rejected at 5% level of significance. Consequently, we conclude that there are two cointegration relationships involving variables such as gross domestic product, health expenditure, education expenditure, gross fixed capital formation, human capital, and labor force variable.

Table 3

Unrestricted cointegration rank test (Maximum Eigenvalue)				
H_0	H_1	Max-Eigen	5% critical value	1% critical value
$r = 0$	$r > 1$	63.7258	39.37	45.10
$r \leq 1$	$r > 2$	49.2910	33.46	38.77
$r \leq 2$	$r > 3$	26.1461	27.07	32.24
$r \leq 3$	$r > 4$	11.0647	20.97	25.52
$r \leq 4$	$r > 5$	9.3478	14.07	18.63
$r \leq 5$	$r > 6$	0.2253	3.76	6.65

Unrestricted cointegration rank test of λ_{\max} are reported in Table 3. Null hypothesis cannot be accepted as the calculated value of λ_{\max} (63.7258 and 49.2910) are greater than the 95 per cent critical value. Therefore, on the basis of λ_{\max} statistic, it can be concluded that there are two cointegration vector. The presence of cointegration vectors shows that there exists a long run relationship among gross domestic product, health expenditure, education expenditure, gross fixed capital formation, human capital, and labor force variable.

Table 4
Normalized Co-integrating Coefficients

LnGDP	Model
LnHE	0.0580787 (0. 0772021)
LnEE	-0.0874559 (0. 1321625)
LnGFC	0.6608038*** (0. 1397912)
LnHC	0. 040840*** (0. 0100919)
LnLB	-0.0210942 (0. 3451254)
Constant	9.455932** (3.838796)

***, ** indicate significance at the 1%, 5% level respectively.

Empirical evidence presented in Table 4 reveals that in the long run gross fixed capital and human capital are positively and significantly affects GDP. 1% increase in gross fixed capital leads to 0.66% increase in GDP. One percent increase in human capital leads to 0.041 % increase in GDP. However, the health expenditure, education expenditure, and labor force are insignificant impact on GDP. This results show that these three variables do not have a relationship with GDP.

3. Error Correction Model

If there is a long run relationship between different variables exists then an error correction process is also taking place. Error correction model examine short run fluctuations in the Cambodia economic activity and the effects of gross fixed capital formation and human capital on these fluctuations.

$$\Delta \text{LnGDP} = \alpha_0 + \alpha_1 \Delta \text{LnHE} + \alpha_2 \Delta \text{LnEE} + \alpha_3 \Delta \text{LnGFC} + \alpha_4 \Delta \text{LnHC} + \alpha_5 \Delta \text{LnLB} + \varepsilon EC_{t-1} + \varepsilon_t \quad (8)$$

Table 5

Error Correction Model Estimation	
ΔLnGDP	Model
ΔLnHE	-0.0489896 (0.0914822)
ΔLnEE	0.0482568 (0.2659663)
ΔLnGFC	0.0308976 (0.2221325)
ΔLnHC	0.014366 (0.0276041)
ΔLnLB	0.0760198 (0.3799817)
ωEC_{t-1}	-0.0788967 (0.4974873)
a_0	0.0682479 (0.0512037)
Prob > F	0.9893
Adj R2	0.5979
Breusch-Pagan test for heteroskedasticity (<i>p-value</i>)	0.7691
RESET Test (<i>p-value</i>)	0.4514
Breusch-Godfrey LM test for autocorrelation (<i>p-value</i>)	0.0471

The ordinary least square estimates for the error correction model of the form in Equation (8) are reported in Table 5. The t-statistics of the estimated coefficients are given in the parentheses. One of the conclusions that can be derived from the results of the error correction model is that there is no statistical significance between the human capital and GDP output. That means the GDP is not affected by the human capital and other variables in short run.

Conclusion

The main objective of this research is to analyze the short run and long run dynamic of human capital on economic growth. To reach that objective, Cointegration joined with Error Correction techniques has been used. The final results reveal that the gross fixed capital and human capital (student enrolments at higher education) are positively affected on economic growth in Cambodia in the long-run, but there are no effects in the short-run.

With regard to the impact of gross fixed capital and human capital on economic growth, it seems necessary where the schools and universities must enhance the quality of students through training skilled labor, professionals in various sectors, equipment, infrastructure, etc... in the direction of market-based reforms by supporting from the government to promote the economic growth in the future.

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FACTORS INFLUENCE PROFITABILITY OF COMMERCIAL BANKS—EVIDENCE FROM CAMBODIAN BANKING SECTOR

Mr. SIEM Monileak⁶⁶, DBA Candidate

1 Introduction

The banking sector is considered to be an important source of financing for most business. It is generally agreed that a strong and healthy banking system is a prerequisite for sustainable economic growth. Bank's health is significantly impact the health of the nation's economy, therefore, the focus of the relationship between bank's health and the economic growth (Rajan & Zingales, 1998; Levine, 1998) and knowkege the determinants of bank's performaceare become very important to not only bank's management but also the to other stakeholders such as central banks, bank associations, and other relevant regulators (Fadzlan Sufian and Royfaizal Razali Chong, 2008).

Investigating the factors that affect the performance has been one of the more popular topics among researchers in banking studies. It can be argued that there are some principle factors to improve financial performance for financial institutions: the bank's size, capital adequacy, liquidity, assets management (asset quality), and the credit risk. The motivation of conducting this research stems from that many studies have been conducted in many countries but unfortunately, there have not been any studies on the performance of commercial banks in Cambodia. For that reason, this research intends to fill the gap by attempting to identify and measure factors that influence the profitability of commercial banks in Cambodia.

⁶⁶ Mr. SIEM Monileak is Head Department of Accounting, Faculty of Finance and Accounting

2

Related Literature Review

A company remains in operation because it expects to make profits. Once that expectation is confirmed unattainable, the most rational decision is to close shop or exit the business. Three indicators, namely: Net Interest Margin (NIM), Return on Assets (ROA) and Return on Equity (ROE) were identified by Ahmed (2003), Aremu et al (2013), ACARAVCI and ÇALIM (2013), and Mashharawi and Al-Zu'bi (2009) to be widely employed in the literature to measure profitability. However, there are divergent views among scholars on the superiority of one indicator over the others as a good measure of profitability. For instance, Goudreau and Whitehead (1989) and Uchendu (1995) believed that the three indicators are all good. Hancock (1989) used only ROE to measure profitability in her study. Also, Odufulu (1994) used only the gross profit margin in measuring profitability. Ogunleye (1995) used ROA and ROE. Profitability measures, according to Akinola (2008) include Profit before Tax (PBT), Profit after Tax (PAT), ROE, Rate of Return on Capital (ROC) and ROA. Sanni (2009) used Earnings Per Share (EPS). However, this study, we shall limit performance to Net Interest Margin (NIM).

Bukhari and Qudous (2012) found that bank size have very no significance on the profitability of a bank. Alkatib (2012) rejected the hypothesis claiming that “there exist statistically insignificant impact of bank size on financial performance measured by return on assets (ROA). Short (1979), Smirlock (1985), Bikker et al. (2002) and Pasiouras et al. (2007) show that bank size affects positively on bank performance. Salloum and Hayek (2012) suggested that there is a direct relationship between bank size and bank profitability, which is positive and statistically significant at 1%. According to Mashharawi and Al-Zu'bi (2009) bank size is the most important factors that affect bank profitability due to that economic growth has positive relationship with profitability. Aremu et al. (2013) showed that bank size is not significantly determined bank profitability. Ramdan et al. (2011) has founded that bank size was negatively insignificant in relationship with profitability. Ben Ameer and Moussa Mhiri (2013) have found that bank size generally has negative and significant coefficient on the bank profitability. Akhtar et al. (2011) have found that there is a significant relationship between bank size and profitability where return on assets is used as proxy for measuring bank's profitability and insignificant relationship where return on equity is used as proxy to measure the profitability of commercial banks. Khrawish (2011) revealed that there is significant and positive relationship between bank size and return on assets and return on equity. Sufian and Chong (2008) suggested that bank size is negatively related to banks' profitability. Ayanda et al. (2013) revealed that bank size did not significantly determine bank profitability. The study conducted by Sastrosuwito and Suzuki (2011) found

that bank size has positive impact but insignificant on profitability. Bilal et al. (2013) concluded that bank size has positive and significant impact on return on assets and return on equity. The study conducted by Tabari et al. (2013) showed that bank size has positive and meaningful effect on performance of banks.

ACARAVCI and ÇALIM (2013) showed that capital adequacy has a significant and positive impact on profitability of state-owned bank and privately-owned banks but it has a significant and negative impact on profitability of foreign banks. Capital adequacy was found to be significant drivers which affected bank profitability both in the short run and long run (Aremu et al., 2013). According to Sayilga and Yildirim (2009) capital adequacy has positively affected on the profitability. Ben Ameer and Moussa Mhiri (2013) confirmed the positive relationship between capital ratio and bank profitability. Akhtar et al. (2011) found negative relation of capital adequacy with bank profitability. Khrawish (2011), in his paper, revealed that there is significant and positive relationship between capital adequacy and return on assets and return on equity. Sufian and Chong (2008) suggested that capitalization (equity/total asset) is negatively related and statistically significant to banks' profitability. Ayanda et al. (2013) founded that capital adequacy is significant drivers which affected bank profitability both in long run and short run respectively. Jha and Hui (2012) concluded that capital adequacy ratio was significantly negative effect on return on assets but positively influenced the return on equity. Sastrosuwito and Suzuki (2011) explained that capital adequacy has positive and significant on return on assets. Syafri (2012) had showed that capital adequacy has positive effect on profitability. Qin and Pastory (2012) have found that capital adequacy has negative impact on profitability. Ben Khediri et al. (2010) found that bank capital strength affects positively and significantly the bank profitability in all specifications in their study. Perera et al. (2013) in their study showed that the equity capital level (capital adequacy) is found to be significantly and positively associated with bank profitability. D. M. Mathuva (2009) finds that bank profitability is positively related with the core capital ratio and risk-based capital. Bilal et al. (2013) concluded that capital ratio has positive but insignificant relation with return on assets and positive and significant impact on return on equity. Tabari et al. (2013) showed that bank's capital has positive and meaningful effect on the performance of bank.

Liquidity was found to be significant drivers which affected bank profitability both in the short run (Aremu et al., 2013). Ayanda et al. (2013) argued that liquidity affects bank profitability in the short run. Jha and Hui (2012) concluded that liquidity did not have any considerable effect on ROA and had no significant on ROE. Qin and Pastory (2012) found that liquidity has positive impact on profitability of banks. Olagunju et al. (2011) indicates that there is significant relationship between liquidity and profitability of bank in Nigeria. Lartey et al. (2013) found that there was a very weak positive relationship between the liquidity and profitability of the listed banks in Ghana.

ACARAVCI and ÇALIM (2013) suggested that asset quality which measured as total loan to total assets has significant and negative impact on profitability of privately-owned banks while it has a significant and positive impact on profitability of foreign bank. Khrawish (2011), in his paper, revealed that there is significant and positive relationship between asset quality (total loan to total assets) and return on equity. Sastrosuwito and Suzuki (2011) found that asset quality has positive and significant impact on profitability. Syafri (2012) analysed factors affect the profit of commercial banks in Indonesia, had showed that asset quality (loan loss provision to total loan) has positive effect on profitability. Qin and Pastory (2012) found that asset quality has positive impact on profitability of bank. Ben Khediri et al. (2010) find that the relation between asset quality (loan to total assets) and bank performance is negative and statistically significant.

The study conducted by Alkatib (2012) has rejected the hypothesis claiming that there exist statistically insignificant impacts of credit risk on financial performance measured by return on assets (ROA). Salloum and Hayek (2012) found that the relationship between credit risk and profitability is negative and statistically significant. This negative relationship indicates that any increase in provision for bad and doubtful loans results in a decline in the profitability of banks. However, Angbazo (1997) and Fernández de Guevara and Maudos (2004) has found that credit risk is positively correlated with profitability. Credit risk was found to be significant drivers which affected bank profitability both in the short run and long run (Aremu et al., 2013). It is almost perfectly significant negative relationship with profitability in all circumstances both in the long run and in the short run. Ramdan et al. (2011) have found that credit risk is associated with significant inverse relationship with profitability. Sufian and Chong (2008) suggested that credit risk is negatively related to banks' profitability. Ayanda et al. (2013) revealed that credit risk did not significantly determine bank profitability. Riaz (2013) has found that there is significant impact of credit risk on both return on assets and return on equity. Boachene et al. (2012) found that credit risk has positive and significant relationship with bank profitability or performance which indicates that as a bank's risk of customer loan default increases, the bank is able to increase its profitability. Tabari et al. (2013) showed that credit risk has negative effect on the performance of bank. KOLAPO et al. (2012) found that credit risk exerts most significant positive effect on the profitability across the banking firms.

According to Aremu at al. (2013) only broad money supply growth rate was found to be a significant driver for bank profitability both in the long run and in the short run. The growth of money supply was positively associated with profits in banking sector. Sufian and Chong (2008) suggested that money supply is not statistically significant to banks' profitability. According to Ayadan et al. (2013) only broad Money Supply growth rate was found to be a significant driver both in the long run and in the short run. Al-Jarrah et al. (2010) found that there is a positive relationship between money supply and profitability measure. These findings agree with Haron (1966b) and Haron and Azimi (2004).

Salloum and Hayek (2012) confirmed that gross domestic product is an important determinant of bank profitability. It is positive and statistically significant with profitability. Bashir (2000) and Beckmann (2007) have showed a significant positive relationship between bank profitability and economic growth. ACARAVCI and ÇALIM (2013) found that real GDP variable has a significant and positive impact on profitability for state-owned bank. This result stands in line with the empirical evidence of Bourke (1989), Molyneux and Thornton (1992), Demircuc-Kunt and Huizinga (1999), Bikker and Hu (2002), Athanasoglou et al. (2008), Dietrich and Wanzenried (2009) and Davydenko (2011). But this variable has a significant and negative impact on profitability for privately-owned bank and foreign bank. This finding agrees with theory and empirical evidence that; the relationship between GDP trend growth and bank profitability could be pro-cyclical. When GDP trend growth is positive, the effect to bank profitability is positive and when GDP trend growth is negative, the effect on profitability is negative. This result stands in line with the empirical evidence of Bennaceur (2003), Panayiotis et al., (2005) and Francis (2011). According to Aremu et al. (2013) there is no evidence found that real GDP growth rate is a determinant of bank profitability which contrary to findings of Dietrich and Wanzenried (2011). The result of the study conducted by Ramadan et al. (2011) showed that real gross domestic product has a positive insignificant impact on return on assets and return on equity. Ben Ameer and Moussa Mhiri (2013) found negative and significant on return on equity and net interest margin. Khrawish (2011) found that there is significant and negative relationship between annual growth rate for gross domestic product and return on assets and return on equity. Sufian and Chong (2008) suggested that economic growth (GDP growth) is not statistically significant to banks' profitability. Jiang et al. (2003) explained that real GDP growth is significant and positively related to bank profitability. Ben Khediri et al. (2010) reported a positive and significant coefficient on GDP growth, suggesting that economic growth is significant determinant of bank profitability. Bilal et al. (2013) concluded that GDP has positive but insignificant impact on return on equity and positive significant impact on return on assets. Tabari et al. (2013) found that the growth of gross domestic product has positive effect on the performance of bank. This means that the more economic growth causes to improve the performance of banks.

