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« **THE ROLE AND IMPORTANCE OF THE ALGERIAN  
FINANCIAL ACCOUNTING SYSTEM IN THE PRESENTATION  
OF FINANCIAL INFORMATION** »

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*Abstract:*

This study investigated of the financial accounting system which is a real change of culture over accounting because it exceeds the purely accounting issues to converge the accounting rules applied by the Algerian companies to IAS / IFRS. Infact, the financial information has become the backbone of the capitalist economy based on free trade. Accounting or financial accounting generally produces a common language to the various economic operators even those whose interests diverged. As far as our country is concerned, the reflection of global harmonization of accounting rules, intended to adopt a common reference that establishes the financial statements in order to obtain greater comparability and greater transparency of the financial situation of companies.

**Keywords:** financial reporting, normalization, IAS<sup>\*</sup> / IFRS<sup>†</sup>, financial accounting.

**Introduction**

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\* IAS : International accounting Standard.

† IFRS : International financial reporting standard.

This study provided an opportunity to explore the development of the economic world and the release of the movements of capital who had as a consequence over twenty years and strong growth of the multinational corporations. The movements of capital on different the world stock exchange (purses) and the needs for accounting and financial information from the funds for pension raised the question of the comparability of the financial statements and their facility of reading by the various actors of the governorship of the companies (shareholders, bankers, creditors, suppliers, employees) and particularly the investors.

Standards IAS/IFRS have the advantage of having a conceptual framework which makes it possible, even if it remains rather vague, to give useful principles for the preparation and the presentation of the financial statements, and also, to provide information useful for the investors.

Concerning the Algerian case, the reflexion of world harmonization of the countable rules had an initiative by the National Council of the Algerian Accounting Department, that, realized by the collaboration of the National Council of French accountancy within the framework of a program was financed by the World Bank, worked out in 2001, and which decided to set up a Financial accounting System which has an agreement with standards IAS/IFRS.

The purpose of this Algerian financial accounting system, called financial accountancy, is to standardize the financial instrument which makes it

possible to compare the performance of the states and to simplify the financial communication in the companies of the whole world.

For obtaining and including/understanding financial information, it is necessary to seek initially, its origin and its source, for that, the accountancy of the company has the role of producing financial information as well as clarifying the management of its leaders namely, satisfying its obligations with regard to the thirds.

Backers (shareholders, banks...) wish to know the profitability of the company, its capacity to honour its debts and the incurred risks, in addition, the customers, the suppliers and the employees wish to obtain information relating to the situation of this company. The aim of this article is to answer the following question:

***What is the role of the Algerian Financial accounting System in the presentation of financial information?***

**1. The role of the Algerian financial accounting system in the presentation of the financial information quality:**

**1.1 The financial accounting system (SCF<sup>‡</sup>) inspired from standards IAS/IFRS:**

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<sup>‡</sup>The SCF is the system accounting financial applied in algeria in 2010, inspired by international accounting standards IAS/IFRS.

The purpose of the application of this new financial countable system which takes as a starting point the standards IFRS is to harmonize Algerian accountancy with the international practice in order to facilitate the language standardized between the national and international companies.

#### **1.1.1- Process of standardization:**

One can summarize the process of standardization from the following points:

- Recognition of the international standards.
- Translation of the international standards in national language.
- Transcription of the standards in the national regulation.
- Installation of the adequate structures and procedures.

#### **1.2.1- Divergences between the S.C.F. and standards IAS/IFRS:**

The SCF is completely compatible with standards IFRS, but there are some differences with the previous standards. The SCF predicts specific rules for the following cases:

- Organization and book-keeping;
- Nomenclature of the accounts;
- Recording of the operations in these accounts.

These fields are not the subject of any international standard and are not treated in the IFRS.

- The SCF treats the particular case of the very small companies which are authorized to hold only one accountancy based on the movements of

treasury whereas the IFRS do not consider any particular provision for these companies, it should be noted that discussions on the possible use of new standard “IFRS for SME” are already in hand in Europe and particularly in France on its application by all the none listed(marked) companies

- The costs of service of the departures in retirement and the evaluative methods of the loads to be funded are the provision object many and detailed on the level of the IFRS, these provisions are taken again totally by the project of the SCF.
- The new reference frame treats specific fields, in particular, banks and insurances, because it treats them especially briefly what is the treatment of the financial instruments, buildings of placement which require a taking into account of the complete text of the IAS/IFRS.
- Permanent inventory is obligatory in the S.C.F. but only authorized in the I.A.S./I.F.R.S.

## **1.2 Financial information following the example application of the accounting system:**

### **1.2.1 The financial information seen by the IFRS:**

The objective of the adoption of a common reference frame is the harmonization of the production of the financial statements in order to obtain a better comparability, and a greater transparency of financial information.

#### **a) More economic:**

- Pre-eminence of economic on the legal concept of “substance over form” example “classification of the leasing agreements”.
- Evaluation of certain post offices to the right value for example; financial instruments, tangible fixed optional assets.

**b) More transparent:**

- Reduction of the accounting choices (as in the prohibition of the method of the LIFO for the valorization of stocks).
- Inscription with the broader assessment, instruments derived.

**c) More detailed:**

- Information in appendix packed, example IAS 14<sup>§</sup>,
- Sectoral Information.
- More argued Operations and information required by IAS 36<sup>\*\*</sup> on the depreciations of credits.

**d) Patrimonial:**

- Vision of the company (1 only standard on the income statement).
- Unsystematic fastening of the loads to the products as deferred unaccepted charges.

**1.2.2 Qualitative characteristics of financial information:**

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<sup>§</sup>IAS 14 « Segment Reporting » requires reporting of financial information by business. It's was issued in august 1997, was applicable to annual periods beginning July 1998 and was superseded by IFRS 8 operating segments with effect from annual periods after January 2009.

<sup>\*\*</sup>IAS 36 “Asset depreciation” was issued by the IASB in March 2004. However, this standard has been amended, some of which have been adopted within the European Union. They are briefly presented below under the heading "At the level of the European Union".

Needing a decision-making, the financial statements must guarantee the transparency on the reality of the entity by presenting complete and useful information.

This information must meet the following characteristics.

**a) Relevance:**

The information is relevant in measurement or it can influence its users in their economic decisions by helping them to evaluate either the past, present or future events. Of information related to its nature and its relative importance.

**b) Reliability:**

Information is reliable when it is full of errors and significant of prejudices, and its development is carried out on the basis of the following criterion:

- Search for a faithful image,
- Pre-eminence of economic reality “on legal appearance”,
- Neutrality,
- Prudence,
- Exhaustiveness.

**c) The comparability:**

Information is comparable when it is established and presented in a sufficiently coherent way to make it possible to make significant comparisons in time and between companies.

**d) Intelligibility:**

It is necessary that countable information is easy to include/understand by any users, who has even simple countable and financial concepts.

**1.3 Impact of the financial accounting system on financial information:**

The whole of the questions relating to the value and the representation of the company by the financial statements, associated to a lawful framework of the production of financial information, by that this new system will have an impact on the evolution of the financial instruments which produces a positive or negative incidence on financial information.

**1.3.1 Financial statements according to SCF'S:**

- The assessment.
- The income statement.
- Table of a clean variation in capital.
- Table of flows of treasury.
- Annex.

**1.3.2 Financial information like generator of the comparability and the legibility of the financial statements:**

The accounts try to explain the situation of the company (assessment) and the impact on the result and the treasury of the operations carried out by the company during the exercise (income statement, table of flows of treasury and clean variation in capital). This explanation is founded on a countable language which is necessary to include/understand and correctly

be able to obtain the information contained in the accounts. In other words, to be able to decipher the figures. The means more adapted to bring financial information they are the financial statements, more precisely the fifth element of the financial statements because these tables gathers all information having circulated in the company,

The latter “the appendix” comprises further information relating to the assessment, with the income statement, the table of flows of treasury and the state of clean variation in capital.

## **2. Review of the theoretical literature:**

The development of the world markets of capital during these last thirty years gave birth to the need for a common economic reference frame.

The financial scandals in Europe and in the United States came to reinforce this need to harmonize and improve financial information in direction of the economic agents.

All that with an aim of reinforcing the transparency of the financial statements of the companies calling public upon the saving. It's within this framework particularly regulated that was born with new reference frame IAS/IFRS. Produced by the IASC and the IASB, the standards which result from this have as wills to establish a coherent and homogeneous single framework, restoring the confidence of the investors on the markets and other partners of the company.

The dominant approach which considers that the object of countable information is to contribute to the decision-making of the investors rests

on two theoretical bases: theory of the efficient markets and the theory of the agency.

The theory of the efficient markets, developed by Fama<sup>††</sup> in 1965 who considers that in the sufficiently broad market or information spreads itself instantaneously, as it is the case for the stock exchange market, the operators react correctly and quasi immediately to information if they have the capacity of the interpreter with accuracy. By producing countable information of quality, the assured efficiency of the markets east provided that the investors are able to interpret this information correctly.

The theory of the agency was developed by Jensen<sup>‡‡</sup> and Meckling 1976. Those defined the relation of agency as a contract by which the main thing engages the agent to accomplish services of which authority of the decision-making. Thus, the theory of the agency opposes the main thing (shareholders, owners of the capital) to its agent (managers, managers paid and professional of a company) which must achieve their details on the accounts.

On June 29, 1973 was signed by Henry Benson, associated of Coopers & Lybrand of London, and by the representatives of the professional countable organizations of Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom, Ireland and the State-

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<sup>††</sup> See Fama (1970a) for a survey of this 'efficient markets' literature.

<sup>‡‡</sup> See Jensen (1978b) for an example of this evidence and references.