According to Salloum and Hayek (2012) inflation does not appear to be a determinant of bank profitability due to that its relationship with profitability is not statistically significant. According to Mashharawi and Al-Zu'bi (2009) economic growth is the most important factors that affect bank profitability due to that economic growth has positive relationship with profitability (ROE). According to Aremu et al. (2013) there is no evidence found that inflation rate is a determinant of bank profitability which contrary to findings of Dietrich and Wanzenried (2011). According to Sayilga and Yildirim (2009) the profitability (ROA and ROE) of the banking sector seems to have increased along with declining inflation rate. The result of the study conducted by Ramadan et al. (2011) showed that inflation has a positive insignificant impact on return on assets and return on

equity. Ben Ameer and Moussa Mhiri (2013) also found a weak significance about the impact of inflationary conditions in the economy on bank performance. Khrawish (2011) found that there is significant and negative relationship between inflation rate and return on assets and return on equity. Sufian and Chong (2008) suggested that inflation has negative impact on banks' profitability. Jiang et al. (2003) explained that inflation is significant and positively related to bank profitability. Sastrosuwito and Suzuki (2011) argued that impact of inflation is insignificant on profitability. Syafri (2012) analyzed factors affect the profit of commercial banks in Indonesia, had showed that inflation rate has negative effect on profitability. Demirgüç-Kunt and Huizinga (1999) found positive relationship between inflation and bank profitability which implies that bank income increases more with inflation than do bank cost. Ben Khediri et al. (2010) explained that the relation between inflation and return on average assets is positive and statistically significant which suggests that banks tend to be more profitable in inflationary environment. Boyd and Champ (2006) explained that most importantly bank profitability—net interest margin, net profits, rate of return on equity, and value added by the banking sector—all decline in real term as inflations rises, after controlling for other variables. Aburime (2008) in his study revealed that inflation is significant macroeconomic determinants of bank profitability in Nigeria. Bilal et al. (2013) concluded that inflation has significant impact on return on asset but insignificant impact on return on equity. Otuori (2013) showed that inflation rate has negative and significant impact on performance of commercial bank in Kenya. Tabari et al. (2013) showed that there is positive effect of inflation on the profitability. This means that banks have the opportunity to adjust their interest rate and consequently improve their performance.

Riaz (2013) has found that there is significant impact of interest rate on both return on assets and return on equity. Ali et al. (2012) found that interest rate has significant impact on the profitability (ROA) of the banks and has a little bit significant on ROE. ACARAVCI and ÇALIM (2013) found that real interest rate has a significant and positive impact on profitability for stated-owned banks and foreign banks while it has an insignificant impact on profitability for privately-owned banks. M. K. Leung et al. (2003) showed that movements in the interest rate on foreign currency have a large significant impact on the time to profitability. Flannery (1981) showed that market interest rates have negative impact on profitability. Demirgüç-Kunt and Huizinga (1999) found that high real interest rates are associated with higher interest margin and profitability. J.-H. Hahm (2004) explained that commercial banks were significantly negatively exposed to interest rate during this sub period implying that higher interest rate negatively impact the firm value of the financial institutions. Aburime (2008) in his study revealed that interest rate is significant macroeconomic determinants of bank profitability in Nigeria. Otuori (2013) showed that interest rate has positive and significant impact on performance of commercial bank in Kenya.

ACARAVCI and ÇALIM (2013) found that real exchange rate has a significant and positive impact on profitability for stated-owned banks and foreign banks while it has an insignificant impact on profitability for privately-owned banks. Khrawish (2011) found that there is significant and positive relationship between exchange rate and return on assets and return on equity. Lare-Lantone (2011) found that neither exchange rate nor the exchange rate regime influences banks profitability significant. J.-H. Hahm (2004) explained that commercial banks were significantly negatively exposed to exchange rate during this sub period implying that higher exchange rate negatively impact the firm value of the financial institutions. Aburime (2008) revealed that exchange rate regime is significant macroeconomic determinants of bank profitability in Nigeria. Babazadeh and Farrokhejad (2012) found that there is a significant, stationary model for behavior of exchange rate both in short-run and long-run towards bank's profit.

3 Research methodology

3.1 Variables

In the empirical study, in order to analyze the factors influence the profitability of commercial banks, we include eleven variables, one of them is dependent variable and others are as independent variables. The independent variables are divided into two categories as bank-specific factors and macroeconomic factors.

Dependent variable

In literature, banks profitability typically measured by return on asset (ROA), return on equity (ROE), and net interest margin (NIM). ROA is defined as net profit divided by total assets and expressed in percent. ROE is defined as net profit divided by total equity and expressed in percent. NIM reflects the difference between interest income and interest expenses as a percentage of total assets. In this study, we use NIM as measure of bank's profitability.

Bank-specific variables

Bank-specific factors are determined by bank's management decisions and policy objectives. We use the following bank-specific characteristics as factors influence bank's profitability.

- **Assets Size:** In most finance literature, total assets of the banks are used as a proxy for bank size. Bank size is represented by natural logarithm of the total assets. The effect of the bank size on profitability is generally expected to be positive (Smirlock, 1985).
- **Capital adequacy:** The ratio of equity to total assets is considered one of the basic ratio for capital strength. It is expected that the higher this ratio, the lower the need for external funding and the higher the profitability of the bank. It shows the ability of bank to absorb losses and handle risk exposure with shareholder. Equity to total assets ratio is expected to have positive relation with performance that well-capitalised banks face lower of going bankrupt which reduces their cost of funding and risks (Berger, 1995; Bourke, 1989; Hassan and Basir, 2003).
- **Asset quality:** Regarding to asset quality we use loans to total assets ratio. Loans to total assets ratio is a measure of income source of banks and it is expected to affect profitability positively unless bank takes on unacceptable risk.
- **Liquidity:** The ratio of liquid assets to total asset is used in this study as a measure of liquidity. The higher this percentage the more liquid the bank is. Insufficient liquidity is one of the major reasons of the bank failures. However, holding the liquid assets has an opportunity cost of higher return. Bourke (1989) finds a positive significant link between bank liquidity and profitability. However, in time of instability banks may choose to increase their cash holding to mitigate risk. Unlike Bourke (1989), Molyneux and Thornton (1992) come to a conclusion that there is a negative correlation between liquidity and profitability level.
- **Credit risk:** Credit risk is approximated by the ratio of provision for doubtful debts to total loans. Empirical work by Miller (1997), Anthanagosoglou et al. (2008) and Liu et al. (2010) found that deterioration in credit quality reduces bank profitability measured by ROA and ROE. Conversely, other studies show that loan loss provision increase lending rates and improve bank net interest margins. In fact, the more provisions are necessary, the riskier the customers of the bank are, and lending rates should be higher to compensate for losses incurred by bank (Ho and Saunders, 1981; Zarruk and Madura, 1992; Angbazo, 1997). The impact of credit risk on the bank profitability is undermined (Salloum and Hayek, 2012).

Macroeconomic factors

Bank's profitability is expected to be sensitive to macroeconomic variables. In this paper in terms of external factors, the three general macroeconomic factors are used: Annual gross domestic products growth rate (GDP), annual inflation rate, and money growth rate.

- **Annual GDP growth rate:** It is measured of the total economic activity. It is expected to have an impact on numerous factors related to the demand and supply for banks deposits and loans. According to the literature on the association between economic growth and financial sector profitability. GDP growth is expected to have a positive relation with bank profitability (Demirguc-Kunt and Huizinga, 1999); Bikker and Hu, 2002). In this context we expect a positive relationship between bank profitability and GDP development as the demand for lending is increasing (decreasing).
- **Annual inflation rate:** This measures the overall percentage increase in Consumer Price Index (CPI) for all goods and services. Inflation affects the real value of costs and revenues. The relationship between the inflation and profitability may have a positive or negative effect on profitability depending on whether it is anticipated or unanticipated (Perry, 1992). If an inflation rate is anticipated, banks can adjust interest rate in order to increase revenues than costs. On contrary, if the inflation rate is not anticipated, banks cannot make proper adjustments of interest rate that costs may increase faster than revenues. But most studies observe a positive impact between inflation and profitability (Bourke, 1989; Monyneux and Thornton, 1992; Hassan and Basir, 2003; Kosmidou, 2006) and that we expect to be positive in this study.
- **Foreign exchange:** foreign exchange risk arises when a bank holds assets or liabilities in foreign currencies and impacts the earnings and capital of the bank due to the fluctuations in the exchange rate. No one can predicts what the exchange rate will be in the next period, it can move in either upward or downward directions regardless of what the estimates and predictions were. This uncertain movement poses a threat to the earnings and capital of bank, if such a movement is in undesired and anticipated directions (Marroof Hussain, 2011).
- **Interest rate:** The impact of interest rate on banks profit operates via two channels of the revenues side (Ramhall, 2009). First a rise in interest rate scales up the amount of income a bank earns on new assets it acquires. But, the speed of revenue adjustment will be function f speed of interest rates. Second, the effect hinge on the amount of loans and securities held. Indeed, in case of rising interest rates on loans are higher than marketable securities so that strong incentives prevail for bank to have more loans rather than buying securities. While Molyneux ad Thornton (1992) and DemirgÜÇ-Kunt and Huizinga (1999) indicate a positive relationship between interest rate and bank profitability, Naceur (2003) identifies a negative relationship.
- **Money growth rate:** According to Aremu at al. (2013) only broad money supply growth rate was found to be a significant driver for bank profitability both in the long run and in the short run. These findings agree with Haron (1966b) and Haron and Azimi (2004).

3.2 Data and Research Methodology

Our sample is a balanced panel dataset of 15 commercial banks observed over the period 2006-2013 consisting of 120 observations. The bank-specific variables are derived from income statements and balance sheets of commercial banks. The financial statements are collected from National Bank of Cambodia and, websites of each banks. With regards to the macroeconomic variables, the data of economic growth, inflation rate and money supply, interest rates are obtained from IMF and World Bank websites.

To examine the determination of bank profitability, we use panel data. A dataset that comprises both time series and cross-sectional elements is known as a panel of data or longitudinal data. In panel data models, the dataset consists of n cross-section units, denoted as $i = 1, \dots, N$, observed at each of T time periods, $t = 1, \dots, T$. In dataset, the total observation is $n \times T$. The basic framework for the panel data is defined according to the following regression model (Brooks, 2008): $Y_{it} = \alpha + \beta'x_{it} + u_{it}$

Where y_{it} is the dependent variables, α is the intercept term, β is a $k \times 1$ vector of parameters to be estimated on the explanatory variables, and x_{it} is a $1 \times k$ vector of observations on the explanatory variables, $t=1, \dots, T$; $i=1, \dots, N$.

Our Panel regression:

$$NIM_{it} = C + \beta_1 SIZE_{it} + \beta_2 CAPAD_{it} + \beta_3 LIQ_{it} + \beta_4 RISK_{it} + \beta_5 ASSQT_{it} + \beta_6 GDP_{it} + \beta_7 INFLATION_{it} + \beta_8 MONEYGR_{it} + \beta_9 INRATESPR_{it} + \beta_{10} EXRATE_{it} + \varepsilon_{it}$$

Where:

NIM stands for Net Interest Margin

i = denoting individual bank in the model

t = referring to year

C = is a constant or intercept

B = is the coefficient of each variable

SIZE is referred to bank size which is measured as log (Total Assets)

CAPAD is referred to Capital Adequacy which is a ratio of ...

LIQ is referred to Liquidity which is ...

RISK is referred to credit risk which is measured as loan loss provision to total loans

ASSQT referred to asset quality which is the ratio of ...

GDP is an annual gross domestic product.

INFLATION = is an annual inflation rate.

MONEYGR = is money growth rate

INRATESPR = is the interest rate spread which is the difference between lending rate in US dollar and borrowing rate in USD dollar.

Exrate = is the average annual exchange rate between US dollar and Khmer Riels.

ε_{it} representing the error term of panel regression

4 Result

4.1 Descriptive statistics

The basic descriptive statistics of the variables are presented in Table 1. For each variable, Table 1 shows mean, median, standard deviation, maximum, and minimum value. On average, Cambodian banks have net interest margin (NIM) of 3.62% over the entire period from 2006 to 2013. The difference (Maximum values is 12.16%, Minimum value is 0.48%, and standard deviation is 1.83%) between Minimum and Maximum clearly shows that there are large differences in profitability among the Cambodian banks. The significant amount of variation can be explained by the factors included in our analysis.

Concerning to the capital adequacy, Cambodian banks is 24.74% on average, minimum value is 17.85%, and maximum value is 66.16%. The liquidity ratio which is one of the most important factors for banks amount to 49.58% on average, while it varies between 17.86% to 81.43%. The credit risk, which is the measure of loan loss provision, is 1.66% on average, while it varies between 0% and 15.62%. The mean of asset quality or loan to total assets ratio is 54.84%, while it varies from 10.18% to 1079%.

Table 1 also reports the mean of macroeconomic variables over the year 2006 through 2013. The average growth rate of gross domestic products is approximately 7% (minimum is 0.1% and maximum is 7.05%). The inflation rate is approximately 4.74%, money growth rate (money supply) is Cambodian banking industry is 28.20%, the nominal interest rate spread is 13.44%, and average exchange rate between U.S dollar and Khmer Riel is 4086 Riel/US\$, over the period 2006 through 2013.