Plain, the charter of creation of an international organization, the committee of the international countable standards, the IAS (International Accounting Standards Countable basic which would be accepted in the world. Henry Benson had noted that the differences on the level of the accounting policies were constraining for the international trade and investments and had proposed that a committee of listeners writes countable standards which would apply to the international exchanges.

A new independent organization was established in 2001 (revised in 2010). Composed of a foundation IFRS (International financial Reporting Standards), of a conseil IASB (International Standard Accounting Board); of a committee of interpretation named IFRS interpretation committee and of a Consultative Committee IFRS Advisory Council.

From 2002 to 2016, many work was carried out by the IASB and led to the publication of adjustments of the almost totality of the existing standards and to the creation of the sixteen new standards.

From 2016 to our days, several publications of countable standards IAS, IFRS, created by several organizers of committee, for the improvement of the performance of the financial statements in the main thing and financial information in general.

### **3. Empirical test:**

The Minister of Finance specified that this text of law comes to define the countable system, the conditions and the procedures of its implementation and to correct the dysfunctions which raised in ordinance

75-35 of April 1975<sup>§§</sup> bearing countable national plan. It also allows, the reform of the countable system applied since 1975, which is adapted more to the changes only knows the country in several fields and the production of detailed and transparent information giving a faithful image of the financial standing of the companies to the profit of the investors and managers.

### **3.1 The transition from the PCN to the new reference frame:**

Reference frame PCN is repealed and substituted by the new reference frame SCF, which returned in application starting from the first of January 2010, under the terms of the provisions of law 07-11 of bearing November 25, 2007 financial countable system. The financial statements, which will be closed the 31/12/2010, will have inevitably to recall flows having to be translated within the companies with the titles of 2010, according to new reference frame SCF.

The entity must stop, by its body of management, possibly assisted internal experts and external specialists on the matter, a strategy of passage. It doesn't have a standard model of strategy of passage of reference frame PCN towards reference frame SCF. Each entity stops a strategy of passage which adapts with its size, the nature of the activity which carries on, as well as the specified related ones to its internal and external environment.

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<sup>§§</sup> See (25/03/2009 a) Official Journal of the People's Democratic Republic of Algeria in reference.

The entities must observe the principle says “the advantages ratio/costs<sup>\*\*\*</sup>”, which takes the accounts of the utility of countable and financial information for the various users of the financial statements, compared to the cost of its production.

### 3.2 The importance of the SCF in the presentation of financial information:

Case study of a ceramic company in the west of Algeria which presents the impact of the passage of the PCN to the SCF (for exercise 2010) on the presentation of financial information; by basing financial statements, the balance sheet (Asset and passive) and its income statement:

#### 3.2.1 The Asset:

Asset	PCN of KDA	SCF of KDA	Impact
Intangible fixed asset	185	185	00
tangible fixed asset	46345	39936	-6409
Immobilization in progress	101928	2928	-99000
Financial Immobilisation	3369381	3369381	00
<b>Total non-current asset</b>	<b>3517839</b>	<b>3412431</b>	<b>-105408</b>
Stocks in progress	17760	17760	00
Receivables	33020	51596	18576
Disponibility	128354	128354	00
<b>Total Current Asset</b>	<b>179134</b>	<b>197712</b>	<b>18578</b>
<b>Asset Total</b>	<b>3696973</b>	<b>3610143</b>	<b>-86830</b>

*Source : Authors*

*calculation*

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\*\*\* See Ali TAZDAIT (2009a) in reference personal translation in english.

-Intangible fixed assets, the financial fixed assets and stocks incur remain unchanged.

-The total of credit decreased bus in the financial countable system, the preliminary expenses became carry forward again.

- The goodwill does not exist because the company did not make the reprocessing yet.

### 3.2.2 The liabilities:

liabilities	PCN of KDA	SCF of KDA	Impact
Capital	602000	602000	00
Reserves	1288293	1288293	00
<b>Net profit</b>	<b>610059</b>	<b>198666</b>	<b>-411393</b>
<b>Report again</b>		<b>9958</b>	<b>-9958</b>
<b>Total capital</b>	<b>2500352</b>	<b>2098928</b>	<b>401424</b>
Financial depts	465534	465534	00
Provision	2159	2159	00
<b>Total non-curant liabilities</b>	<b>467693</b>	<b>467694</b>	<b>00</b>
providers	116497	44748	-71749
Tax	52857	248	-52609
Other depts	56656	192502	135846
treasury	555775	806031	250256
<b>Total curant liabilities</b>	<b>781785</b>	<b>1043531</b>	<b>261746</b>
<b>Total liabilities</b>	<b>3696973</b>	<b>3610143</b>	<b>-86830</b>

*Source : Authors*

*calculation*

- The emitted capital and the liability not running are unchanged.
- The negative impact which is in this profit's, means that several accounts (as the result in authority of assignment) was cancelled by the accounts carryforward again.
- Positive Impact in the passive total current due to the dispersion of the accounts in the swing.

### 3.2.3 The income statement :

<b>the income statement</b>	<b>PCN of KDA</b>	<b>SCF of KDA</b>	<b>Impact</b>
Turnover	94573	94573	
Immobilized production	1091835	1091835	
<b>Production of exercise</b>	<b>1186409</b>	<b>1186409</b>	00
consummate purchase	72248	72248	
Outdoor services	12812	12812	
<b>Consummate of exercise</b>	<b>85061</b>	<b>85061</b>	00
<b>Added value</b>	<b>1101347</b>	<b>1101347</b>	
Personnels fees	28566	28566	
Taxes	2415	2415	
gross operating surplus	1132330	1132330	00
operating product	1510843	15	
Operating fees	878696	3411	
Depreciaition charge	4370	870009	
<b>Operating result</b>	<b>2393909</b>	<b>265748</b>	<b>-2128161</b>
Financial product	3618	1025	-2593
Financial fees	1025	165	-860
<b>Financial fees</b>	<b>2593</b>	<b>860</b>	<b>-1733</b>
Result before tax	634461	264888	-369573
taxes	24402	66222	41820
<b>Résultat of exercise</b>	<b>610059</b>	<b>198666</b>	<b>-411393</b>

*Source :*

*Authors calculation*

- The sales turnover remains unchanged.
- The turnover did not change.
- Different reduction “products and running costs” due has a conversion of month been worth of transfer of credit.
- On the other hand, the operational result and the financial result have one negative impact on the result of exercise.

From 2010 to our days, the ceramic company of the west had known an improvement on the practice of the SCF, an improvement on the presentation of the financial statements. Many Algerian companies knew an imbalance of the financial statements compared to the changes and the adaptation, but, a financial improvement with considering the day on the qualification of the presentation of the financial statements for the communication of financial information between investors of the whole world.

## **Conclusion**

The new conceptual base to which this system is leaned and which is compatible with the international standards, defines in a more precise way the concepts, the accounting policies and the rules of evaluation and accounting to be respected. As regards publication and production or book-keeping of information of quality, reflecting the true economic and financial situation companies and useful for all the users of the financial statements of the companies.

In economic environment in constant evolution, the companies need tools of presentation and measurement enabling them to improve financial information; based on a conceptual framework and standards, reference frame IFRS leaves an important place to the judgement of the professionals. Their countable estimates and their choices can have substantial incidences on the presentation of the financial statements.

Since the new regulation of a new reading of the compatibility, the Algerian SCF inspired of countable standards international IAS/IFRS, with licence to harmonize the financial instruments for the investors resident and non-resident, to improve the legibility of the financial statements, and the performance of financial information.

In Algeria, national Chart of accounts While extending itself to the development of a true financial countable system which processes economic and financial data, as a whole and according to qualitative criteria which will have to help the interested users and the economic partners in their decision-makings. Convergence is concretized, for the groups whose adoption of the new standards is effective. It is now acting to decline then to integrate these standards towards the whole of the functions of the company.

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**A Characterization of Commitment Avoidance Strategies  
in Language Use  
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**Abstract:**

In making their commitments, speakers tend to use a set of strategies (in the form of embedded lexicographical markers or specific syntactic constructions) designed to mitigate the degree of commitment involved in their utterances. Searle (1969: 59) noted this phenomenon, though only in passing, arguing that such instances of language use entail “exceptions to normal ways of promising, running counter to the intuitions of philosophers and linguists”. Given that this linguistic phenomenon has received little attention, if at all, research wise, we attempt in this paper to provide theoretical groundwork for the problem of defining 'non-committal' utterances and for their classification. We characterize commitment avoidance utterances in terms of illocutionary point, considering whether this type of utterances has the function of a commissive, only with a weakened degree of commitment or whether they form a distinct class of utterances. To this end, a number of sample utterances illustrating the targeted language use is provided and analyzed. We also attempt to state the constitutive rules of 'noncommittal' utterances, in the perspective of identifying the conditions under which these utterances converge with assertions and promises (speech acts involving commitment) and those under which 'non-committal' or 'non-obligating' utterances diverge from these commitment-making speech acts. Finally, we identify the ways in which a 'non-committal' utterance is different from a typical performative

utterance, drawing on Austin's (1962) and Searle's (1989) accounts of performativity.

**Key words:** Non-committal utterances, speech acts, strategies, language use.

## **Introduction**

Based on their observation of language use, Austin (1962: 151) and Searle (1979: 12-15) have established five general categories of language acts <sup>1</sup>. One such category is a special class of illocutionary acts called 'commissives'. According to Searle (ibid: 14) and Austin (ibid: 157), the whole point of a commissive is to commit the speaker to a future course of action.

It is common for language users to commit themselves to certain courses of conduct as they do when they promise, or to commit themselves to something's being the case as they do when they assert. It seems even commoner for language users to express their intention to do something without actually undertaking to do it. Austin (ibid: 158) has mentioned this phenomenon, though only in passing. He argues (ibid) that 'declarations of intention' are different from 'undertakings', questioning whether or not they should be classed together. This means that to express the intention to do something is not equivalent to undertaking to do it.

In fact, the problem with what I shall call here 'non-committal' or 'non-obligating' utterances is not only one of classification, but is also one of definition. It is not clear whether we are dealing with mere embeddings (in the form of grammatical or lexicographical markers) used within a commissive to indicate weak degrees of commitment or whether this type of utterances actually counts as a distinct class of speech acts in its own right. And if the

1- The five categories of language acts refer to Austin's (1962: 151) and Searle's (1979: 12-15) classification of illocutionary acts. Based on differences in illocutionary force, Austin distinguishes between verdictives, exercitives, commissives, behavitives, and expositives. Searle (ibid: 12), on the other hand, takes illocutionary point, direction of fit between words and the world, and expressed sincerity conditions as the bases for constructing his classification. He distinguishes between assertives, directives, commissives, expressives, and declarations. Though Searle's classification draws in part on Austin's taxonomy of illocutionary acts, the alternative classification he offers seems to involve far less overlap and to have a much more consistent principle of classification.

latter is the case, then the question to be asked concerns whether this kind of utterances has the characteristics of a performative utterance.

### **1. Commitment Avoidance Utterances: A Distinct Class**

Before we attempt to establish commitment avoidance utterances as a distinct category, it would be appropriate to provide, first, a few illustrative cases of the type of utterances in question. The data below are instances of commitment avoidance utterances:

- (1) I'll see if I can come tomorrow.
- (2) I may lend you the money.
- (3) I believe Dave has been absent for more than a fortnight or so.
- (4) Well, if I'm not mistaken, the town you're looking for should be a ten-minute drive from here.

If asked to relate each one of the utterances above to the closest corresponding speech act category in, say, Searle's taxonomy of illocutionary acts, perhaps then an initial reading of (1), (2), (3), and (4) may lead us to conclude that (1) is a commissive wherein the speaker promises 'to show up the next day', (2) is also an undertaking 'to lend some money to the hearer', (3) is an assertive wherein the speaker asserts 'that Dave has

been absent for a while', and finally that (4) can similarly be subsumed under the class of 'assertives'.

Such classification, though sounding adequate at first glimpse, is, to say the least, wholly unsatisfactory. There is clearly a difference between (1) above and (5) below:

(1) I'll see if I can come tomorrow.

and,

(5) I promise that I'll come tomorrow.

One may argue that the difference is only one of strength or force (that is, the strength with which the illocutionary point (purpose of the act) is presented), but this is not the case. In my belief, (5) is a commitment to seeing not to the act (as it is the case with a promise), but is a commitment to consider whether it will be possible for the speaker to come or not. I argue that announcing to come and committing to come are both logically ruled out in utterance (5). Indeed, the speaker is neither announcing the intention to come nor committing to come. In saying "I'll see if I can come tomorrow", what I do is only to announce my intention to consider the possibility of coming tomorrow, but what I also, and most importantly, do is to show the hearer that I don't commit to coming tomorrow; the phrasing is so chosen that the speaker is placed under no obligation to perform the predicated act.

If the point of a promise is the undertaking of an obligation by the speaker to do something, then to say "I promise I'll come tomorrow" is to undertake to come tomorrow. On the other hand, the illocutionary point of (1) is exactly the opposite of (5). Therefore, to say that (1) is essentially the same as (5) is parallel to "it is and it is not" or "I promise, but I ought not". The two utterances; that is (1) and (5), are not merely different, but are in fact opposite in meaning.

The same is true for (2); the speaker is under no obligation to undertake the predicated act. Similarly, (3) and (4), which are not concerned with a future course of action, but with the expression of a belief, involve lack of commitment by the speaker to the truth of the propositions contained in the utterances. Instances of commitment avoidance in communication occur both when the speaker chooses to indicate lack of commitment to a future course of action and lack of commitment to an assertion. In fact, commissives (more specifically promises) and assertions are essentially the same because what the speaker *does* by means of making an assertion or a promise is to make a commitment to do something, and therefore to take responsibility for the truth of the proposition.

So far, I have argued that ‘non-committal’ utterances bear resemblance to a certain degree to promises and assertions, but are still essentially different from both. One way to examine in what sense ‘non-committal’ utterances are similar to and in what sense they are different from assertions and promises is by looking at the constitutive rules for promising and asserting. This would to a certain extent allow us to point out the conditions where ‘non-committals’ converge with assertions and promises and those where they diverge from them.

### **1.1 Constitutive Rules: Commitment Avoidance Utterances Vs. Undertakings**

Searle (1965: 231-233) states the rules for promising as follows:

Given that a speaker *S* utters a sentence *T* in the presence of a hearer *H*, then, in the utterance of *T*, *S* sincerely (and non-defectively) promises that *p* to *H* if and only if:

- (1) *Normal input and output conditions obtain*
- (2) *S expresses that p in the utterance of T.*
- (3) *In expressing that p, S predicates a future act A of S ((2) and (3) are called ‘propositional content rules’ (see, Searle (ibid: 231).*
- (4) *H would prefer S’s doing A to his not doing A, and S believes H would prefer his doing*

*A to his not doing A* <sub>3</sub>

(5) *It is not obvious to S and H that S will do A in the normal course of events*

(6) *S intends to do A* (this condition is called ‘the sincerity condition’ (See, Searle (ibid: 233))

(7) *S intends that the utterance of T will place him under an obligation to do A.*

In stating the conditions of assertions, Searle (1969: 67) distinguishes between the essential condition of an assertion, and its preparatory and sincerity conditions (for a

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2. Input conditions refer to conditions for intelligible speaking whereas output conditions cover conditions for understanding (e.g. knowing the language, being conscious, not acting under duress or threat, etc) (See, Searle (1965: 231)).

3. this is a crucial distinction between promises and threats; for the promise to be non-defective, the promised act must be something that the H wants done (Searle, 1965: 233).

detailed statement of the rules for assertions, See Searle (1969: 67)). :

(1) *S expresses that P in the utterance of T.*

(2) *S has evidence (reasons, etc.) for the truth of p.* (first preparatory rule)

(3) *It is not obvious to both S and H that H knows (does not need to be reminded of, etc.)*

*p.* (second preparatory rule)

(4) *S believes p.* (the sincerity rule)

(5). *Counts as an undertaking to the effect that p represents an actual state of affairs* (the essential condition)

In view of the conditions (for promises and assertions) listed above, it appears that an important convergence point shared by assertions and promises, on the one hand, and commitment avoidance utterances, on the other hand, is the psychological state<sup>4</sup> expressed in the performance of the illocutionary act, which, according to Searle (1979: 5), corresponds to the sincerity condition of the act. Following this line of thought, the expressed psychological state of ‘belief’ would cover not only assertions, explanations, arguments, and postulations, but also non-obligating expressions of belief (i.e. commitment avoidance utterances). Similarly, the expressed psychological state of ‘intention’ would also cover not only promises, pledges, vows, and threats, but also non-obligating declarations of intention (i.e. commitment avoidance utterances)

On the other hand, the difference between an utterance intended as a promise or an assertion, and a commitment avoidance utterance relates to the most important feature of the speech acts in question, notably ‘the essential condition’. In the case of ‘promises’, Searle (1965: 234) postulates that intending the utterance as the undertaking of an obligation to

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4. In Searle’s (1979: 4) “Expression And Meaning”, Searle contends that in the performance of any illocutionary act with a propositional content, the

speaker expresses some attitude towards that propositional content. A speaker may thus have the belief that  $p$ , the desire that  $p$ , the regret that  $p$ , etc.

perform a certain act is an essential feature of a promise. According to Searle (1965: 234), condition (7) is a distinguishing feature; it is this condition that distinguishes promises from other kinds of speech acts. Thus, the proposal that utterances accompanied with expressions intended to avoid commitment, but which involve a predicated future act still count as a promise (only with weaker strength than the usual promise) does not obtain. When it comes to logic, one cannot speak of weak commitment and strong commitment; either there is commitment or there is not.

Compared to assertions, again, a non-committal would differ from an assertion when it comes to its essential rule. According to Searle (1969: 66), asserting that  $p$  consists in committing oneself to the truth of  $p$ . The commitment principle is what characterizes both assertions and promises. Without ‘the essential condition’, the practice of assertion and promise would simply not exist.

Conversely, what constitutes a ‘non-committal’ (or what makes a non-committal possible) is the absence of the obligation to do  $A$ , in the case of an expression of an intention to do  $A$ , and the absence of commitment to the truth of  $p$ , in the case of an expression of a belief that  $p$ . Thus, the essential rule for a commitment avoidance utterance may be formulated as follows:

- a. in the case of ‘an expression of an intention’:  
*S intends that the utterance of T will place him under no obligation to do A*

Or as Grice would perhaps prefer it:

*S intends that the utterance of T will produce in H a belief that S is under no*

*obligation to do A.*

- b. in the case of ‘an expression of a belief’:  
*S intends that the utterance of T will not commit him to the truth of p.*

The thread of the argument so far has been to demonstrate; first, that both assertions and promises constitute undertakings although they come under different headings in Searle’s and Austin’s taxonomies of illocutionary acts; and second, that commitment avoidance utterances are essentially different from assertions and promises, specifically in illocutionary point or purpose of the act (i.e. the essential condition). Based on this characterisation, we may feel tempted to establish that utterances with a commitment avoidance illocutionary point form a homogenous class of utterances as opposed to those utterances with a commitment-making illocutionary point.