	Mean	Median	Maximum	Minimum	Std. Dev.
NIM	0.036181	0.033865	0.1216	0.004858	0.018336
SIZE	5.872618	5.840119	6.967868	4.953596	0.495786
CAPAD	0.247377	0.193061	0.661608	0.059895	0.142434
LIQ	0.495813	0.47678	0.81426	0.178588	0.151185
RISK	0.016646	0.007003	0.156195	0	0.026242
ASSQT	0.548425	0.481943	10.79489	0.101766	0.954028
GDP	0.069	0.0705	0.108	0.001	0.030417
INFLATION	0.047375	0.037	0.123	0.014	0.031961
MONEYGR	0.281897	0.211613	0.629296	0.048396	0.164734
INRATESPR	0.13442	0.1474	0.1771	0.0667	0.04186
EXRATE	4086.115	4070.458	4174.25	4020	50.91956
Source: Researcher, 2014					

4.2 Empirical result from panel data analysis

The first step of this study is to investigate whether the variables contain a panel unit root. A panel unit root test in this study is examined based on the Levin et al. (2002), and Im et al. (2003). The result of unit root test for a series of NIM, bank specific variables (bank size, liquidity, asset quality, credit risk, and capital adequacy) and macroeconomic variables (GPD, inflation, money growth rate, interest rate spread and exchange rate) in each bank using the Levin et al. (2002) for common unit root process and Im et al. (2003) for individual unit root process. The null hypothesis of unit root is rejected at the 1% significant level (see Appendix). This means that our variables are stationary.

The existence of the problem of multicollinearity was tested using correlation coefficient test and Vector Inflation Factor (VIF). The correlation coefficient above 0.8 between independent variables indicates the existence of the problem of multicollinearity (Guajarati, 2007). The highest value of correlation is 0.701881 that is between exchange rate and interest spread and followed by the second highest value of correlation is 0.693659 that is between bank size and capital adequacy (see Appendix). However, all the correlation coefficients between the independent variables were less than 0.8 which is there is no serious multicollinearity problem arises as showed in Table 2.

Table 2: Correlation coefficient between independent and dependent variables

	NIM	SIZE	CAPAD	LIQ	RISK	ASSQT	GDP	INFLATION	MONEYGR	INRATESPR
NIM	1.000000									
SIZE	0.258779	1.000000								
CAPAD	-0.061351	-0.693659	1.000000							
LIQ	-0.586561	-0.323506	0.012164	1.000000						
RISK	0.000561	-0.199320	0.382531	0.026535	1.000000					
ASSQT	0.098389	0.192062	-0.047330	-0.225558	-0.062253	1.000000				
GDP	0.098058	-0.122013	-0.005169	0.011620	-0.138643	-0.209635	1.000000			
INFLATION	0.132423	-0.144970	0.032734	0.039326	0.055500	-0.048549	0.196435	1.000000		
MONEYGR	0.030371	-0.157325	-0.036313	0.214636	-0.005559	0.003730	0.255566	-0.177785	1.000000	
INRATESPR	0.028482	-0.172573	0.084877	0.144145	0.129133	0.061510	-0.319583	0.418746	0.142055	1.000000
EXRATE	-0.021708	-0.142456	0.085094	0.117556	0.108426	0.087525	-0.420307	-0.204885	0.094542	0.701881
Source: Researcher, 2014										

Another method to test for multicollinearity is to test for VIF. According to Gujarati (2007), a rule of thumb if the VIF is above 10 that would result in the existence of multicollinearity. If the VIF of a variable exceeds 10 that variable is said to be highly collinear. As we can see from the Table 3 that presented the VIF of the variables, none of them is above 10. This shows that there is no problem of multicollinearity in this analysis.

Table 3: Variance Inflation Factors of Variables

Variable	Coefficient variance	Centered VIF
SIZE	1.96E-05	2.920909
CAPAD	0.000220	2.697515
LIQ	9.50E-05	1.314545
RISK	0.003011	1.255569
ASSQT	2.12E-06	1.166103
GDP	0.003401	1.905557
INFLATION	0.008464	5.235922
MONEYGR	0.000118	1.934928
INRATESPR	0.008430	8.945102
EXRATE	4.02E-09	6.306260

Source: Researcher, 2014

It was carried out diagnostic test to identify error terms behavior and thereby ensure reliability of the output of the model used. White-Heteroscedasticity Test used for this purpose and results indicates that no heteroscedasticity problems in the model used as indicated Appendix.

Panel data models are usually estimated using either fixed effects or random effects models. In the fixed effect model, the individual-specific is random variable that is allowed to be correlated with the explanatory variables. The rationale behind random effects model is that, unlike the fixed effect model, the individual-specific effect is a random variable that is uncorrelated with the independent variables included in the model. The fixed effects model is an appropriate specification if we are focusing on specific set of N firms and our reference is restricted to the behavior of these sets

of firms (Baltagi, 2005). Also in order to find which model (random effect vs. fixed effect model) is appropriate, the Hausman test can be conducted. From the Correlated Random Effects—Hausman Test, the appropriate model is random effect model (see Appendix).

Table 4 presents the estimated parameters and t-statistics obtained from the application of random effect model using NIM as dependent variable.

Capital adequacy is highly significant and positive related to bank profitability. It is easier for well-capitalized banks to pursue more business opportunities and thus earning higher profit since the higher this ratio the more protection afforded to the banks. This finding is confirmed with many previous studies such as ACARAVCI and ÇALIM (2013), Aremu *et al.* (2013), Sayilga and Yildirim (2009), Ben Ameer and Moussa Mhiri (2013), Akhtar *et al.* (2011), Khrawish (2011), Sufian and Chong (2008), Ayanda *et al.* (2013), Jha and Hui (2012), Sastrosuwito and Suzuki (2011), Syafri (2012), Qin and Pastory (2012), and Ben Khediri *et al.* (2010). Liquidity (LIQ) is very highly significant but negatively related to bank profitability. This finding have been revealed by the studies of Aremu *et al.* (2013), Ayanda *et al.* (2013), Qin and Pastory (2012), Olagunju *et al.* (2011), and Lartey *et al.* (2013). Credit risk is positively significant related to the profitability of bank which measured by net interest income. This means that if the advances or credit risk is increased, the profitability of the bank also increase. Whereas, the net lending rate (interest rate spread) has also found to be significantly related with the bank's profitability but negatively related. The result confirmed with the studies of Alkatib (2012), Salloum and Hayek (2012), Angbazo (1997), Fernández de Guevara and Maudos (2004), Aremu *et al.* (2013), Ramdan *et al.* (2011), Sufian and Chong (2008), Riaz (2013), Boachene *et al.* (2012), Tabari *et al.* (2013), and KOLAPO *et al.* (2012).

Money growth rate (money supply) is very highly positive related to bank profitability. The result also revealed by Aremu *et al.* (2013), Ayadan *et al.* (2013), Al-Jarrah *et al.* (2010), Haron (1966b), and Haron and Azimi (2004). Interest spread is highly significant but negatively related to profitability. Riaz (2013), Ali *et al.* (2012), ACARAVCI and ÇALIM (2013), M. K. Leung *et al.* (2003), Flannery (1981), Demirgüç-Kunt and Huizinga (1999), J.-H. Hahm (2004), Aburime (2008), and Otuori (2013) also find that interest rate is significant with profitability of bank. Exchange rate is highly significant and positively related to profitability of bank. This finding also have been found by ACARAVCI and ÇALIM (2013), Khrawish (2011), J.-H. Hahm (2004), Aburime (2008), and Babazadeh and Farrokhejad (2012).

However, this study found that bank size is positively related but insignificant with profitability of banks. This confirmed with the findings by many previous studies such as Bukhari and Qudous (2012), Aremu *et al.* (2013), Ramdan *et al.* (2011), Ayanda *et*

al. (2013), and Sastrosuwito and Suzuki (2011). This study also finds that asset quality is positively related but insignificant with nt profitability of bank. This is contrast to the previous studies such as ACARAVCI and ÇALIM (2013), Khrawish (2011), Sastrosuwito and Suzuki (2011), Syafri (2012), Pastory (2012), and Ben Khediri et al. (2010) who are all finds that asset quality is significantly related to bank profitability. Many studied have found that gross domestic product is significantly related with bank profitability. However, the studies of Aremu at *al.* (2013), Ramadan et *al.* (2011), Sufian and Chong (2008) and Bilal et *al.* (2013) found that gross domestic product is insignificant related with bank profitability. Our study finds gross domestic product is positively related but insignificant with bank profitability.

Table 4: Factors influence the NIM

Variables	Coefficient	Std. Error	t-Statistic	Prob.
SIZE	0.005103	0.005742	0.888719	0.3761
CAPAD	0.031386	0.014258	2.201376	0.0298**
LIQ	-0.046400	0.008343	-5.561447	0.0000*
RISK	0.070459	0.041675	1.690675	0.0938***
ASSQT	1.58E-05	0.000989	0.016018	0.9872
GDP	0.016319	0.039129	0.417058	0.6775
INFLATION	0.235869	0.068799	3.428392	0.0009*
MONEYGR	0.025284	0.008148	3.103148	0.0024*
INRATESPR	-0.155767	0.064450	-2.416854	0.0173**
EXRATE	0.000120	4.74E-05	2.525413	0.0130**
Constant	-0.466491	0.210517	-2.215932	0.0288
R-squared = 0.3685, Adjusted R-squared = 0.3105, F-statistic = 6.3600, Prob(F-statistic) = 0.0000				
Note: *, **, and *** indicate significance level of 1%, 5%, and 10% respectively.				

Source: Researcher, 2014

5

Conclusion

In trying to determine factors influence on the commercial bank profitability in Cambodia by focusing on bank-specific factors (internal factors) and macroeconomic factors (external factors), the following conclusion can be drawn:

- This study has examined how bank-specific characteristics and macroeconomic variables affect the profitability of commercial banks in Cambodia over the period from 2006 to 2013. So far, there is no published econometric studies that has examined the important issues of the factors that influence the profitability of commercial banks for Cambodian banking industry even though Cambodian banking industry has experienced transformation and reforms since 2000. Thereby, an efficient banking system coupled with financial stability contributed to the economic growth which has achieved more than a decade. Therefore this study contributes to a better understanding of banking performance in Cambodian banking sector which is dominated by commercial banks.
- This study has found that liquidity, inflation, money supply are the most important factors influence on profitability of bank. The interest rate spread, exchange rate and capital adequacy are the next important factors affect profitability of commercial banks. Credit risk also a factor affect bank profitability.
- However, assets size, asset quality and gross domestic product has positive relationship with bank profitability but seem not the significant factors affect profitability of commercial banks.

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Appendix A

Panel unit root test result

Null: Unit root (assumes common unit root process)	
Series	Levin, Lin & Chu t-statistic
NIM	-2.00312 (0.0000)
SIZE	-2.82073 (0.0024)
CAPAD	-10.5749(0.0000)
ASSQT	-8.53461 (0.0000)
LIQ	-7.14136 (0.0000)
RISK	-6.81327 (0.0000)
GDP	-10.0075 (0.0000)
INFLATION	-5.86165 (0.0000)
MONEYGR	-9.72030 (0.0000)
INRATESPR	-0.39541 (0.3463)
EXRATE	-10.0707 (0.0000)

	Null: Unit root (assumes individual unit root process) Std. Error-t-Statistic		
Series	Im, Pesaran and Shin W-stat	ADF - Fisher Chi-square	PP - Fisher Chi-square
NIM	-2.47755 (0.0066)	52.5415 (0.0033)	74.6830 (0.0000)
SIZE	-0.94419 (0.1725)	48.6128 (0.0092)	70.1903 (0.0000)
CAPAD	-3.60673(0.0002)	66.4300(0.0001)	76.7277(0.0000)
ASSQT	-1.68890 (0.0456)	44.6606 (0.0239)	55.5158 (0.0015)
LIQ	-2.76008 (0.0029)	60.6527 (0.0003)	57.4382 (0.0009)
RISK	-2.37914 (0.0087)	47.3813 (0.0064)	42.3394 (0.0226)
GDP	-2.42365 (0.0079)	52.9353 (0.0030)	49.7755 (0.0069)
INFLATION	-0.87613 (0.1905)	31.4567 (0.2972)	31.7959 (0.2829)
MONEYGR	-3.82532 (0.0001)	69.6846 (0.0000)	69.6846 (0.0000)
INRATESPR	-0.12024 (0.4521)	23.7949 (0.6923)	8.48440 (0.9999)
EXRATE	-2.42364 (0.0077)	53.0650 (0.0029)	15.1609 (0.9767)

Appendix B

Heteroskedasticity Test: White

F-statistic	1.449383	Prob. F(52,67)	0.0761
Obs*R-squared	63.52661	Prob. Chi-Square(52)	0.1313
Scaled explained SS	131.8890	Prob. Chi-Square(52)	0.0000

Appendix C

Correlated Random Effects - Hausman Test

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	18.196213	10	0.0517

FACTORS DRIVING STUDENT LEARNING MOTIVATION

Dr. MOEUNG La⁶⁷ and Dr. SOUN Hong⁶⁸

Abstract

This study was designed to explore the factors driving students to study, to identify differences between male and female students in terms of their study behaviors and find out what factors aligning with motivational theories of Maslow's hierarchy of needs, McGregor's theories X-Y, Herzberg's two-factor theory, and McClelland's three needs theory. The result of data analysis can be explained as follows. First, pleasing family, graduating with honors, application to present and future job, learning, and getting good grades are the top five factors motivates most students to study. Second, female students are relatively more motivated to study at NUM owing to getting good grade. However, male students are reasonably more motivated to study for learning with competition than female. Finally, pleasing family aligns with McGregor's theory X, social needs of Maslow's hierarchy and need for affiliation of McClelland. Next, graduating with honors and getting good grades align with esteem needs of Maslow's hierarchy, need for achievement of McClelland, and hygiene factors of Herzberg. After that, learning aligns with self-actualization of Maslow's hierarchy, need for power of McClelland, and motivator of Herzberg. At last, Job application aligns with need for power of McClelland. The recommendation for faculty members arising from this study is that they should use multiple motivational methods in each class setting. They are not much different than those given countless times to managers working in business settings: avoid a one-size-fits all motivational approach and recognize that students in the classroom, like employees in a corporate setting, are individuals who are motivated by various tactics. Effective teaching, like good management, hinges upon personalizing the motivation to fit the individual.

Keywords: *Motivation, Maslow's hierarchy of needs, McGregor's theories X-Y, Herzberg's two-factor theory, and McClelland's three needs theory*

⁶⁷ Dr. MOEUNG La is Vice Director of English Department

⁶⁸ Dr. SOUN Hong, Head of Department, School of Graduate Studies

1 Introduction

1.1 Background

What makes students study, usually a simple question expressed with frustration, is heard over and over again whenever university faculty assemble pull together. “Students are motivated by fear,” some faculty members might claim, “give them tough classes and they’ll pull through.” Other faculty members might plea the opposite case, arguing that students thrive on positive feedback. Still other teaching faculty might argue that students work to satisfy their own personal achievement goals, or students work when they believe that there will be direct payback—in future pay or opportunities—for the efforts expended today. In the end, if a dozen faculty members were asked “What makes students study?” it is likely a dozen different opinions would be advanced (Beth, 2005). So the disagreement about which sources of student motivation match with which classical motivation theories has occurred.