Assuming that commitment-avoidance utterances could indeed form a distinct set, the question then remains to ask what kind of utterances are we dealing with here? Are they of the performative or non-performative type?

## **2. Commitment-Avoidance Utterances: Performative or Non-Performative?**

In the perspective of improving our characterisation of commitment avoidance utterances, we shall turn, as was noted above, to the question of whether commitment avoidance utterances actually ‘perform’ an action or merely ‘constate’ a state of affairs, and if in using a commitment avoidance utterance, we perform an action, then what do we mean by this?

### **2.1 Austin’s Notion of The Performative:**

In introducing the notion of the performative, Austin (1962: 1) refers to the loose use by some philosophers of language of ‘sentence’ for

‘statement’ and argues that the reason behind this confusion is the erroneous assumption that all declarative sentences are statements. It was commonly held, Austin (ibid: 2) contends, that all statements are used to report or record straightforward information about facts and that all statements are therefore verifiable. Austin (ibid: 3) then refutes this, stipulating that a sentence is not a statement, but that it can be used to make a statement, to indicate reservations, to influence conduct, or to evince emotion, and whatnot. Based on this observation, Austin (ibid: 4) distinguishes between what he calls ‘constatives’ and ‘the masquaraders’<sup>5</sup>, or ‘performatives’.

Constatives ‘constate’ or ‘report’ facts. They are statements of fact that can be either true or false; they report facts that are verifiable. The utterances below are examples of constatives:

- (5) It is raining now.
- (6) Dinner is burning.
- (7) This ring is worth 1500 Dollars.

On the other hand, ‘performatives’, Austin (ibid: 5) stipulates, do not report facts and are not verifiable. Rather, the utterance of a performative is, or is a part of, the doing or performing of an action; hence the name ‘performative’. Austin (ibid: 5) adds that grammatically performatives tend to have verbs in the first person singular present indicative active. By way of illustration, he (ibid: 5) suggests examples (8)-(11) below:

(8). ‘I name this ship the Queen Elizabeth’ ( \_ as uttered when smashing the bottle against the

stem.)

(9). 'I bet you sixpence it will rain tomorrow'

(10). 'I bequeath my watch to my brother.' ( \_ as occurring in a will.)

(11). 'I do (sc. Take this woman to be my lawful wedded wife)' ( \_ as uttered in the course of the marriage ceremony.)

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5. According to Austin (ibid: 4), the masqueraders are utterances that 'masquerade' or look like statements of fact, but which in fact do not describe nor constate. This disguise, Austin (ibid.) argues is mainly caused by their grammatical make-up (i.e. the use of the first person singular present indicative)

Austin (ibid: 6) argues that to utter these sentences (in the appropriate circumstances) is not to report my saying them or to describe "my doing of what I should be said in so uttering to be

doing". Rather, the issuing of the utterance is itself the performing of an action (or the leading incident in the performance of the act). Austin (ibid: 6) explains that when one says 'I do' in a marriage ceremony, for instance, one is not reporting on the marriage or informing about it; rather, one is *indulging* in it. The utterances above, moreover, cannot be said to be either true or false. Constatives, on the other hand, are uttered with a historical reference.

In his description of performatives, moreover, Austin (ibid: 8) asserts that certain conditions must obtain if the utterance is to be successful as a performative. To name a ship, for example, and for the words in (8) to take

effect, the speaker must be the person appointed to name the ship (See, Austin, *ibid*: 8). It is also commonly known that it is necessary for the offer of a bet to have been accepted if the ‘the bet’ is to be felicitous (See Austin, *ibid*: 8).

While the cases cited above which involve the performative formula (‘I V’) as in ‘I bet’, ‘I do’, ‘I give’, ‘I bequeath’, and ‘I name’ are the commonest type of performatives, Austin (*ibid*: 9) saw fit to add to the list of ‘the performative’ utterances such performative formulas as ‘I apologize’, ‘I promise to ...’, ‘I order you to ...’, and ‘I pronounce you ...’, etc. He (*ibid*: 9) explains that an utterance in the form of ‘I promise to do something’, for example, is not merely a matter of uttering certain words, but also counts as the doing of an action. In making a promise, my words actually bind me to a certain course of action. Also, when I say ‘I order you to leave the room’, I am actually performing an order, and not merely reporting or informing.

Austin (*ibid*: 57) then suggests some criteria for the isolation of the performative, arguing that the verb in the performative is typically used in the first person singular indicative active and that a performative utterance can admit the insertion of ‘hereby’ (as a litmus test). However, Austin (*ibid*: 58) soon recognized that neither mood (declarative), nor tense (present indicative), nor voice (active), nor the ‘hereby’ test constitute enough evidence that the utterance is a performative.

For illustration, Austin (*ibid*: 58) cites the following examples:

- |                 |                |                       |    |
|-----------------|----------------|-----------------------|----|
| A-              | B-             | C-                    | D- |
| (a) Go out!     | (a) You did it | (a) I shall be there. |    |
| (a) You may go. |                |                       |    |
| (b) out!        | (b) Guilty!    |                       |    |

The utterances in set (A) above are as much performatives as the highly formalized ‘I hereby order you to go out’. Also, I could simply say ‘You did it’ instead of saying ‘I find you guilty’. I could as well say “I shall be there”

instead of saying “I promise that I shall be there’ and ‘you may go’ instead of ‘I give you permission to go’. These examples indicate that utterances can be performative even when they are not uttered using the explicit performative ‘I hereby V’

Austin (ibid: 58) argues that even the mood test fails. An utterance does not necessarily have to be in the active mood to be a performative.

One could say:

(12) ‘I hereby authorize you to enter’, or

(13) ‘You are hereby authorized to enter’

The present tense also is not requisite for the utterance to be a performative. Austin (ibid: 58) explains that it is possible to say:

(14) ‘I hereby pronounce you off-side’, as well as say

(15) ‘You were off-side’

## **2.2 Explicit Vs. Implicit Performatives**

In view of these differences in the form of the performative, Austin (ibid: 69) calls utterances with a formula that makes explicit what action it is that is being performed in issuing the utterance ‘an explicit performative’ while he calls utterances which do not make explicit the force of the utterance “a primary or implicit performative”. To identify a performative from a non-performative in the case of non-explicit formulas, Austin (ibid: 62) argues, we need to see if the utterance is reproducible in form in a pattern similar to that of the explicit performative. He (ibid: 68) adds that the issuing of an utterance is not always equivalent to the doing of something because “the reduction to an explicit performative does not seem always possible”.

Now, if we attempt to apply Austin's test for identifying the performative to utterances used to avoid commitment, we would end up with formulas of this sort:

(16) I (hereby) do not commit myself to doing A / I (hereby) do not commit myself to the truth of *p*

or

(17) I (hereby) intend to do A, but do not undertake to do it/ I (hereby) believe that *p*, but do not commit myself to the truth of *p*.

Following Austin's test, if commitment avoidance utterances can be used performatively, then an utterance like 'I may come tomorrow' should be reproducible without a problem into 'I hereby do not commit to coming tomorrow'. Clearly, the test fails; the utterance sounds non-idiomatic. The reason behind this is that 'hereby' does not collocate with a verb in the negative form.

Still, does this mean that when I indicate in a sentence lack of commitment, I am uttering words in a vacuum? When I show lack of commitment in an utterance like 'I'll see if I can come tomorrow', am I not uttering these words to a certain effect and do they not take effect once received by the hearer? Aren't statements and declarations actions in the same way that promises and commands are? After all, if we apply Austin's test of the explicit performative, we will discover that statements just like promises can be made with an explicit performative verb as in 'I hereby state that ...', 'I hereby declare that ...', and 'I hereby assert that ...'. And yet, according to Austin, only performatives are actions and constatives are sayings.

It seems that Austin's test for the explicit performative would blur his distinction between performatives and constatives. This was, in fact, one of the objections that Searle (1989: 536) had to Austin's notion of the explicit performative. In what follows, we will review Searle's amended version of

the performative and his conception of what constitutes a linguistic act, in the perspective of situating commitment avoidance utterances within a general theory of speech acts.

## 2.2 Searle's Conception of 'The Performative'

Though Searle has a number of objections to Austin's notion of the performative, he does not consider the notion to be useless. As was mentioned earlier in this paper, Searle (1989: 536) objects to Austin's distinction between performatives and constatives because constatives, like statements, can be formulated in the first person present indicative active in much the same way as performatives can. Again, just like performatives, statements can also take an explicit performative verb. Hence, utterances like:

(18) I hereby state that the storm is coming.

(19) I hereby assert that he has failed.

(20) I hereby confirm that he is innocent.

do not perform actions, but only report facts. And yet, these utterances are perfectly sound using the hereby test and the present indicative active form.

Searle (ibid: 536) also argues that there is also a problem with Austin's distinction between explicit performatives and implicit ones. He (ibid: 536) explains that it is difficult to make intuitive correlations between what Austin calls implicit performatives and their explicit manifestations. For instance, to say:

(21) I intend to come.

does not correspond to the explicit performative:

(22) I promise that I will come.

"I intend to come" is in fact a statement of an intention. 'I intend to come' corresponds to 'I state that I intend to come' rather than 'I promise that I

will come'. Yet, I could, in making such a statement, Searle (ibid: 536) argues, be indirectly making a promise. He (ibid: 537) suggests therefore to consider utterances like:

(23) Leave the room!

(24) Can you pass the salt?

(25) I'll be there.

as 'performances' of an order, of a request, and of a promise respectively rather than as 'performatives'<sup>6</sup>. For Searle (ibid: 537), the implicit/explicit distinction could be done without and the only performatives that should be considered as such are those that take a performative verb that explicitly names the speech act being performed. In connection with this idea, he (ibid: 536) states that:

some illocutionary acts can be performed by uttering a sentence containing an expression that names the type of speech act, as in for example, "I order you to leave the room." These utterances, and only these, are correctly described as performative utterances<sup>7</sup>.