(Maslow, 1968) argued that needs drive behavior, and motivation is determined by the level of the needs hierarchy at which the individual is operating. McClelland (1966) claimed instead that motivation is driven by an innate need to achieve, and Herzberg, Mausner, and Snyderman (1959) proposed that the content of the jobs themselves was the source of the elusive employee motivation. Davis and Murrell (1993) summarized, “while faculty members can serve as academic helmsmen, the collective energy of all students at the oars actually moves the boat through the water”. Nevertheless, teaching faculty measure their successes or failures in terms of student learning – and student learning is closely connected to student study behavior. According to (Beth, 2005) The faculty member attempting to build motivational factors into his or her course will find himself or herself as befuddled as the manager in a business setting who attempts to motivate all of his or her employees by using the same strategies—A “one size fits all” motivational tool will fail in academia as surely as it has failed in the world of business.

The purpose of this research was to align explanations for student motivation with the classical workplace motivation theories. Are students driven by needs, confirming Maslow’s (1968) theory? Are they instead motivated by innate needs, aligning with McClelland’s (1966) work? Or are they, perhaps, motivated to study only when the content of their courses inspires them, as seems to be suggested by Herzberg et al. (1959)? Once college faculties are aware of the sources of students’ motivation, they will be better equipped to develop classroom strategies that capitalize on them (Beth, 2005).

1.2 Research Problem

Studying plays an integral role in the success of university students. Faculty members, however, are limited in their abilities to compel students to study. The faculty's inability to harness the sources of student motivation has become a more serious concern over the past decade (Beth, 2005). Hence, it is important to find out which motivation factors may prove to be a major determinant of driving students to study.

1.3 Research Questions

This study was organized to answer around the below research questions:

1. What motivates most students to study?
2. Are there differences between the motivating factors affecting high-performing students, mid-performing students, low-performing students, male students and female students?
3. What factors motivating students to study aligned with the motivational theories of Abraham Maslow, Douglas McGregor, Frederick Herzberg, and/or David McClelland?

1.4 Research Objectives

The research paper has three main objectives and basically was designed:

- to explore the factors driving students to study,
- to identify differences between strong, average, poor, male, and female students of their study behaviors, and
- to connect student study motivation to the larger area of workplace motivation theory.

1.5 Scope and Limitation

In term of **scope**, this study, conducted at National University of Management, Cambodia, was designed to explore the factors that drive students to study, to identify differences between successful and less-successful student in terms of their study behaviors, and to connect student study motivation to the larger area of workplace motivation theory. Anyway, this study also **limits** factors that motivate students to study by aligning only with the motivational theories of Abraham Maslow, Douglas McGregor, Frederick Herzberg, and/or David McClelland.

2

Literature Review

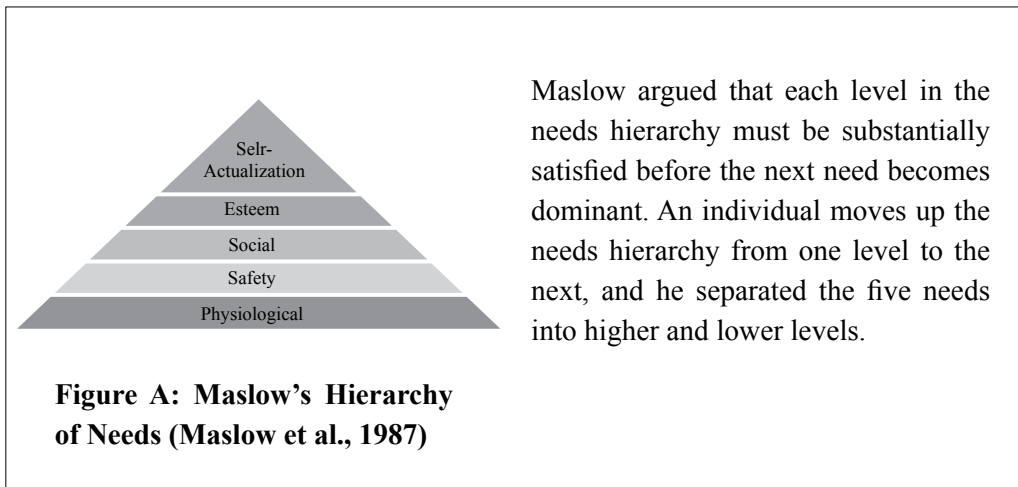
Motivation, is enthusiasm for doing something (Armada, 2008). Similarly, (Steers, Mowday, & Shapiro, 2004) state that it is the process by which a person's efforts are energized, directed, and sustained toward attaining a goal. The energy element is a measure of intensity, drive, or vigor. The high level of effort needs to be directed in ways that help the organization achieve its goals. Employees must persist in putting forth effort to achieve those goals (Robbins & Coulter, 2012).

This study centers attention on **four early motivation theories** such as *Maslow's hierarchy of needs*, *McGregor's theories X and Y*, *Herzberg's two-factor theory*, and *McClelland's three needs theory*. Although more valid explanations of motivation have been developed, these early theories are important because Robbins and Coulter (2012) said that they represent the foundation from which contemporary motivation theories were developed and because many practicing managers still use them.

2.1 Maslow's Hierarchy of Needs

The best-known theory of motivation is probably Abraham Maslow's hierarchy of needs theory of Ambrose & Kulik (1990). Maslow was a psychologist proposing that within every person is a hierarchy of five needs (Maslow, Frager, & Fadiman, 1987):

- 1 **Physiological needs:** A person's needs for food, drink, shelter, sex, and other physical requirements.
- 2 **Safety needs:** A person's needs for security and protection from physical and emotional harm, as well as assurance that physical needs will continue to be met.
- 3 **Social needs:** A person's needs for affection, belongingness, acceptance, and friendship.
- 4 **Esteem needs:** A person's needs for internal esteem factors such as self-respect, autonomy, and achievement and external esteem factors such as status, recognition, and attention.
- 5 **Self-actualization needs:** A person's needs for growth, achieving one's potential, and self-fulfillment; the drive to become what one is capable of becoming.



Maslow's need theory was widely recognized during the 1960s and 1970s, especially among practicing managers, probably because it was intuitively logical and easy to understand. Although Maslow provided no empirical support for his theory, and several studies that sought to validate it could not (Hall & Nongaim, 1968); (Lawler III & Suttle, 1972); (Creech, 1995); and (Rowan, 1998), many practicing managers still use them (Robbins & Coulter, 2012).

Physiological and safety needs were considered *lower-order needs*; social, esteem or ego, and self-actualization needs were considered *higher-order needs*. Lower-order needs are predominantly satisfied externally while higher-order needs are satisfied internally. **Principals** using Maslow's hierarchy to motivate agents do things to satisfy agents' needs. But the theory also says that once a need is substantially satisfied, an individual is no longer motivated to satisfy that need. Therefore, to motivate someone, you need to understand what need level that person is on in the hierarchy and focus on satisfying needs at or above that level (Robbins & Coulter, 2012). For example, according to study of (Beth, 2005) females were more motivated by the presumed applicability of the course, Self-fulfillment, and the possibility of making the dean's list, Esteem or Egoistic.

Students with high GPAs are different in their motivations than those with low, but the Beth's (2005) conclusions offer little guidance for faculty members trying to create a full class of high achievers. None of the factors cited by high performing students seem to indicate the presence of some universal motivators that can be written into syllabi or woven into pedagogy. Instead, most of the top motivating factors (caring about grades, wanting to learn) might be established within students before they set foot into a college classroom.

Erikson's (1980) model of identity development in adulthood suggests that adults entering the stage of integrity may search for meaning in their pursuit of higher education. The need to seek truth and meaning at this stage could explain why the adults in this survey ranked *learning and self* to grades as their top motivators. Anyway, in Beth's study (2005) among the top reasons for studying among all students were grades and upcoming exams.

Robbins and Coulter (2012) state "Intel managers understand employee needs and their impact on motivation. The company helps satisfy the social needs of its young workforce in Vietnam, where more than half of the population is under the age of 25. Intel provides opportunities for its young employees, who love American culture, to have fun with their coworkers during work breaks as ways to satisfy their needs for belongingness and friendship. Recognizing that its employees are eager to learn western ways of doing business and have a strong drive for self-development and achievement, Intel offers them training programs for personal growth and career development to satisfy their esteem and self-actualization needs."

Maslow's model can be applied to college students and their motivations to study, with similar implications. Students might be driven to study by **safety needs** if they see their *investment in college as a form of financial insurance in their future*. They might be motivated instead by **social needs** if they *enjoy the community of the college and wish to remain a part of their group or cohort*. Perhaps **esteem** needs drive the competitive student, who sees his or her grades or honors as evidence of winning an academic race. Finally, some students may be driven by **self-actualization**, desiring to prove something to themselves through their *academic successes* (Beth, 2005).

2.2 McGregor's Theory X and Theory Y

Douglas McGregor is best known for proposing two assumptions about human nature: Theory X and Theory Y (Heil, Bennis, & Stephens, 2000). Very simply, **Theory X** is a negative view of people that assumes workers have little ambition, dislike work, want to avoid responsibility, and need to be closely controlled to work effectively, but **Theory Y** is a positive view that assumes employees enjoy work, seek out and accept responsibility, and exercise self-direction (McGregor, 1960).

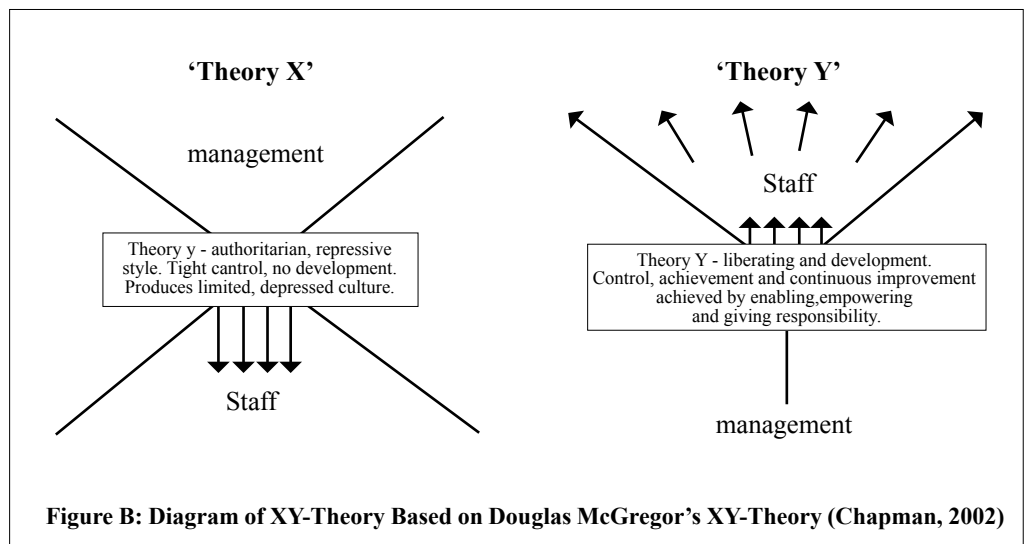
Moreover, McGregor (2006) believed that Theory Y assumptions should guide management practice and proposed that participation in decision making, responsible and challenging jobs, and good group relations would maximize employee motivation. Unfortunately, no evidence confirms either set of assumptions is valid or that being a Theory Y manager is the only way to motivate employees (Robbins & Coulter, 2012).

McGregor's (1985) well-known categorization of management beliefs can possibly be related to faculty's attitudes toward students. According to McGregor, managers tend to classify their employees in one of two categories. **Theory X** employees find work distasteful and do all they can to avoid it. Managers who believe that their place of work is populated with this type of employee feel the need to maintain an autocratic, discipline-driven workplace. Therefore, Intel's current CEO, Paul Otellini said, "When Andy was yelling at you, it wasn't because he didn't care about you. He was yelling at you because he wanted you to do better (McGirt, 2009)."

Are students believed to adhere to Theory X, and expected to display signs of laziness and irresponsibility whenever left unsupervised? Do they demonstrate what McGregor referred to as the "human characteristic dislike for work?" If so, the implications for faculty are similar to those for management: They should run a "tight ship," i.e. focusing on the disciplinary qualities of grading have never expected students to do more than they are required, for (Beth, 2005) said some students would be motivated only by the fear of failure. He or she would not care about learning for the sake of knowledge, and would only study when faced with an upcoming exam. Like managers, faculty members should form beliefs about the tendencies of their students. For instance, according to (Beth, 2005) the high **achiever** appears to thrive on the positive reinforcement that comes with his or her success, while the lower performer is driven largely by fear and competition.

Particularly fear of failing a course in which the student currently carries a low average and fear of upcoming exams motivates most students. The motivational force of fear is strongest among students who have low overall grade point averages. Fear, therefore, may be considered a "last resort" motivator. Students who were not previously motivated to study by loftier goals (such as love of knowledge or need to achieve) find themselves pressed to study late in the game by a fear of failing (Beth, 2005).

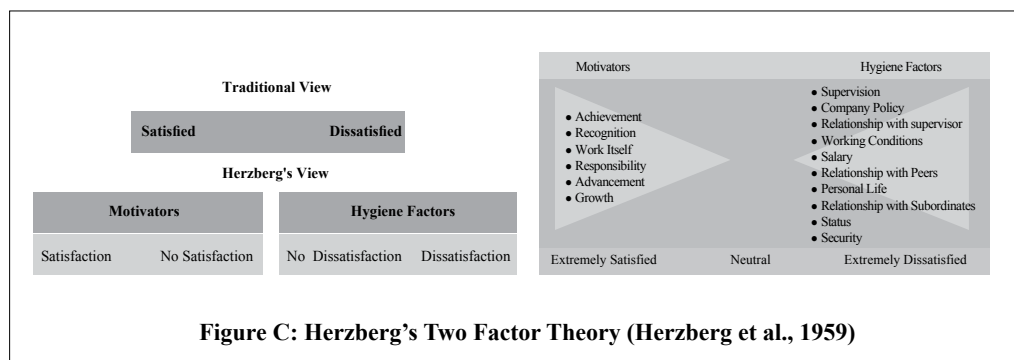
Of course, McGregor's (1985) recognized that not all managers maintain such a dismal assessment of their employees. Managers adhering to **Theory Y** believe that workers have an innate tendency toward self-direction and commitment to objectives. Managers who believe that the average human being not only accepts but actively seeks responsibility provide their employees with a great deal of freedom and autonomy in their work. Faculties who subscribe to Theory Y behave similarly: They develop an open classroom environment in which students would be free to take responsibility for their own learning. For example, according to (Beth, 2005) **female** students academically outperform than males, and the males were more motivated than the females by an easy course, fear of disappointing family, fear of losing a scholarship, and a sense of competition. The **females**, on the other hand, were more motivated by the presumed applicability of the course and the possibility of making the dean's list. This means that employing theory X to the male students is more effective, whereas the females are more suitable with theory Y.



2.3 Herzberg's Two-Factor Theory or Motivation-Hygiene Theory

Frederick Herzberg's two-factor theory, also called motivation-hygiene theory, proposes that Motivators are intrinsic (psychological) factors increased job satisfaction and motivation, while Hygiene factors are extrinsic (environmental) factors associated with job dissatisfaction, which simply keep people from being dissatisfied, but don't motivate (Herzberg et al., 1959).

Herzberg et al. (1959) proposed that a dual continuum existed: The opposite of "satisfaction" is "no satisfaction," and the opposite of "dissatisfaction" is "no dissatisfaction." Again, Herzberg believed that the factors that led to job satisfaction were separate and distinct from those that led to job dissatisfaction.



Similarly, Herzberg (1982). also suggested that the opposite of satisfaction was not dissatisfaction. When **hygiene factors, the extrinsic ones**, are adequate, people won't be dissatisfied, but they won't be satisfied (or motivated) either. As a result, Robbins and Coulter (2012) state that removing dissatisfying characteristics from a job would not necessarily make that job more satisfying (or motivating).

To motivate people, Ambrose & Kulik (1990) said Herzberg suggested emphasizing **motivators**, the intrinsic factors having to do with the job itself. Therefore, managers or instructors who sought to eliminate factors that created job or study dissatisfaction could keep people from being dissatisfied but not necessarily motivate them.

According to the study of (Beth, 2005) among the top reasons for studying among all students were grades and upcoming exams, but the top reason cited for not studying was work and family obligations. His study also shows that the greatest differences between high GPA and low GPA students are in the factors of learning application, honors, dean's list, family, scholarship, and competition. Low GPA students, expectedly, expressed much more agreement with many of the excuses not to study, and their strongest reasons to avoid the books should be sports and school activities, and the presence of an easy professor with whom they can "get by". Overall, the high achiever appears to thrive on the positive reinforcement that comes with his or her success, while the lower performer is driven largely by fear and competition. Hence, to eliminate job dissatisfaction, faculty members should focus on hygiene factors, which are facilitating in minimizing work and family obligations, reducing sports and school activities, behaving as an easy professor. Furthermore, to motivate students, they should emphasize on motivators, which are teaching applicable course, honoring, recording in dean's list, giving good grades for higher performers and frequently alerting students for upcoming exams.

Herzberg's theory enjoyed wide popularity from the mid-1960s to the early 1980s, despite criticisms of his procedures and methodology. Moreover, although some critics said his theory was too simplistic, it still has influenced how we currently design jobs, especially when it comes to job enrichment, which is the intrinsic factor (Robbins & Coulter, 2012).

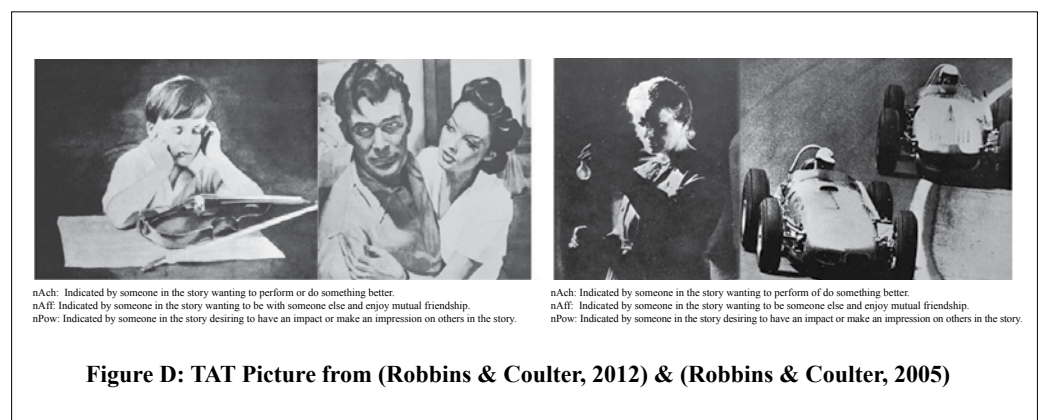
2.4 McClelland's Three Needs Theory

David McClelland and his associates proposed the **three-needs theory**, which says there are three acquired (not innate) needs that are major motives in work; Atkinson and Raynor (1974), McClelland (1975b) & Stahl (1986). These three needs include the need for achievement (**nAch**), the drive to succeed and excel in relation to a set of standards; the need for power (**nPow**), the need to make others behave in a way that they would not have behaved otherwise; and the need for affiliation (**nAff**), the desire for friendly and close interpersonal relationships. Of these three needs, the need for achievement has been researched the most. The other two needs in this theory haven't been researched as extensively as the need for achievement, McClelland (1955).

People with a high need for achievement are striving for personal achievement rather than for the trappings and rewards of success. They have a desire to do something better or more efficiently than it's been done before, McClelland (1961). People prefer jobs that offer personal responsibility for finding solutions to problems, in which they can receive rapid and unambiguous feedback on their performance in order to tell whether they're improving, and in which they can set moderately challenging goals. High achievers avoid what they perceive to be very easy or very difficult tasks. Also, a high need to achieve doesn't necessarily lead to being a good manager, especially in large organizations. That's because high achievers focus on their own accomplishments, while good managers emphasize helping others accomplish their goals (P. McClelland, McClelland, & Burnham, 1976). In addition, we do know that the best managers tend to be high in the need for power and low in the need for affiliation, McClelland (1975a). McClelland showed that employees can be trained to stimulate their achievement need by being in situations where they have personal responsibility, feedback, and moderate risks (Miron & McClelland, 1979).

All three of these needs can be measured by using a projective test (known as the Thematic Apperception Test or TAT) in which respondents react to a set of pictures. Each picture is briefly shown to a person who writes a story based on the picture. (See TAT Pictures for some examples.) Trained interpreters then determine the individual's levels of nAch, nPow, and nAff from the stories written (Robbins & Coulter, 2012).

In the study of Beth (2005) **The female students** were motivated more by achievement and male students more by fear, these results are most likely driven by their differences in academic performance, not their different genders.



The conclusions of Beth (2005) are perplexing—rewards matter: but only to the students who will tend to receive the rewards; anyway, fear motivates: but only those students who truly have something to fear, and competition spurs performance: but only for traditional-aged male students.

3

Research Methodology

3.1 Conceptual Framework

Based on the literature review, a Conceptual Framework is developed as a source of research model. It involves four parts of early motivation theories such as *Maslow's hierarchy of needs*, *McGregor's theories X and Y*, *Herzberg's two-factor theory*, and *McClelland's three needs theory*. First, **in Maslow's hierarchy**, individuals move up the hierarchy of five needs (physiological, safety, social, esteem, and self-actualization) as needs are substantially satisfied. A need that's substantially satisfied no longer motivates. Second, **in Theory X** of McGregor, manager believes that people don't like to work or won't seek out responsibility so they have to be threatened and coerced to work. However, **Theory Y** manager assumes that people like to work and seek out responsibility, so they will exercise self-motivation and self-direction. Third, **Herzberg's theory** proposed **intrinsic factors** associated with job satisfaction were what motivated people—that is they are **motivators** that increase job satisfaction and motivation. On the other hand, Extrinsic factors associated with job dissatisfaction simply kept people from being dissatisfied—they are **hygiene factors** that eliminate job dissatisfaction, but don't motivate. Finally, **three-need theory** proposed three acquired needs that are major motives in work. They are need for achievement (nAch) which is the drive to succeed and excel in relation to a set of standards, **need for power (nPow)** which is the need to make others behave in a way that they would not have behaved otherwise and **need for affiliation (nAff)** which is the desire for friendly and close interpersonal relationships (Robbins & Coulter, 2005).

Abraham Maslow	Douglas McGregor	Frederick Herzberg	David McClelland
self-actualization	theory Y	motivator	need for power
esteem needs	theory X	hygiene factors	needs for achievement
social needs			need for affiliation
safety			
physiological			

Figure E: Conceptual Framework of Motivational Theories

3.2 Research Design and Survey Questions

This study was conducted at the NUM, Cambodia. The survey and the research design were adopted from Beth's (2005) research upon Factors Driving Student Motivation at Felician College, in Lodi, New Jersey. However, there are slightly changes on application of the research question in order to make the questions match with NUM study environment; for example, the question of (*I am motivated to study because I want to make the Dean's list*) is not included in the survey as our Deans haven't established those list. The questions on the 7-scale Likert survey (written by the researchers) included questions such as *I study more when the class is difficult and I'm afraid of failing*, *I am motivated to study because I want to graduate with honors*, and *I don't study because I have no time due to work and family obligations*. **The questions were broad enough to cover need-based motivation** (*I am motivated to study because studying makes me feel good*), **achievement based motivation** (*I am motivated to study because I want to outdo my classmates and friends*) and **content-based motivation** (*I study more when I find the material interesting and practical*).

The survey instrument used 54 questions—28 questions on motivation to study, 19 questions on no motivation of studying and its top reasons and 9 questions on students' background. The background information compiled included gender, age, year, shift, grade point, employment, athletic, exercise, and school payment. Regarding 28 questions on motivation comprises 3 questions directed to motivation to study at the school, in my chosen field, and on my major subjects; 2 questions on interesting material and practical material; 2 questions on professor; 2 questions on difficult and easy subject or course; 1 question on fear of failing; 1 question on easy grade ie getting an easy A; 2 questions on high or low course average; 2 questions on upcoming midterm and final exam; 1 question on cost—course payment; 2 questions on present or future job application; 1 question on work promotions; 1 question on learning; 1 question on grades; 1 question on graduating with honors; 1 question on feel good; 1 question on self-proving, 2 questions on outdoing classmates and friends; 1 question on pleasing family; 1 question on maintain scholarship. Upon 19 questions of on motivation of studying and its top reasons comprises 3 questions directed to low motivation to study at the school, in my chosen field, and on my major subjects; 2 questions on work obligations and family obligations; 2 questions on sports activities and school activities; 1 question on going out with my friends; 1 question on poor facilities; 1 question on noise; 1 question on getting fine without studying; 1 question on hopeless; 1 question on low memory; 1 question on useless; 1 question on hate the topic; 1 question on easy professor; 1 question on boring; 1 question on waste of time; 1 question on no recognition.

3.3 Sampling Design and Technique

The surveys were administered by the researchers from the month of January 2014 to April 2014. The surveyed students were drawn from bachelor students on weekend and weekday in 5 turns, 4 years and all majors of very distinct populations at National University of Management, Cambodia. 206 out of 1400 students voluntarily completed a survey on the sources of student motivation.

3.4 Data Collection Method

Five students were asked to assist in distributing the questionnaire and insert data in SPSS, the Statistical Package (Version 16) in the early of January 2014. Of course, those students were well trained by researcher before doing their job.

3.5 Measurement of Variables

Dependent variable, Motivation, is measured by Motivation to Study example At NUM, In Chosen Field, and/or On Major Subjects. The Eighteen dependent variables are measured as follows—first **Materials** are measured by *Interesting and/or Practical Materials*; second **Professor**, by *Liking the Professor and or Good Professor*; third **Subject** is measured by *Easy Subject and/or Difficult Subject*; fourth **Fear**, by *Afraid of failing* and fifth **Grade**, by *Easy Grade—Getting an easy A*. Sixth, **Course Average** is measured by *Low Course Average and/or High Course Average*; seventh **Upcoming Exam**, by *Upcoming Midterm and / or Upcoming Final*; Eight **Cost**, by *High Payment*; ninth **Job Application**, by *Present Job and or future Job application* and tenth **Work Promotions**, by *getting a promotion at work*. Eleventh **Learning** is measured by *Knowing material*; twelfth **Getting Good Grades**, by *getting good grades*; thirteenth **Honor Graduation**, by *Graduating with Honors*; fourteenth **Feel Good**, by *studying makes me feel good*; fifteenth **Self-proving**, by *studying can prove something to myself*; sixteenth **Competition**, by *Outdoing Classmates and / or Outdoing Friends*; seventeenth **Pleasing Family**, by *not disappointing my family* and finally **Maintain Scholarship**, by *not losing scholarship*.

3.6 Statistical Tools for Empirical Data Analysis

SPSS Version 16 is used for data analysis since it is probably the most common statistical software used in business research & also quite user-friendly (Muijs, 2004).

3.7 Descriptive Data Analysis

The surveys were scored by assigning a rank of codes—7 to the *statement strongly agree* and a score of 1 to *strongly disagree*.

Demographic and background responses were also scored numerically. After the surveys were completed, the data were compiled for the 206 student participants. The Mean, Frequency, and Crosstabs are used for analysis. First, frequency is used to check if there is any question coded out of its range or not. Next, mean scores with their items were calculated, if any. Then, Crosstabs are used in order to find a clearer view of each variable in data analyses with different students' behavior i.e. each question on Motivation and the reason for learning were cross-tabled against different students' behavior by focusing only on students strongly agreeing or agreeing. The reasons of motivation are sorted from the highest to the lowest mean score, so the result of data analysis can be explained.

On comparing students' behaviors, i.e. gender or grade point, if the range of strongly agreeing or agreeing of students on any item is between (34% and less), the phrase *faintly more motivated* is used; between (35%-45%), the phrase *a bit, a little, or slightly more motivated*; between (46%-55%), the phrase *rather, quite, fairly, somewhat, relatively, or moderately more motivated*; between (56%-65%), the phrase *reasonably more motivated*; between (66%-75%), the phrase *pretty more motivated*; and between (76% and more), the phrase *pretty further more motivated*. If the extent of strongly agreeing or agreeing of students on any item is more than 50%, the analysis will be done on the item; furthermore, if the difference of the item is 5% or more, the further analysis or conclusion will be done. Anyway, a conclusion will also be drawn if the on difference behavior is more than 10% regardless of extent of strongly agreeing or agreeing of students. Finally, the questions on motivation and their reasons were clustered according to how well they aligned with classical motivational theory by tagging questions as corresponding to McGregor, McClelland, Maslow, or Herzberg. The number of respondents either *strongly agreeing or agreeing* with the tagged questions was viewed as confirmation or rejection of the theory as an explanation of students' motivation to study.