Another problem with performatives is that the same performative verb can have performative as well as non-performative uses. For illustration, Searle (ibid: 537) suggests the following examples:

(26) I always promise to come see you on Wednesday when I meet you on Tuesday.

(27) I promise too many things to too many people. ('promise' here is a performative verb used non-performatively)

6- This does not invalidate Austin's distinction between explicit and implicit performatives.

7- Searle's remark would be valid only if he changes his definition of 'performative utterances' into a definition of 'explicit performative utterances' because the distinction between implicit and explicit performatives is an important one.

All the other problems associated with performatives that were noted by Searle (1989) relate to the criteria set by philosophers, particularly by Austin, to distinguish performative from non-performative utterances. According to Searle, many of these distinctions don't work. Yet, Searle (ibid) contends that the problems that arise when considering performatives do not preclude the fact that certain actions are actually performed just by virtue of saying them while others are not so performed. He (ibid: 551) adds that what has been really obstructing sound understanding of the notion of performativity is not so much giving the wrong answers to the questions asked; rather, it is not asking the right questions in the first place. In Searle's (ibid: 554) view, one of the central questions to be asked in relation to performatives is why is it that performativity is restricted to only some verbs. He (ibid: 538) explains that I can promise by saying 'I promise to ....', I can order by saying 'I order you to ...', but I can't fix the roof by saying 'I hereby fix the roof' and I don't fry an egg just by saying 'I hereby fry an egg'. Performatives work with only certain verbs and not with others. Why is it that such verbs as 'fry' or 'fix' can just not be used performatively? In answering this question, Searle (ibid: 554) argues that there is nothing in the semantics of these verbs that should prevent speakers from intending them performatively. If, for instance, a speaker says:

(28) I hereby end all wars.

the utterance would be non-performative, not due to semantic limitations, but due to the facts of nature that limit the ability of Mankind in this way. If, on the other hand, it is God who utters the same utterance, the utterance

would then be performative because it is possible for God to make such a change in the world only by virtue of saying the words.

Searle (ibid: 552) also notes that another central question that philosophers have been oblivious about is: How or by what means do we perform an action just by saying something? In relation to this question, Searle (ibid: 552) argues that since an essential constitutive feature of any illocutionary act is the intention to perform that act, then for all speech acts, the act in question is performed solely by manifesting the intention to do it. He (ibid: 552) suggests that “we perform a type of illocutionary act by uttering a type of sentence that encodes the intention to perform an act of that type”. This means that in the case of a directive, for instance, the intention of the speaker is to get the hearer to do something. The manifestation of this intention is linguistically encoded in the utterance. For example, one way to perform directive speech acts is by using the imperative mood.

Searle (ibid: 552) further argues that performatives are also manifestations or declarations of intentions. The difference between performatives and other speech acts, however, is that in the case of performatives, the intention of the speaker is that the utterance itself should constitute the performance of the act named by the verb. In other words, performatives are self-referential. Thus, when I say “I hereby order you to go”, I mean that “by this-here-very utterance, I make it the case that I order you to go”. The utterance is a manifestation of the intention to order you to go, and is itself the performance of the act named by the verb. This is why performatives characteristically take “hereby”, as in “I hereby promise to come see you tomorrow”.

Other than being self-referential, performatives are also self-guaranteeing, as Searle (ibid: 538) puts it. Unlike statements, performative utterances cannot be falsehoods or lies. I may state that:

(29) It is raining now

My statement could be a lie if I state that it is raining when in fact I believe that it is not raining. Similarly, If I state that:

(30) John promised to fix the fence,

and John hasn't promised to fix the fence, then that utterance is a falsehood. Conversely, if I say:

(31) I promise to fix the fence,

When in fact I don't intend to come fix it, then my utterance is insincere, but it is not a lie because I am not lying about the force of my utterance as a promise. I intend it to be taken as a promise and the hearer understands it as a promise. Therefore, in making a performative utterance, the speaker cannot be mistaken, lying, or insincere about the type of act named by the performative verb.

To summarize Searle's work on performatives, the following ideas seem to be the most important to mention. First, Searle restricts the notion of the performative to explicit performative utterances, and these include utterances that contain a verb that explicitly names the act being performed. In this sense, statements are as much performative utterances as promises, orders and permissions. Second, he identifies two characteristics that make some performatives different from others. These features include self-referentiality and self-guarantee. These are two important characteristics that statements lack, and that other performatives, like commissives and directives have.

Drawing on Searle's analysis, we could at least start asking the right questions about commitment avoidance utterances. I believe a central question about this kind of utterances (i.e. utterances with a commitment avoidance illocutionary point) is 'what is it that we exactly do or what act are we actually performing, if we perform any, when we avoid commitment? Let's consider for instance the following examples:

(32) I'll lend you the money if I get it

(33) I'll marry you if my family approves

(34) I may show up; it depends.

What I do, in producing utterance (32) is to let the hearer know that I will lend him the money when I get it. What I do, in uttering (33) is to let the hearer know that I will marry her (or him) if and only if my parents accept. And finally, in making utterance (34), what I exactly do is again to let the hearer know that I may show up the next day and that it depends, on what? It is not clear. There is a certain degree of ambiguity about the speaker's real intention in every one of the utterances above. (32), (33), and (34) all imply that the speaker may or may not do A. There is no explicit definitive commitment. It is not known whether I will lend the money or not, whether I will marry or not, whether I will show up tomorrow or not. It doesn't matter whether at the moment of speaking, the speaker is sincere about the conditions upon which he says that his will depends or whether he only made those conditions up; even if it mattered, it would prove impossible to know what one really has in mind if it does not manifest, directly or indirectly, in his talk. What is of interest to us is what manifests itself linguistically. In all three utterances, my intention as to doing or not doing the predicated future act is not made clear. The only intention that is clear in (32), (33), and (34) is that I intend to 'let' the hearer 'know' or to 'inform' him or to 'state' that I may or may not lend the money, that I may or may not marry, and that I may or may not show up the next day. My intention is to make a statement about the potentiality or possibility of  $p$  and to create therefore in the hearer a state of uncertainty concerning  $p$ . The speaker is made to expect either  $+p$  or  $-p$  to an equal degree.

So far as it goes, it does seem that the utterances just noted are statements. They are not performatives, but are only 'performances of statements', if we take Searle's views on 'performatives' into account. It is also of interest to note that it is not common for utterances of this type to be prefixed by an explicit performative verb like 'I state that ...' though it is perfectly possible to say :

(35) I hereby state that I will lend you the money if I get it.

Drawing on Searle's account, utterance (35) would be a performative because it contains a performative expression. However, it is a type of performative that is different from performatives with the self-guaranteeing and self-referential character that a promise or a directive typically has.

Having established the status of these utterances as statements, the question to be addressed is with what purpose are these statements made? Are they statements made just for the sake of informing in the same way that we inform about weather conditions, or about some other fact, or do they have some other purpose?

A close look at these utterances indicates that they are a special kind of statements because they do not share with statements in their potential for falsehood or truth. The reason for this is that they are not statements about pre-existing facts or state of affairs. They are rather statements concerned with a potential future event. Put differently, these statements are not reports or descriptions of facts, but are only statements of conditioned intentions, and therefore they resist verification . If what I do when I make such statements is to state, but my purpose is not to inform (since what I am doing is in fact to not give any clear information about what will happen), then what could my purpose be? Why should a speaker, for instance, feel induced to say:

(35) I will lend you the money

Instead of saying,

(36) if/when I get the money, I will lend it to you.

To this question, there are two possible answers. The speaker could be really uncertain about whether or not he can get the money (proposition one), and therefore, he would be uncertain about the truth of proposition two as well (i.e. since the truth of  $P_1$  entails the truth of  $P_2$ ). Or, the speaker may already know that he can't or doesn't want to lend the money regardless of whether proposition 2 is fulfilled or not. In either case, his purpose is one: to indicate to the hearer that his statement, though a statement is underlyingly a

commitment, places him under no obligation to lend the money. His purpose, in other words, is to avoid commitment for the more ultimate and overarching purpose of preserving positive face.

## **Conclusion**

In this paper, we have attempted to characterize utterances with a commitment avoidance illocutionary point. We began by questioning whether these utterances are similar to ‘assertions’ and ‘promises’, only with weakened degrees of commitment or whether they form a distinct class of utterances. Based on an analysis of the constitutive rules of promises, assertions and non-committal utterances, we came to the conclusion that commitment avoidance utterances are essentially different from assertions and promises, particularly as far as their illocutionary point or purpose of the act is concerned. We have also attempted to examine whether non-committal utterances are of the performative or non-performative type. In a bid to answer this question, we drew on Austin’s and Searle’s works on ‘performativity’ and, thereupon, concluded that non-committal utterances are not performative utterances because they fail Austin’s test of the performative (i.e. they can’t be appropriately reproducible, using the ‘hereby’ formula). We could also identify the ways in which commitment avoidance utterances are different from typical performative utterances, notably in terms of two features; self-referentiality and self-guarantee. Finally, though we characterized utterances with a commitment avoidance illocutionary point as statements, we noted that non-committal utterances seem to be a special class of utterances because, unlike typical statements, they are not verifiable.

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**Diffusion Orientation is More Than Cultural Constraint**

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**Introduction**

Diffusion orientation is one of the important cultural values and behavioral dimensions in the international management literature. In the literature, the concept of diffusion orientation refers to the integration of work, family (social), and personal roles and life spheres at the individual and cultural levels (Trompenaars & Hampden-Turner, 2000; Powell, Francesco, & Ling, 2009).