4 Data Analyses and Empirical Findings

4.1 Demographic Information

Figure 1 to 9 shows demographic information. Figure 1, male carry 53% out of 206 students, while 47% are female, & figure 2.2, students whose age group are (18-21), (22-25), (26-29) and (30 or more) account for 55%, 41%, 3% & 1%. Figure 3, 27%, 26%, 24%, and 23% are percentage of students who study in year 1, 2, 3 & 4 respectively. Figure 4, students studying in the time shift of (07:00-10:00) have 22%; (10:30-01:30), 29%; (02:00-05:00), 14%; (05:30-08:30), 18%; & (Sat-Sun), 17%. Figure 5, among 159 students whose grade are A+, A, A-, B+, B, B-, C+, C, C-, D+, D, and D- have 16%, 11%, 11%, 17%, 10%, 2%, 14%, 10%, 1%, 3%, 4%, and 1% respectively. If grade point (A+, A, A- & B+) are grouped to be high-grade, (B, B-, C+ & C), mid-grade; & (C-, D+, D & D-), low-grade, so 56% of students have high-grade point; 36%, mid & 8%, low. Figure 6, 33% out of 206 students occupy fulltime job, 19%, part-time job, & 47%, no job; figure 7, 42% out of 206 are athlete students & 58% are not; and figure 8, 59% out of 206 do exercise and 41% do not. Finally, figure 9, 26% out of 206 students pay for school fee themselves; 23% pay only some of it and 50% do not pay at all.

4.2 Motivations and Reasons To Study Against Gender

Table 1 shows extent of strongly agreeing or agreeing on motivations and reasons to study against gender. First, 53% out of 206 students are male, while 47% are female. This mean there are 14 male students more than female, account for 7% difference. Next, 54% of female students 20% more than male are motivated to study at NUM, and 61% of female students 5% more than male are also motivated to study on major subjects. However, 54 % of male students 7% more than female are motivated to study in chosen field. As a result, female students are relatively more motivated to study at NUM than male, *slightly* motivated; and female students are also *relatively* more motivated to study major subjects than male, *faintly more motivated*. However, male students *relatively* more motivated to study in chosen field than female.

Table 1: Motivations and Reasons to Study Against Gender

Ref: N/Q	Variables and items	Strongly Agreeing or Agreeing					
		Number of Gender			Percentage of Gender		
		Male	Female	Total	Male	Female	Total
		110	96	206	53%	47%	100%
e-m1,2,3	Motivation to Study (Avg)	53	52	105	48%	54%	51%
e-m1	At NUM	37	52	89	34%	54%	43%
e-m2	In Chosen Field	59	45	104	54%	47%	50%
e-m3	On Major Subjects	62	59	121	56%	61%	59%
17-b12	Pleasing Family	66	60	126	60%	63%	61%
13-b7	Graduating with Honors	65	54	119	59%	56%	58%
9-b2,b3	Application (Avg)	62	52	114	56%	54%	55%
9-b2	To Present Job	57	47	104	52%	49%	50%
9-b3	To Future Job	66	57	123	60%	59%	60%
11-b5	Learning	63	49	112	57%	51%	54%
12-b6	Getting Good Grades	55	54	109	50%	56%	53%
14-b8	Feel Good	53	44	97	48%	46%	47%
2-a3,4	Professor (Avg)	50	43	93	45%	45%	45%
2-a3	Like the Professor	50	35	85	45%	36%	41%

2-a4	Good Professor	49	51	100	45%	53%	49%
1-a1,2	Materials (Avg)	49	44	92	44%	45%	45%
1-a1	Interesting	50	42	92	45%	44%	45%
1-a2	Practical	47	45	92	43%	47%	45%
8-b18	Cost	49	43	92	45%	45%	45%
10-b4	Work Promotions	53	38	91	48%	40%	44%
15-b9	Self-proving	51	40	91	46%	42%	44%
16-b10,b11	Competition (Avg)	46	31	77	42%	32%	37%
16-b10	Outdoing Classmates	45	31	76	41%	32%	37%
16-b11	Outdoing Friends	47	31	78	43%	32%	38%
18-b13	Maintain Scholarship	37	37	74	34%	39%	36%
7-a11,12	Upcoming Exam (Avg)	37	34	71	33%	35%	34%
7-a11	Upcoming Midterm	33	32	65	30%	33%	32%
7-a12	Upcoming Final	40	36	76	36%	38%	37%
5-a8	Easy Grade: Get an Easy	34	30	64	31%	31%	31%
4-a7	Fear of Failing	31	32	63	28%	33%	31%
6-a10,9,10r	Course Average (Hi)	25	23	48	23%	23%	23%
6-a10	Low Course Average	41	27	68	37%	28%	33%
6-a9	High Course Average	36	35	71	33%	36%	34%
6-a10r	Low Course Average r	14	10	24	13%	10%	12%
3-a6,5,6r	Subject (Dif)	29	18	46	26%	18%	22%
3-a6	Easy Subject	35	30	65	10%	5%	8%
3-a65	Difficult Subject	46	30	76	42%	31%	37%
3-a6r	Easy Subject r	11	5	16	10%	5%	8%

Third, 63% of female students 3% more than male are motivated to study for pleasing their family, 56% of female students 6% more than male are also motivated to study for getting good grade. Thus, female students are *reasonably* more motivated to study for getting good grade than male, *moderately* motivated. Fourth, However, 59% of male students which are 3% more than female are motivated to study for graduating with honors, 56% of male students 2% more than female are motivated to study for present or future job application, and 57% of male students 6% more than female are motivated to study for learning. Accordingly, male students are *reasonably* more motivated to study for learning than female, *moderately* motivated, because 42% of male students 10% more than female are motivated to study for competition, 41% i.e. they want to outdo out their classmates and fiends; moreover, male students are also 42% of male students 11% more than female are motivated to study with the difficult class, course or subject—this is agree with the nature of masculinity of male, needing challenging and competing. Totally, students are strongly agreeing or agreeing they are motivated to study at NUM 43%, to study in chosen field 50%, or/and to study on major subjects 59%—This means that in term of soft facilities, major subjects are pretty stronger motivated students than chosen files and chosen files are also moderately stronger motivated students than the university name. Students are motivated to study because 61% want to please their family, 58% want to graduate with honors, 50% believe they can apply what they learn to their present job, 60% believe they can apply what they learn to their future job, 54% actually want to know the material, and 53% want to get good grades. Therefore, 51% of 206 students are strongly agreeing or agreeing that they are motivated to study for pleasing family, graduating with honors, application to present and future job, learning, and getting good grades which carry 61%, 58%, 55%, 54%, 53% respectively.

4.3 Motivations and Reasons to Study Against Student's Grade Point

Table 2 shows extent of strongly agreeing or agreeing on motivations and reasons to study against student's grade point, and there are twelve main points to be discussed. Initially, among 159 students, 56% have high-grade point; 36%, mid; and 8%, low—This means students in high-grade point are 20% more than mid-grade point, and 48% more than low-grade point.

Table 2: Motivations and Reasons to Study Against Student's Grade Point

Ref: N/Q	Variables and items	Strongly Agreeing or Agreeing							
		Number of Gender Point				Percentage of Grade Point			
		H	M	L	Total	H	M	L	Total
		89	57	13	159	56%	36%	8%	100%
e-m1,2,3	Motivation to Study	44	29	7	80	49%	50%	56%	50%
e-m1	At NUM	35	25	6	66	39%	44%	46%	42%
e-m2	In Chosen Field	46	29	7	82	52%	51%	54%	52%
e-m3	On Major Subjects	51	32	9	92	57%	56%	69%	58%
17-b12	Pleasing Family	49	36	8	93	55%	63%	62%	58%
13-b7	Graduating with Honors	52	29	9	90	58%	51%	69%	57%
9-b2,b3	Job Application	47	28	10	84	52%	48%	73%	53%
9-b2	To Present Job	45	24	9	78	51%	42%	69%	49%
9-b3	To future Job	48	31	10	89	54%	54%	77%	56%
11-b5	Learning	42	31	9	82	47%	54%	69%	52%
12-b6	Getting Good Grades	45	29	7	81	51%	51%	54%	51%
1-a1,2	Materials	43	27	7	77	48%	47%	54%	48%
1-a1	Interesting	43	30	5	78	48%	53%	38%	49%
1-a2	Practical	42	24	9	75	47%	42%	69%	47%
14-b8	Feel Good	41	26	7	74	46%	46%	54%	47%
2-a3,4	Professor	43	24	6	73	48%	42%	46%	46%
2-a3	Like the Professor	38	25	5	68	43%	44%	38%	43%
2-a4	Good Professor	48	23	7	78	54%	40%	54%	49%

15-b9	Self-proving	40	26	4	70	45%	46%	31%	44%
10-b4	Work Promotions	36	26	7	69	41%	46%	54%	44%
8-b18	Cost	34	27	6	67	38%	47%	46%	42%
18-b13	Maintain Scholarship	29	24	4	57	33%	42%	31%	36%
16-b10,b11	Competition	33	20	4	57	37%	35%	27%	36%
16-b10	Outdoing Classmates	30	21	4	55	34%	37%	31%	35%
16-b11	Outdoing Friends	36	19	3	58	40%	33%	23%	36%
7-a11,12	Upcoming Exam	28	22	4	53	31%	38%	27%	33%
7-a11	Upcoming Midterm	28	17	3	48	31%	30%	23%	30%
7-a12	Upcoming Final	28	26	4	58	31%	46%	31%	36%
5-a8	Easy Grade: Get an easy A	30	15	4	49	34%	26%	31%	31%
4-a7	Fear of Failing	27	16	4	47	30%	28%	31%	30%
6-a10,9,10r	Course Average (Hi)	20	15	4	38	22%	26%	27%	24%
6-a10	Low Course Average	32	19	5	56	36%	33%	38%	35%
6-a9	High Course Average	31	20	5	56	35%	35%	38%	35%
6-a10r	Low Course Average r	8	10	2	20	9%	18%	15%	13%
3-a6,5,6r	Subject (Dif)	20	13	3	36	22%	22%	23%	22%
3-a6	Easy Subject	24	24	5	53	27%	42%	38%	33%
3-a5	Difficult Subject	30	23	5	58	34%	40%	38%	36%
3-a6r	Easy Subject r	10	2	1	13	11%	4%	8%	8%

Note: 1 Grade Point: High (A+, A, A- & B+), Mid (B, B-, C+ & C), and Low (C-, D+, D & D-)
2 Valid Percentages: 77%

Next, high-grade point students are motivated to study on their major subject for 57%; mid, 56%; low, 69%, so low-grade point students are more motivated to study in their major subject than high- and mid-grade point for 12% and 13% respectively. This means low-grade point students are *pretty* more motivated to study in their major subject than high- and mid- grade point, which are *reasonably* motivated.

Third, for pleasing family high-grade point students are motivated to study for 55%; mid, 63%; low, 62%—this means for pleasing family, mid- and low- grade point students are more motivated to study than high grade point students for 8% and 7% respectively; therefore, for pleasing family, mid- and low- grade point students are *reasonably* more motivated to study than high grade point students, *fairly* motivated.

Fourth, for graduating with honors high-grade point students are motivated to study for 58%; mid, 51%; low, 69%—this means for graduating with honors, low-grade point students are more motivated to study than high- and mid- grade point students for 11% and 18% respectively. As a result, for graduating with honors, low-grade point students are pretty more motivated to study than high-grade point students, *reasonably* motivated and mid-grade point students, *somewhat* motivated.

Fifth, for present or future job application, high-grade point students are motivated to study for 52%; mid, 48%; low, 73%—this means for present or future job application, low-grade point students are more motivated to study than high- and mid- grade point students for 21% and 25% respectively. Hence, for present or future job application, low-grade point students are *pretty* more motivated to study than high-grade point students, which are relatively motivated and mid-grade point students, which are *a little relatively* motivated.

Sixth, for leaning, high-grade point students are motivated to study for 47%; mid, 54%; low, 69%—this means for leaning, low-grade point students are more motivated to study than high- and mid- grade point students for 22% and 15% respectively, so for leaning, low-grade point students are *pretty* more motivated to study than high-grade point, *relatively* motivated and mid-grade point student, *a little relatively* motivated.

Seventh, for interesting material, high-grade point students are motivated to study for 48%; mid, 53%; low, 38%—this means for interesting material, mid- and high- grade point students are more motivated to study than low-grade point students for 15% and 10% respectively. Thus, for interesting material, mid- and high- grade point students are *moderately* more motivated to study than low-grade point students, *slightly* motivated.

Eighth, for practical material, high-grade point students are motivated to study for 47%; mid, 42%; low, 69%—this means for practical material, low-grade point students are more motivated to study than mid- and high- grade point students for 27% and 22% respectively. Accordingly, for practical material, low-grade point students are *pretty* more motivated to study than mid- and high- grade point students, slightly motivated.

Ninth, for good professor, high-grade point students are motivated to study for 54%; mid, 40%; low, 54%—this means for good professor, high- and low- grade point students are more motivated to study than mid-grade point students for 14%; therefore, for good professor, high- and low- grade point students are *moderately* more motivated to study than mid-grade point students, *slightly* motivated.

Tenth, for outdoing friends, high-grade point students are motivated to study for 40%; mid, 33%; low, 23%—this means for outdoing friends, high- grade point students are more motivated to study than mid- and low- grade point students for 7% and 17% respectively. As a result, for outdoing friends, high-grade point students are *slightly* more motivated to study than mid- and low- grade point students, *faintly* motivated.

Eleventh, for upcoming final exam, high-grade point students are motivated to study for 31%; mid, 46%; low, 31%—this means for upcoming final, mid- grade point students are more motivated to study than high- and low-grade point students for 15%. Hence, for upcoming final exam, mid-grade point students are *somewhat* more motivated to study than high- and low- grade point students, *faintly* motivated.

Finally, in average there are 50% of 159 students are strongly agreeing or agreeing they are motivated to study for pleasing family, graduating with honors, present or future job application, learning, and getting good grades which carry 58%, 57%, 53%, 52%, and 51%.

4.4 Reasons for Low Motivation of Study Against Student's Grade Point

Table 3 shows extent of strongly agreeing or agreeing on less motivations to study and reasons for not study against student's grade point. Initially, for horizontal line, among 159 students, 56% have high-grade point; 36%, mid; and 8%, low. Next, in average 7% are strongly agreeing or agreeing they are not being motivated to study—4% are not motivated to study in NUM and 9% are not motivated to study in their chosen field and major subjects. Third, for work obligation high-grade point students are not motivated to study for 25%; mid, 19%; low, 23%. Fourth, for family obligation, high-grade point students are not motivated to study for 16%; mid, 11%; and low, 8%. Fifth, for poor facilities, high-grade point students are not motivated to study for 12%; mid, 16%; low, 15%. Sixth, for easy professor, high-grade point students are not

motivated to study for 15%; mid, 12%; low, 8%. Seventh, for waste of time, high-grade point students are not motivated to study for 11%; mid, 12%; low, 8%. Eighth, boring, high-grade point students are not motivated to study for 10%; mid, 11%; low, 15%. Tenth, for sport activities, high-grade point students are not motivated to study for 10%; mid, 12%; and low, 8%.