In the cross-cultural literature, diffusion orientation is conceived as, “the degree to which we engage others in specific areas of life and single levels of personality, or diffusely in multiple areas of our lives and at several levels of personality at the same time” (Trompenaars and Hampden-Turner, 2000: 81). The concept of life spheres (or areas) deals with the range of performing obligations,

while that of levels of personality deals with the universalist range of collective programming identities. Individuals in diffusion cultures interpret their personal and private spaces with less demarcations, both in terms of performing obligations as well as collective programming identities. As a cultural construct, diffusion orientation is perceived as something given and that individuals adapt to as a cultural constraint.

In this study, we propose that diffusion orientation is more than cultural constraint. We investigate three alternative conceptions of diffusion orientation as a construct. First, diffusion orientation as cultural causation, that constrains human behavior and has a range of behavioral consequences. Second, diffusion orientation as cultural mediation, that mediates how people respond adaptively to extrinsic values and intrinsic behaviors. Third, diffusion orientation as cultural pathway, that is formed as a consequence of conscious and/or subconscious decision strategies of individuals. We refer these as theoretical, empirical, and strategic perspectives respectively.

*Theoretical perspective of diffusion orientation.* Cultural scholars, such as Hofstede (1980), hold that the cultural constructs have universal value (e.g. if women with fluid approach to work-life exchanges are accommodated) and

behavioral (e.g. if the dominant groups with bounded approach to work-life exchanges are accommodated) consequences, as well as psychological (e.g. work-life enrichment belief) and sociological (e.g. work-life conflict behaviors) consequences. We refer this traditional conception of diffusion orientation as cultural causation model, grounded in a perspective of culture as a constraint. This conception considers cultural constructs as institutionally shaped intrinsic organizational characteristics of a social system, that have a variety of direct organizational consequences. Cultural theory postulates that the managers should take cultural constructs as constraints, and should seek to help women and other diverse subjects adjust to the bounded approach to work-life exchanges.

*Empirical perspective of diffusion orientation.* Diffusion orientation has been found to have both positive (e.g. work life enrichment) as well as negative (e.g. work life conflict) effects (Ollier-Malaterre, 2016). Diffusion orientation itself has been found to be a cultural consequence of value (e.g. gender role dependence ideology) factors (Ashforth, Kreiner, & Fugate, 2000) as well as behavioral (e.g. boundary management style) factors (Kossek, Lautsch & Eaton, 2006). This suggests that diffusion orientation mediates the relationship between extrinsic value and intrinsic behavior factors, on the one hand, and effects on work and life interactions, on the other hand. We refer this conception of diffusion orientation

as cultural mediation model, grounded in a perspective of culture as a mediator of effects on one's life.

*Strategic perspective of diffusion orientation.* Culturally formed value of diffusion orientation empowers a subject to realize normative value of competing life obligations (work-life boundary management), supplementary physiological identity (gender role dependence ideology), complementary psychological power (work-life enrichment), and parapsychological knowledge of the metaphysical value of both work and life in one's well-being (work-life conflict). However, instead of taking culturally constructed diffusion orientation as a normative constraint, subjects may choose to construct a new cultural value of diffusion orientation by recognizing the differential effects of positive sum (work-life enrichment belief), negative sum (work-life conflict behaviors), positive (gender role dependence ideology), and negative (boundary management style) correlation between work value and social value. They may construct this new workculture value as the cultural value within their society. We refer this conception of diffusion orientation as cultural pathway model, grounded in a perspective of cultural as a consequence of life decisions.

We next investigate specific pathway foundations of the cultural pathway model. Thereafter, we operationalize the construct of diffusion orientation based on these foundational dimensions. We explain the method for empirically validating the construct of diffusion orientation and its foundational dimensions. We use structural equations modeling to test the three models of diffusion orientation. Finally, we conclude by discussing our findings.

### **Literature Review. Pathway Foundations of Diffusion Orientation**

From a metaphysical perspective, diffusion orientation can be interpreted as transfer of four types of energies – identity, obligations, power, and knowledge. We review literature to clarify four pathway foundations of diffusion orientation: diffusion of collective identity for transferring relationship programming (identity transfer), diffusion of performing obligations for transferring responsibilities (obligations transfer), diffusion of power orientation for transferring profiting (power transfer), and diffusion of knowledge sharing for transferring development (knowledge transfer).

*Collective programming identity* deals with the range of identities that an individual must consider in any social interaction (Parsons, 1951). Collective programming identity based on universalist codes is defined as “a difference

between ‘us’ and ‘them’ in relation to the realm of the Sacred and the Superior such as God or reason, thus relating to salvation, progress and rationality.” (Karolewski, 2011: 938). The non-members are considered inferior as long as they are not converted. The difference between those who have a close relationship to the superior identity, and those who do not, is a hierarchical one, but everybody (potentially) is capable of overcoming his or her inferiority, by converting to the right faith or adopting the superior institutions (Eisenstadt & Giesen 1995, p. 83). The institutional boundaries of collective identity may be crossed over, and ‘us’ identity may be transferred through communication, education and conversion (Karolewski, 2011). This ‘institutional identity’ differs from the ‘symbolic’ identity being programmed within the collectivity. Whereas symbolic identity draws on shared symbols of commonality such as common currency, a common anthem, common holidays or even a common past, institutional identity is based on specific institutions (in the larger sociological sense including norms, procedures and regulations) and on the belief in the superiority of these institutions (Karolewski, 2011). Universalistic codes support a twofold identity transfer, by ‘shaping conceptions of the normal’ (Manners 2002), as well as ‘conceptions of the superior’ (Karolewski, 2011). The identity transfer spreads both norms of appropriateness and norms of superiority in third-party relationships. As a

consequence, collectivity's institutions, procedures, norms and values become new rules of conduct for the third-party relationships. By adopting these norms third parties also assume the institutionally programmed identity of the collectivity. For instance, in a formal work setting, everyone connected with the work organization is treated impartially on the basis of a same general norm, procedure or rule; but those not connected to the work organization and not adopting its norms, procedures or rules, are excluded from the boundaries of the organization and its stakeholder groups.

*Performing obligation* deals with the range of performing obligations involved in any given form of social interaction. In a formal work setting, social relationships involve targeted obligations, where we meet with or contact someone for some very particular reason constructed through their symbolic status and position. In contrast, in a family and friends setting, social relationships involve a broad or diffuse range of obligations. We rely on family and friends for a broad range of types of support, including conversation, support, accommodation, and intimate relationships. Such broad range of support has the potential of dealing with almost any set of interests and problems (Parsons,1951). When there are sustained interactions, social exchange theory predicts development of psychological contracts that transform transactional nature of exchange into relational nature

(Emerson, 1972). Cook et al. (1990) observe that in social exchanges, strength and nature of reciprocity and obligation, and the degree and timing of its manifestation within a relationship is clarified over time. Diffusion is manifested when this sense of obligation flows across domains and across time, i.e., obligation transfer happens when obligation within one relationship (example a superior-subordinate) is reciprocated with a favor in the other domain (example personal), either immediately or at some other point of time (across time).

While the diffusion orientation through collective programming identity and performing obligations guides individuals to broaden the range of interests valued in a social interaction, two additional work-culture factors guide subjects to become more targeted.

*Profiting oriented power attribution* deals with the varying power attributions among individuals based on their symbolic performing obligations, and that allows powerful subjects to capture profiting through exchange relationships. Individuals with superior symbolic performing obligations, based on their history of distinguished accomplishments and symbolic positions, are attributed omnipotence – all-powerful – characteristic. Social relationships with powerful individuals become diffused, as individual subjects endorse the power of those individuals to

manifest anything, and seek to be a part of their power sphere by valuing and fulfilling all their needs and expectations. The powerful individuals reciprocate by delegating power and authority to the individual subjects, and acting as benevolent benefactors who have a moral responsibility as servant leaders to profit from the exchange so that they may help the individual subjects at all costs. Diffusion is manifested when the power of the powerful individuals is transferred to the subjects, as well as when the subjects seek to perform extra-role obligations for the powerful individuals from a formal work setting.

*Knowledge sharing for planning heuristics* deals with the varying knowledge sharing among individuals based on their institutional identities, and that forms the basis for the planning heuristics governing the exchange system. Individuals with superior institutional identities, based on their family or community of origin and/or affiliation, are perceived to have omniscience – know-it-all – characteristic. Social relationships with knowing individuals become diffused, as individual subjects romanticize the knowledge of individuals within those institutional boundaries and seek affirmation of their knowledge by openly and freely sharing that knowledge with them. The knowing individuals reciprocate by recognizing the value of that knowledge and counter-sharing that within their institutional boundaries. For instance, Chow et al. (2000) reported that Chinese were reluctant

to share information with an out-group member, but open to share with an in-group member. Similar propositions have been made by Sinha et al. (2001) on how Indians differentiate between *apne log* (in-group members) and *paraye log* (out-group members). Knowledge sharing within institutional boundaries acts as a reassurance to the insecure knowledge identity by raising confidence of and legitimizing the individual who originally made the knowledge but is without the institutional identity. This validation transfer gives credibility to the knowledge making subject to work on the planning heuristic of capturing residual value in the social space outside the institutional boundaries.

Given the significance of power attribution and knowledge sharing in guiding individuals to become more targeted, from a metaphysical perspective, the construct of diffusion orientation reflects more than the open range of collective programming identity and performing obligations. On the one hand, it reflects a complete preference for a universalist range of collective identity and performing obligations, manifesting in the absorption of alternative identity through transfer of performing obligations. In other words, those with alternative identities are also assigned superior performing obligations after they absorb the collective identity. On the other hand, superior performing obligations of those without superior institutional identities are attributed to a perverse outcome of inferior institutions.