Table 3: Low Motivations to Study & Reasons for not Study Against Student's Grade Point

Ref: N/Q	Variables and items	Strongly Agreeing or Agreeing							
		Number of Gender Point				Percentage of Grade Point			
		High	Mid	Low	Total	High	Mid	Low	Total
		89	57	13	159	56%	36%	8%	100%
f-nm1,2,3	Less Motivated to Study (Avg)	6	5	1	12	7%	8%	5%	7%
f-nm1	At NUM	3	3	0	6	3%	5%	0%	4%
f-nm2	In Chosen Field	8	6	1	15	9%	11%	8%	9%
f-nm3	On Major Subjects	8	5	1	14	9%	9%	8%	9%
c1,2	Obligations (Avg)	18	9	2	29	20%	15%	15%	18%
c1	Work Obligations	22	11	3	36	25%	19%	23%	23%
c2	Family Obligations	14	6	1	21	16%	11%	8%	13%
c6	Poor Facilities	11	9	2	22	12%	16%	15%	14%
c13	Easy Professor	13	7	1	21	15%	12%	8%	13%
c15	Waste of Time	10	7	1	18	11%	12%	8%	11%
c14	Boring	9	6	2	17	10%	11%	15%	11%
c5	Going out withFriends	8	7	1	16	9%	12%	8%	10%
c9	Hopeless	10	6	0	16	11%	11%	0%	10%
c11	Useless	8	8	0	16	9%	14%	0%	10%
c3,4	Activities (Avg)	9	6	1	15	10%	10%	8%	9%

c3	Sports Activities	9	7	1	17	10%	12%	8%	11%
c4	School Activities	8	4	1	13	9%	7%	8%	8%
c10	Low Memory	9	5	1	15	10%	9%	8%	9%
c12	Hate the Topic	8	7	0	15	9%	12%	0%	9%
c7	Noisy House	6	8	0	14	7%	14%	0%	9%
c16	No Recognition	9	4	0	13	10%	7%	0%	8%
c8	Getting Fine Without Studying	7	4	0	11	8%	7%	0%	7%

Note: 1 High (A+, A, A- & B+), Mid (B, B-, C+ & C), and Low (C-, D+, D & D-)

2 Valid Percentages: 77%

Finally, the top 5 reasons which students are not being motivated to study are work obligations 23%, poor facilities 14%, family obligations 13%, waste of time, boring, or sport activities 11%. In short, the extent of strongly agreeing or agreeing on less motivations to study and reasons for not study against student's grade point are not more than 50%; furthermore, the difference between high- mid- or low- grade point students are not more than 10%. Therefore, it is not need to draw any conclusion of different students' grade-point.

4.5 Motivators Aligning with McGregor's Theory X and Theory Y

For this study, several questions on the motivation survey were earmarked as "Theory X" compliant. (Theory Y was not directly measured, but was presumed instead to be confirmed by the negation of Theory X.) In the academic arena, a Theory X student would be one motivated by the fear of failure.

Table 4: Percent of Students Strongly Agreeing or Agreeing with McGregor’s Theory X

Ref: N/Q	Variables and items	Grade Point			Gender	
		High	Mid	Low	Male	Female
		89	57	13	159	56%
4-a7	Fear of Failing	30%	28%	31%	28%	33%
6-a10	Low Course Average	36%	33%	38%	37%	28%
7-a11,12	Upcoming Exam	31%	38%	27%	33%	35%
17-b12	Not Disappointing Family	55%	63%	62%	60%	63%
18-b13	Maintain Scholarship	33%	42%	31%	34%	39%

Table 4 shows percent of students who are strongly agreeing or agreeing with McGregor’s theory X. For not disappointing family, more than 54% of both high- mid- or low- grade point students and male or female students are strongly agreeing or agreeing that they will be motivated to study. Therefore, not disappointing family should be considered as motivator aligned with McGregor’s theory X. Students who were not previously motivated to study by higher goals, such as love of knowledge or need to achieve, find themselves pressed to study late by pleasing family—this might be due to traditional and cultural factors of the Cambodian.

4.6 Motivators Aligning with Maslow’s Hierarchy of Needs

To identify need levels in this study the survey questions were categorized as complying with social, esteem, and self-actualization motivators. Physiological and Safety needs were not identified because they have already fulfilled students need.

Table 5: Percent of Students Strongly Agreeing or Agreeing with Maslow's Hierarchy of Needs

Ref: N/Q	Variables and items	Grade Point			Gender	
		High	Mid	Low	Male	Female
		89	57	13	110	96
	Self-Actualization needs					
11-b5	Learning	47%	54%	69%	57%	51%
14-b8	Feel Good	46%	46%	54%	48%	46%
15-b9	Self-proving	45%	46%	31%	46%	42%
	Esteem needs					
10-b4	Work Promotions	41%	46%	54%	48%	40%
12-b6	Getting Good Grades	51%	51%	54%	50%	56%
13-b7	Graduating with Honors	58%	51%	69%	59%	56%
16-b10,b11	Competition	37%	35%	27%	42%	32%
	Social needs					
2-a3	Like the Professor	43%	44%	38%	45%	36%
17-b12	Pleasing Family	55%	63%	62%	60%	63%

Table 5 shows percent of students strongly agreeing or agreeing with Maslow's hierarchy of needs. First, regarding social needs, factor which motivates students to study is pleasing their family, which has 55%, 63%, 62%, 60%, and 63% for high-grade point, mid-grade point, low-grade point, male and female students respectively. Next, concerning esteem needs, factors which motivate students to study are graduating with honors, which have 58%, 51%, 69%, 59%, and 56% for high-grade point, mid-grade point, low-grade point, male and female students respectively, getting good grades, which have 51%, 51%, 54%, 50%, and 56% for high-grade point, mid-grade point, low-grade point, male and female students respectively, and work promotion, which has 54% for low-grade point students.

Finally, about self-actualization needs, factors which motivate students to study are learning, which have 47%, 54%, 69%, 57%, and 51% for high-grade point, mid-grade point, low-grade point, male and female students respectively and feel good, which have 54% and 48% for low-grade point and male students respectively. To conclude, in Maslow's hierarchy of needs, items align with social needs is pleasing their family, with esteem needs are graduating with honors and getting good grades, with self-actualization needs is learning.

4.7 Motivators Aligning with Herzberg's Two-Factor Theory

Table 6: Percent of Students Strongly Agreeing or Agreeing with Herzberg's Two-Factor Theory

Ref: N/Q	Variables and items	Strongly Agreeing or Agreeing				
		Grade Point			Gender	
		High	Mid	Low	Male	Female
		89	57	13	110	96
	Hygiene factors					
18-b13	Maintain Scholarship	33%	42%	31%	34%	39%
13-b7	Graduating with Honors	58%	51%	69%	59%	56%
12-b6	Getting Good Grades	51%	51%	54%	50%	56%
8-b18	Cost	38%	47%	46%	45%	45%
7-a11,12	Upcoming Exam	31%	38%	27%	33%	35%
6-a10	Low Course Average	36%	33%	38%	37%	28%
6-a9	High Course Average	35%	35%	38%	33%	36%
5-a8	Easy Grade: Get an easy A	34%	26%	31%	31%	31%
2-a3,4	Professor	48%	42%	46%	45%	45%
	Motivators					
15-b9	Self-proving	45%	46%	31%	46%	42%
11-b5	Learning	47%	54%	69%	57%	51%
14-b8	Feel Good	46%	46%	54%	48%	46%
1-a1	Interesting Materials	48%	53%	38%	45%	44%

Table 6 shows percent of students who are strongly agreeing or agreeing with Herzberg's two-factor theory. First, in relation to hygiene factors, items reducing & removing dissatisfaction of students in term of study are graduating with honors, having 58%, 51%, 69%, 59%, & 56% for high-grade point, mid-grade point, low-grade point, male & female students respectively, and getting good grades, having 51%, 51%, 54%, 50%, & 56% for high-grade point, mid-grade point, low-grade point, male and female students respectively. Another, vis-à-vis motivator, items motivating students to study, is learning, having 47%, 54%, 69%, 57%, & 51% for high-grade point, mid-grade point, low-grade point, male & female students respectively, and feel good, having 54% & 48% for low-grade point and male students respectively. In brief, in Herzberg's two-factor theory, items aligning with hygiene factors, keeping students from being dissatisfaction in term of study, are *graduating with honors* and *getting good grades* and item aligning with motivator is *learning*.

4.8 Motivators Aligning with McClelland's Three Needs Theory

Table 7: Percent of Students Strongly Agreeing or Agreeing with McClelland's Three Needs

Ref: N/Q	Variables and items	Strongly Agreeing or Agreeing				
		Grade Point			Gender	
		High	Mid	Low	Male	Female
		89	57	13	110	96
Needs for Achievement						
5-a8	Easy Grade: Get an easy A	34%	26%	31%	31%	31%
6-a9	High Course Average	35%	35%	38%	33%	36%
7-a11,12	Upcoming Exam	31%	38%	27%	33%	35%
12-b6	Getting Good Grades	51%	51%	54%	50%	56%
10-b4	Work Promotions	41%	46%	54%	48%	40%
13-b7	Graduating with Honors	58%	51%	69%	59%	56%
15-b9	Self-proving	45%	46%	31%	46%	42%
Need for Affiliation						

2-a3	Liking the Professor	43%	44%	38%	45%	36%
17-b12	Pleasing Family	55%	63%	62%	60%	63%
	Need for Power					
9-b2,b3	Job Application	52%	48%	73%	56%	54%
9-b2	To Present Job	51%	42%	69%	52%	49%
9-b3	To Future Job	54%	54%	77%	60%	59%
11-b5	Learning	47%	54%	69%	57%	51%
18-b13	Maintain Scholarship	33%	42%	31%	34%	39%

Table 7 shows percent of students strongly agreeing or agreeing with McClelland's three need theory. **First**, regarding **needs for achievement**, factors motivating students to study are **graduating with honors**, which have 58%, 51%, 69%, 59%, and 56% for high-grade point, mid-grade point, low-grade point, male and female students respectively, **and getting good grades**, which have 51%, 51%, 54%, 50%, and 56% for high-grade point, mid-grade point, low-grade point, male and female students respectively. **Next**, about **need for affiliation**, factor motivating students to study is **pleasing their family**, which has 55%, 63%, 62%, 60%, and 63% for high-grade point, mid-grade point, low-grade point, male and female students respectively.

Finally, concerning **need for power**, factors motivating students to study are **learning**, which have 47%, 54%, 69%, 57%, and 51% for high-grade point, mid-grade point, low-grade point, male and female students respectively; **present job application**, which have 51%, 42%, 69%, 52%, and 49%; for high-grade point, mid-grade point, low-grade point, male and female students respectively; and future job application learning, which have 54%, 54%, 77%, 60%, and 59% for high-grade point, mid-grade point, low-grade point, male and female students respectively. To sum up, in McClelland's three need theory, items aligning with **needs for achievement** are **graduating with honors and getting good grades**, item aligning with **need for affiliation** is **pleasing family**, and items aligning with **need for power** are **learning and present and future job application**.

4.8 Summary Motivators Aligning with Motivational Theories

In Table 8 **Initially**, show that pleasing family is motivator aligned with McGregor's theory X, social needs of Maslow's hierarchy and need for affiliation of McClelland's three need theory. Next, graduating with honors and getting good grades are motivators aligned with esteem needs of Maslow's hierarchy, need for achievement of McClelland's three need theory, and hygiene factors of Herzberg's two-factor theory. Third, learning is the motivator aligned with self-actualization of Maslow's hierarchy, need for power of McClelland's three need theory, and motivator of Herzberg's two-factor theory. Finally, Job application aligned with need for power of McClelland's three need theory.

Table 8: Factors Aligning with Motivational Theories

Theory		McGregor's theory X	Maslow's hierarchy of needs	Herzberg's two-factor theory	McClelland's three need theory
Motivators					
Job application					need for power
Learning			self-actualization	motivator	need for power
getting good grades			esteem needs	hygiene factors	needs for achievement
graduating with honors			esteem needs	hygiene factors	needs for achievement
pleasing family	not disappointing family		social needs		need for affiliation

5

Conclusion and Recommendation

5.1 Factors motivate most students to study

Pleasing family, graduating with honors, application to present & future job, learning, & getting good grades are the top five factors motivates most students to study. In term of soft facility, major subjects are pretty stronger motivators than chosen fields & chosen fields are also moderately stronger motivators than the university name.

5.2 Motivation factors affecting different students' preferment and gender

Regarding gender, female students are *relatively* more motivated to study at NUM than male, slightly motivated & female students are also *reasonably* more motivated to study for getting good grade than male, *moderately* motivated. However, male students are *reasonably* more motivated to study for learning with competition than female, *moderately* motivated, i.e. they want to outdo out their classmates & fiends; moreover, they are also motivated to study with the difficult class, course or subject—this is agree with the nature of masculinity, needing challenging & competing.

Concerning student performance, initially, low-grade point students are pretty more motivated to study in their major subject than high- and mid- grade point, *reasonably* motivated. Next for practical material, low-grade point students are pretty more motivated to study than mid- and high- grade point students, *slightly* motivated. Third for graduating with honors, low-grade point students are *pretty* more motivated to study than high-grade point students, reasonably motivated and mid-grade point students, *somewhat* motivated. Fourth for present or future job application and leaning, low-grade point students are pretty more motivated to study than high-grade point, relatively motivated and mid-grade point student, a little relatively motivated. Fifth for pleasing family, mid- and low- grade point students are reasonably more motivated to study than high grade point students, *fairly* motivated. Sixth for interesting material, mid- and high- grade point students are *moderately* more motivated to study than low-grade point students, slightly motivated. Seventh for good professor, high- and low-grade point students are moderately more motivated to study than mid-grade point students, slightly motivated. Eight for outdoing friends, high-grade point students are *slightly* more motivated to study than mid- and low- grade point students, faintly *motivated* to study. Finally for upcoming final, mid-grade point students are *somewhat* more motivated than high- and low-grade point students, *faintly* motivated.

Totally, low-grade point students are *pretty* more motivated to study in their major subject, with practical material, for graduating with honors, with present or future job application and for leaning; mid- and low- grade point students are *reasonably* more motivated to study for pleasing family; mid- and high- grade point students are moderately more motivated to study with interesting material; high- and low-grade point students are *moderately* more motivated to study with good professor; high-grade point students are *slightly* more motivated to study; and mid-grade point students are *somewhat* more motivated in upcoming final.

5.4 Factors aligned with motivational theories

First, not disappointing family should be considered as motivator **aligned with McGregor's theory X**. Students who were not previously motivated to study by higher goals, such as love of knowledge or need to achieve, find themselves pressed to study late by pleasing family—this might be due to traditional and cultural factors of the Cambodians. Second, in Maslow's hierarchy of needs, items align with social needs is pleasing their family, with esteem needs are graduating with honors and getting good grades, with self-actualization needs are learning. Third, in **Herzberg's two-factor** theory, items which align with **hygiene factors**, which keep students from being dissatisfaction in term of study, are **graduating with honors and getting** good grades and item which aligns with motivator is learning. Finally, in McClelland's three need theory, items aligning with needs for achievement are graduating with honors and getting good grades, item aligning with **need for affiliation** is **pleasing family**, and items aligning with **need for power** are **learning** and **present and future job application**. Another way round, *pleasing family* is motivator aligning with McGregor's theory X, social needs of Maslow's hierarchy and need for affiliation of McClelland's three need theory. Next, *graduating with honors and getting good grades* are motivators aligning with esteem needs of Maslow's hierarchy, need for achievement of McClelland's three need theory, and hygiene factors of Herzberg's two-factor theory. Third, learning is the motivator *aligning* with self-actualization of Maslow's hierarchy, need for power of McClelland's three need theory, and motivator of Herzberg's two-factor theory. Finally, *Job application* aligns with need for power of McClelland's three need theory.

This study arose from the question Research concludes that there is not a single answer to this question “What makes students study?” and *it is not so appropriated to neatly align student motivation with any only single classic management motivation theory*. The **recommendation** for faculty that arises from this study is faculty members should use multiple motivational methods in each class setting. Regardless of difference gender and grade-points, faculty members wishing to motivate their class should eliminate *reasons which students are not being motivated to study to remove study dissatisfaction* and use *the top motivators to intensify students study*, for most students are agree or strongly agree with the statements.

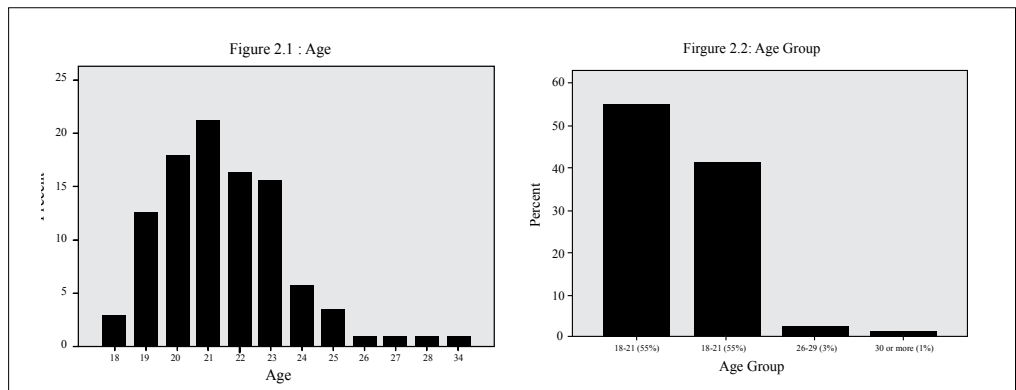
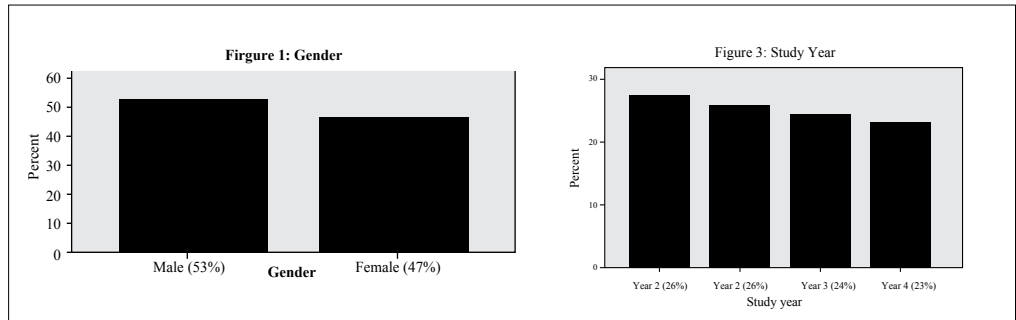
First, persuading students to study hard so that they will *learn new knowledge and skills, get good grade, graduate with honors, apply what they learn in their present or future job and pleasing their family*—don’t disappoint their family especially their guardian who desire a return of their good academic performance.

Next, faculty members should not behave as *easy professors* who *waste students’ time* by instructing *boring* lesson which is not related to job application. Faculty and its members should develop and update curriculum by aligning with the modern world of job market i.e. challenge the students and provide connections to real-world applications by the useable content of the course. The NUM should also provide modern facilities comprising teaching facilities and other supporting facilities such as *sport facility* which save students’ time so that they don’t have to waste their time going to sport club. This can strengthen *faculty name* and *university name* as they are seem not so motivate student to study.

Finally, motivating students to study is not only basing on school and faculty members but also family and employer i.e. they should sympathetic understand the students who obligate to study, family, and work by lowering work and family pressure to the students so that they are able to appreciate to study. However, the overall recommendations for faculty members are not much different than managers given countless times to work in business settings—avoid a one-size-fits all motivational approach and recognize that students in the classroom, like employees in a corporate setting, are individuals who are motivated by various tactics. Effective teaching, like good management, hinges upon personalizing the motivation to fit the individual.

Appendix A

Figure and Demographic Bar Chart



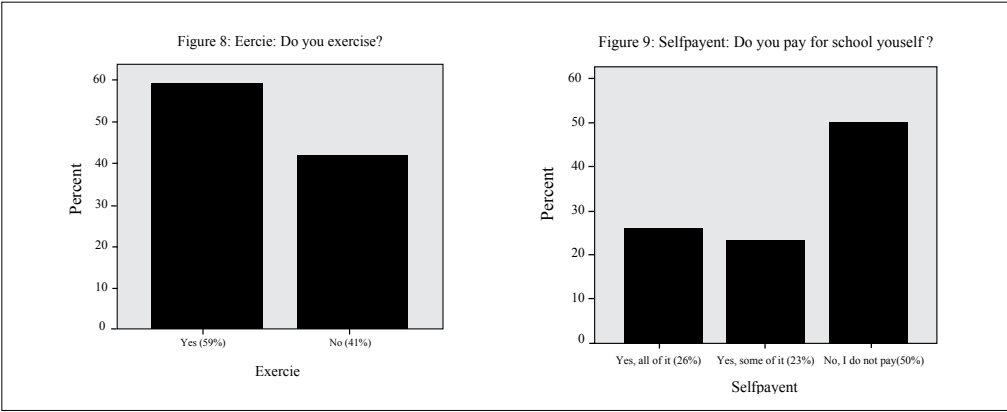
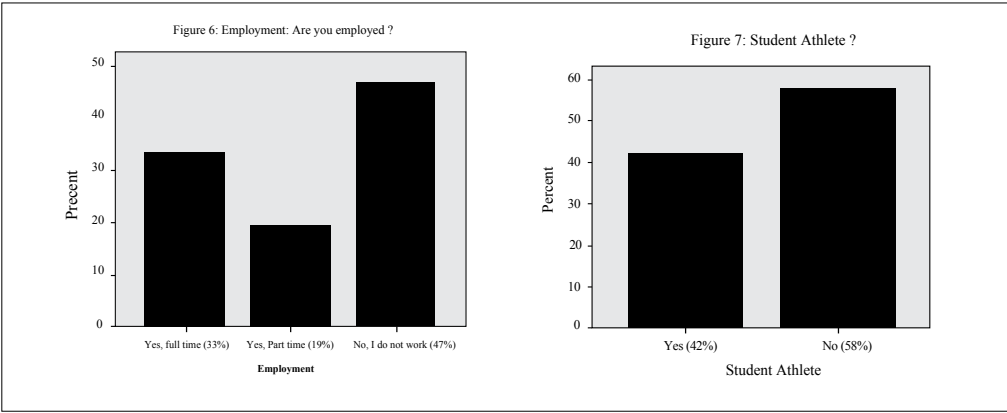
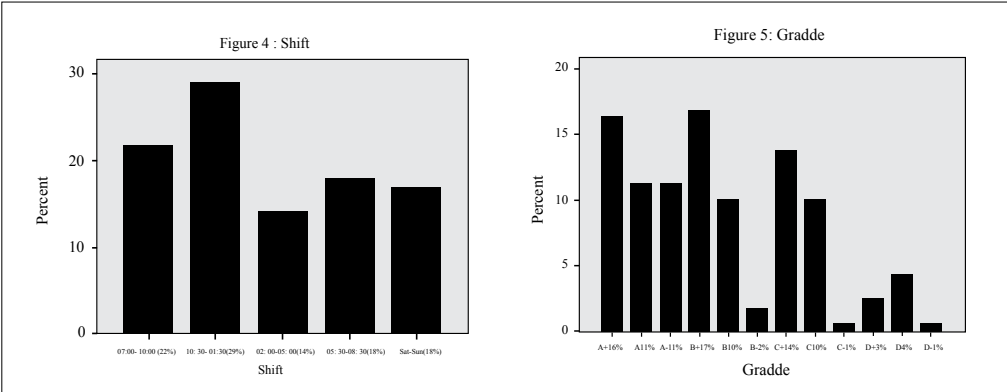


Figure 10: Motivation Factors Affecting Different Students' Gender

Motivators	Male	Female
study at NUM	male slightly motivated	relatively more motivated
study for getting good grade	moderately motivated	reasonably more motivated
study for learning with competition	reasonably more motivated	moderately motivated

Figure 11: Motivation Factors Affecting Different Students' Gender Performance

Motivators	High Performance	Mid Performance	Low Performance
Major subject	reasonably motivated	reasonably motivated	pretty more motivated
Practical material	slightly motivated	slightly motivated	pretty more motivated
Graduating with honors	reasonably motivated	somewhat motivated.	pretty more motivated
Job application and leaning	relatively motivated	a little relatively motivated	pretty more motivated
Pleasing family	fairly motivated	reasonably more motivated	reasonably more motivated
Interesting material	moderately more motivated	moderately more motivated	slightly motivated
Good professor	moderately more motivated	slightly motivated	moderately more motivated
Outdoing friends	slightly more motivated	faintly motivated	faintly motivated
upcoming final	faintly motivated	somewhat more motivated	faintly motivated

Appendix B

Questionnaire on Factors Driving Student Learning Motivation

General Instructions: This questionnaire asks you about your study habits and the motivations that lie behind them. Your participation in this survey is voluntary and you may withdraw at any point. Please do not write your name so that your responses will be anonymous. Thank you in advance for your participation.

I Background Information (Please circle the responses that apply to you.)

- 1 Gender: 1 Male 2 Female
- 2 Age
- 3 Year: 1 2 3 4
- 4 Shift: 1: 0700-1000 2: 1030-1330 3: 1400-1700 4: 1730-2030 5: Weekend
- 5 Grade: A+ A A- B+ B B- C+ C C- D+ D D-
- 6 Are you employed? 1 Yes, full time Yes, part time 3 No, I do not work
- 7 Student athlete? 1 Yes 2 No
- 8 Do you exercise? 1 Yes 2 No
- 9 Do you pay for school yourself? 1 Yes, all of it 2 Yes, some of it 3 No, I don't pay

II University Students' Motivation to Study

Listed below are some statements that address university students' motivations to study. Please using the scale provided below, rate these statements to the extent to which they are most applicable to you. 7 stands for strongly agree; 6, agree; 5, agree somewhat; 4, not sure or not applicable; 3, disagree somewhat; 2, disagree; and 1, strongly disagree.

I Am Motivated To Study...

1. at NUM1 1 2 3 4 5 6 7
2. in my chosen field..... 1 2 3 4 5 6 7
3. on my major subjects..... 1 2 3 4 5 6 7

I Study More

1. When I find the material to be interesting 1 2 3 4 5 6 7
2. When I find the material to be practical 1 2 3 4 5 6 7

3. When I like the professor 1 2 3 4 5 6 7
4. When the professor is good 1 2 3 4 5 6 7
5. When the class/subject is difficult 1 2 3 4 5 6 7
6. When the class/subject is easy 1 2 3 4 5 6 7
7. When I'm afraid of failing..... 1 2 3 4 5 6 7
8. When I can get an easy A 1 2 3 4 5 6 7
9. When my average in the class is high 1 2 3 4 5 6 7
10. When my average in the class is low 1 2 3 4 5 6 7
11. When midterms are approaching 1 2 3 4 5 6 7
12. When finals are approaching 1 2 3 4 5 6 7

I Am Motivated To Study...

1. Because I have paid so much for my courses..... 1 2 3 4 5 6 7
2. Because I believe I can apply what I learn to my present job ... 1 2 3 4 5 6 7
3. Because I believe I can apply what I learn to my future job 1 2 3 4 5 6 7
4. Because excelling in school can help me get a promotion at work
..... 1 2 3 4 5 6 7
5. Because I actually want to know the material 1 2 3 4 5 6 7
6. Because I want to get good grades 1 2 3 4 5 6 7
7. Because I want to graduate with Honors..... 1 2 3 4 5 6 7
8. Because studying makes me feel good 1 2 3 4 5 6 7
9. Because I want to prove something to myself 1 2 3 4 5 6 7
10. Because I want to outdo my classmates 1 2 3 4 5 6 7
11. Because I want to outdo my friends 1 2 3 4 5 6 7
12. Because I don't want to disappoint my family 1 2 3 4 5 6 7
13. Because I don't want to lose my academic scholarship 1 2 3 4 5 6 7

I Am Less Motivated To Study...

- | | | | | | | | |
|-----------------------------|---|---|---|---|---|---|---|
| 1.at NUM | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 .in my chosen field | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3.on my major subjects..... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

My Top Reasons for not Studying Are...

- | | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1. I have no time to study because of work obligations | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I have no time to study because of family obligations | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I have no time to study because of sports activities | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I have no time to study because of school activities..... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I would rather go out or hang out with my friends | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. The facilities at school are not conducive to study | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. My house is always noisy | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I can get by just fine without studying | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I would not do well in the course anyway | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I'll never even remember the content of the course later on ... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. I'll never even use the content of the course later on | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I hate the course or topic..... | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13 My professor is "cool" or "easy" | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. Studying bores me | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. Studying is a waste of my time | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. I never get any kind of recognition for doing well anyway | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix C:

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**ST. 96 CHRISTOPHER HOWES, KHAN DAUN PENH
PHNOM PENH, CAMBODIA 12202
TEL/FAX : (855) 23 427 105
WEBSITE : WWW.NUM.EDU.KH**