Therefore, subjects with collective programming identity face institutional pressures to become very discriminating about power attribution and knowledge sharing. A subjective identity of diffusion orientation reflects a condition where the individual attributes power to and shares knowledge with only those who meet the culturally mediated objective criteria of superior performing obligations.

### **Methodology**

**Item Development:** For Identity transfer scale, we derived items from Trompenaars & Hampden-Turner's (2000) scenario portraying how the boss in a diffusion culture assumes the identity of a "father-figure", socially acting as a mentor and indulgent care-giver and from Liden & Maslyn (1998)'s leader-member exchange construct based on the identity exchange subdimensions of loyalty, affect and professional respect. For Obligation transfer scale, we adapted items from LMSX scale (Bernerth, Armenakin, Field, Giles & Walker, 2007). For Power transfer scale, we adapted items from the different types of power (French & Raven, 1959). For Knowledge transfer scale, we adapted items from Lee (2001), guided by De Long and Fahey (2003) categorization of knowledge into three types; a) Human Knowledge: individuals' knowledge about how to do a particular task; b) Social Knowledge: cultural norms that exist; c) Structured Knowledge: knowledge of procedures in organizations and systems.).

We surveyed 301 respondents (mean age = 34.39 years). The sample consisted of 64.8 percent males. 70.2 percent were married. 75.1 percent were in Delhi. 74 percent worked in private sector. 70 percent completed the survey offline. 8 responses were incomplete and discarded. The item psychometrics met the criteria for using confirmatory factor analysis and testing the construct of diffusion orientation.

In the confirmatory factor analysis, factor correlations were moderate to strong (ranging from 0.26-0.77) indicating that covariance amongst these factors can be explained by a higher-order factor. In the revised model, we allowed the three factors to load on to a general higher-order factor. The fit indices for the model were similar to the previous model ( $\chi^2(32) = 147.90, p < 0.001$ ; CFI = 0.92, SRMR = 0.055, RMSEA = 0.085).

For the test of the cultural pathway hypotheses, we included items on the four constructs – work-family conflict, work-family enrichment, work-family boundary management, and gender role freedom ideology.

*Work-family conflict.* We used ten items scale by Netemeyer, Boles and McMurrian (1996). Conflict was measured in both directions, i.e., work to family conflict (WFC,  $\alpha = 0.92$ ) and family to work conflict ( $\alpha = 0.85$ ).

*Work-family enrichment.* We measured work-family enrichment using six item scale developed by Carlson et al (2006). Enrichment was measured in both directions- work to family enrichment (WFE,  $\alpha = 0.84$ ) and family to work enrichment (FWE,  $\alpha = 0.80$ ).

*Work-family boundary management.* We measured work-family boundary management using the Boundary Management Style (BMS) scale by Kossek, Lautsch and Eaton (2006). Originally the scale had 9 items ( $\alpha = 0.70$ ) but we deleted one item (I tend to handle emails related to my family separate from emails related to my work) because this is not relevant in all work contexts surveyed in India.

*Gender role freedom ideology.* We adapted four item measure of gender role ideology by Jaga (2014). The alpha was 0.76.

All the items in these scales were measured on a five point scale, with responses ranging from 1= Strongly Disagree and 5= Strongly Agree.

## **Findings**

Diffusion orientation has a stronger correlation with work-family enrichment than with work-family conflict or with work-family boundary management. Scholars

have previously predicted work-family enrichment to be stronger than work-family conflict in diffusion cultures (Ollier-Malaterre, 2016; Powell, Francesco, & Ling, 2009). Our findings suggest that this is not a product of cultural mediation (cultural-effects model), but a pathway to cultural construction (cultural pathway model). To validate these findings, we test three models – cultural-causation (or culture as an invariable and universal constraint) model, cultural-effects (or cultural mediation or artifact) model, and cultural as a pathway consequence (cultural construction) model – using path analysis structural equations modeling (Figure 1).

All the fit indices supported the validity of cultural construction model. Diffusion orientation is constructed through direct and mediated work-family enriching effects of gender role ideology, and through direct and mediated work-family conflicting effects of boundary management style. The fit indices were weaker and below acceptable thresholds for the cultural mediation model that views diffusion orientation as a cultural artifact, whose antecedents are gender role ideology and boundary management style, and whose consequences are work-family conflict and work-family enrichment. The fit indices were even worse for the orthodox cultural constraint model that diffusion orientation is culturally caused effect on work-family enrichment and conflict, boundary management style, and gender role ideology.

Insert Figure 1 About Here

## **Discussion**

Although we find evidence for the cultural pathway construct of diffusion orientation in the sampled subject population from India, the scores of sampled individuals vary significantly from low to high diffusion orientation. What explains these variations in the subjective diffusion orientation, within a constant culturally mediated force? In order to explain these pathway construction differences, we distinguish between two types of subjects, based on their exchange behaviors within and without the institutional cultural ideologies. We refer them as perspective diffusers and perspective targeters,

Perspective diffusers are guided by an aspiration to gain an advantage in their private exchange relationships, by trading off benefits of their social exchange relationships. They realize this advantage by seeking relationships with at par value – the relationships based on the norms of fair market exchange. They ascend the value accrued from these relationships to above par by transferring identity and/or obligations. Perspective diffusers transfer identity to those who are willing to transfer their knowledge in exchange, enabling them to accrue a quality advantage. For instance, Apple transfers the coveted Apple identity to those who

are willing to transfer their knowledge to it, by classifying them as its preferred employees, suppliers or customers. Perspective diffusers transfer obligation to those who are willing to transfer their freedom power in exchange, enabling them to accrue a cost advantage. For instance, Apple transfers the revered Apple obligation – the obligation to serve the mission of Apple – to those employees, suppliers or customers who are willing to make 100% commitment to Apple.

Perspective targeters are guided by an aspiration to gain an advantage in their social exchange relationships, by trading off the costs in their private exchange relationships. They realize this advantage by seeking relationships with below par value – the relationships based on the norms of social exchange outside the market parameters. They ascend the value accrued from these relationships to at par by transferring knowledge and/or power. Perspective targeters transfer knowledge to those who are willing to transfer their identity in exchange, enabling them to accrue a quality parity. For instance, an emerging market Apple supplier transfers its knowledge to Apple, because that allows the former to fulfill the identity of Apple supplier and thereby position itself in the global market at par quality. Without this knowledge transfer, Apple may prefer a supplier relationship with at par value – one within the established global market where knowledge needs no discovery. Perspective targeters transfer power to those who are willing

to transfer their obligations in exchange, enabling them to accrue a cost parity. For instance, an emerging market supplier transfers the control over its freedom power to Apple, because that allows the former to fulfill the obligations of Apple and thereby position itself in the global market at par cost. Without this power transfer, Apple may prefer a supplier relationship with at par value – one within the established global market where power needs no shaping.

We propose that the varying behaviors of perspective diffusers and perspective targeters are a function of their resource conditionality. The cultural behaviors of perspective diffusers are linked to a munificent resource conditionality. Their challenge is to seek additional knowledge for leveraging their munificent resources, and to test the potential power of their munificent resources, so that they may “form” stretched aspirations. The cultural behaviors of perspective targeters are linked to a constrained resource conditionality. Their challenge is to discover a different identity for their constrained resources, and to shape a different set of obligations of those resources, so that they may “fulfill” their core aspirations.

What matters for the cultural behaviors is not the objective – but the subjective – resource conditionality. And, what matters for subjective resource

conditionality is not the behavioral traits – but the exchange objectives – of the subject. Individuals with diffusion objective perceive their resource conditionality to be munificent, because they focus on trading knowledge and freedom power from their social relationships in exchange for their private identity and obligations. The greater the private identity and obligations they trade, the more munificent their resource conditionality becomes. Individuals with targeted objective perceive their resource conditionality to be constrained, because they focus on trading identity and obligations from their social relationships, in exchange for their private knowledge and freedom power. The greater the private knowledge and freedom power they trade, the more constrained their resource conditionality becomes.

## **Conclusions**

In this paper, we review literature to construct a perspective that the diffusion orientation guides individuals to broaden the range of interests valued in a social exchange. A subjective identity of diffusion orientation reflects a condition where the individual attributes power to and shares knowledge with only those who meet the culturally mediated objective criteria of superior performing obligations. We deconstruct behavioral construction of diffusion orientation in a sample of white-

collar respondents from the two cities of India, and reconstruct confirmatory evidence for a constructive perspective of diffusion orientation.

We investigate the thesis that diffusion orientation is more than cultural constraint. Our findings confirm that subjects construct diffusion orientation as a state of perspective reconstructing through positive affirmation of both gender role freedom ideology, as well as work-family exchange in the form of conflict, enrichment, and boundary management.

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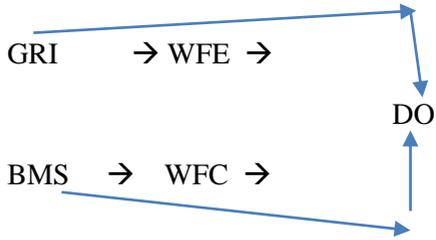
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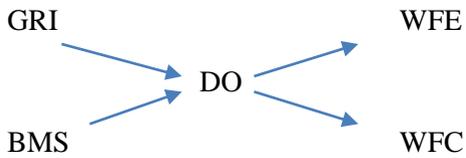
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**Figure 1: Cultural Pathway, Mediation, and Causation Models**

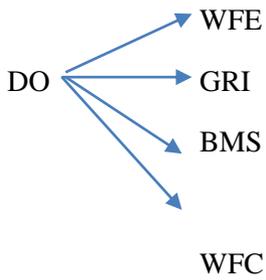
1) Cultural Pathway model (culture as a consequence)



2) Cultural Mediation model (culture as an effect)



3) Cultural Causation model (culture as a constraint)



**DOG SMILE PARTY: A CASE STUDY EMPLOYING COST –  
VOLUME –PROFIT ANALYSIS**

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**ABSTRACT**

This paper presents a case study in which a stray animal-friendly foundation considers establishing a charity party to raise funds to help stray and handicapped dogs and cats. The organizers of the party try to consider how many participants need to attend the party so that the foundation can the target fund level. The focus is on profit planning and determining a break-even point for the foundation. This case is appropriate for upper-level undergraduate business students as well as first-year graduate students.

**INTRODUCTION**

A stray animal-friendly foundation hopes to host a dog party on December 15, 2018. The aims of this party are to help find homes for stray dogs and to raise at least THB 50,000 for medical fees for stray dogs and cats.

Darrat, the president of the foundation, called a meeting to discuss plans for the charity event. The following is a transcript of a conversation between her and other members, including Miss Thanyarak, association treasurer, and Mr. Poothep, foundation vice president.

Darrat: Our foundation would like to raise THB 50,000 to support medical expenses of stray and handicapped dogs and cats by throwing a “Dog Smile Party.” Participants will have to buy tickets. They and their dogs can enjoy the activities at the party. And we will have a buffet lunch including drinks. What activities should we include in this charity event?

Thanyarak: Photo booth with dogs, artwork. Participants can let the artist draw portraits of their dogs. Dog spa.

Poothep: We also should include a dog fashion show, dog clinic, and dog photo contest.

Thanyarak: We also have many pet shops that sell animal foods and products at discount prices.

Darrat: That’s great. I like it. What do we give to the dog who wins the photo contest?

Poothep: Food and a dog collar.

Darrat: Awesome! The participants at the party may be interested in the photos of the stray dogs that our foundation helps. We may find home for our poor animals. Moreover, we will get donations from some participants.

Darrat: Thanyarak, our plan is that the highest number of charity participants that we will handle for this project is 800. However, we expect not more than 500 participants will come to the “dog smile party.” And we will charge each participant THB 1,000. Each participant can bring one animal with this ticket. If they bring more than one animal, they must pay THB 500 per each additional animal. I wonder how much we will have left for the animal fund if everything goes as planned.

Darrat: If we have fewer participants than we anticipate, like last year, we will have only 200 persons joining the party; will we be okay? What is the smallest number of participants that we must get to break even?

Poothep: I asked the volunteer members who has business knowledge for help in analyzing this issue.

Thanyarak: One more thing that I would like to know. The planned price that we would like to charge the participants of the party is THB 1,000; however, if the participants are only 200 people, what is the minimum price that we can charge participants and still break even?

Poothep: I also asked the volunteers for help in analyzing this issue. They will bring me the results of their analysis in the next few days. I gave them the detailed planned expenses.

Darrat: Thank you very much.

Table 1 shows the projected expenses for the party.

Table 1

*Expenses for the Dinner Cruise*

Transaction	Price (THB)
1. Buffet cost per person	THB 300
2. Average drink cost per person	THB 50
3. Advertisement expense on the website	THB 1,000
4. Hall rental expenses	THB 50,000
5. Cost of decorating the hall with the dog smile theme	THB 4,000
6. Costs for a master of ceremonies (presenter)	THB 2,000

7. Animal snacks cost (got sponsorship from Dog Friend pet shop)	THB -
8. Cost per one portrait for each dog (cat)/ one spa treatment for each dog (participant can choose one treatment).	THB 200
9. Costs for one photograph for each dog	THB 50
9. Average cost for medical check for each dog that the animal clinic at the party will charge	THB 200

### **Learning Objectives of Financial Management Subjects Related to Dinner Cruise**

The financial management subjects related to this case are:

1. Cost behavior analysis
2. Cost volume profit (CVP) or break-even analysis

### **Discussion questions**

1. Categorize various expenses into fixed costs and variable costs.
2. What is the minimum number of participants at the party that the foundation needs to break even?
3. If 500 participants come to the party, each with one dog as planned, how much money will be left for the vegan fund?
4. If the number of people participating drops by 60%, what will be the income of the foundation?
5. If there are only 200 participants, what price per ticket should the foundation charge to break even?

6. If there are only 200 participants, what price per ticket should the association charge to ensure that the money to support the animal foundation equals THB 50,000?
7. What is the margin of safety in units and in Thai dollars if 500 participants come to the party?

## CASE ANALYSIS

### 1. Cost behavior analysis

The first step is to identify the nature of the costs and separate them into fixed costs and variable costs. Fixed costs are those that remain constant within the relevant range of activity (Garrison, et al., 2015; Braun and Tietz, 2018), such as hall rental expense.

A variable cost is a cost which total dollar amount varies in direct proportion to changes in the activity level (Garrison et al., 2015; Gitman and Zutter, 2015). For example, cost for portrait for each dog equals THB 200; if there is one dog each, it will cost THB 200; if two dogs, it will cost THB 400.

Fixed costs are presented in Table 2. Total fixed costs for the charity party = THB 57,000. Variable costs per car are shown in Table 3. Total variable costs per person = THB 800.

Table 2

*Fixed Costs (unit: THB)*

Transaction	Amount (THB)
1. Cost to publicize dog smile party news on the website	1,000
2. Cost for a master of ceremonies (presenter)	2,000

3. Hall rental expense	50,000
4. Cost of decorating the hall with a dog smile theme	4,000
Total fixed costs	57,000

Table 3.

*Variable costs per person with one animal companion (unit: THB)*

Transaction	Amount (THB)
1. Buffet cost per person	300
2. Average drink cost per person	50
3. Cost per one portrait/one spa treatment for each dog	200
4. Costs for one photograph for each dog	50
5. Cost for medical check for each dog	200
Total variable costs per person	800

## 2. Determine contribution margin per person

Contribution margin is the amount remaining from sales revenue after variable expenses have been deducted (Garrison et al., 2015; Horngren et al., 2013). This can be obtained by subtracting the unit variable cost for the unit selling price.

In this case, the contribution margin per unit is THB 1,000-THB 800 = THB 200.

## 3. Find the break-even point

Two techniques for estimating break-even point (BEP) are utilized in this study: equation method and contribution margin method.

The following abbreviations are used in the calculations:

SP = Selling price per unit

VC = Variable cost per unit

FC = Total fixed costs

Q = sales in units

OI = Operating income

CM = Contribution margin per unit

CM = Contribution margin percentage

### ***3.1 Equation Method***

To use the equation method for determining the BEP, the revenue is estimated as the following equation:

$$\text{Revenues} - \text{Variable Cost} - \text{Fixed costs} = \text{Operating income}$$

$$(\text{SP} \times \text{Q}) - (\text{VC} \times \text{Q}) - \text{FC} = \text{OI}$$

Using vegan charity party data and setting revenue equal to THB 0, we get:

$$\text{THB } 1,000 \times \text{Q} - \text{THB } 800 \times \text{Q} - \text{THB } 57,000 = \text{THB } 0$$

(1)

$$\text{THB } 200 \times \text{Q} = \text{THB } 57,000$$

$$\text{Q} = \text{THB } 57,000 / 200$$

$$\text{Q} = 285 \text{ persons}$$

If the participants in party less than 285, it will incur a loss. If the number of people who join the party equals 285, it will break even. If the participants are greater than 285, it will start making a profit. Here the BEP is estimated in units.

The BEP can also be estimated in terms of revenues:

$$285 \text{ participants} \times \text{THB } 1,000 \text{ (selling price)} = \text{THB } 285,000$$

### ***3.2 Contribution margin method***

This is the simplest approach to estimate the BEP. It just rearranges the terms in equation (1)

$$(SP \times Q) - (VC \times Q) - FC = OI$$

$$(SP - VC) \times Q = FC + OI$$

$$\text{As } CM = SP - VC$$

$$\text{That is, } CM \times Q = FC + OI$$

$$(2) \quad Q = \frac{FC + OI}{CM}$$

At the BEP, operating income is THB 0, Setting  $OI = 0$ ,

$$(3) \quad Q = \frac{FC}{CM}$$

Estimation of total fixed cost (FC) is THB 57,000 as demonstrated in TABLE 2

$$\begin{aligned} \text{Thus, the BEP (in number of units)} &= \frac{\text{THB } 57,000}{\text{THB } 200/\text{person}} \\ &= 285 \text{ person} \end{aligned}$$

To estimate the BEP in terms of revenues, one useful method is to calculate the contribution margin percentage (CM%) as follows:

$$\begin{aligned} \text{CM \%} &= \frac{CM}{SP} \\ &= \frac{\text{THB } 200}{\text{THB } 1,000} \\ &= .20 \\ &\text{Or } 20 \text{ percent} \end{aligned}$$

This implies that 20.00 percent of revenues are the contribution margin. At the BEP, the contribution margin is equal to fixed costs of THB 57,000.

$$\text{BEP revenues} = \frac{\text{FC}}{\text{CM\%}}$$

$$= \text{THB } \frac{57,000}{.20}$$

$$= \text{THB } 285,000$$

4. If 500 participants come to the party as planned, the money that the foundation can make for the foundation fund is THB 43,000, as shown below:

$$= (\text{SP} \times \text{Q}) - (\text{VC} \times \text{Q}) - \text{FC} = \text{OI}$$

$$= (\text{THB } 1,000 \times 500 \text{ participants}) - (\text{THB } 800 \times 500 \text{ participants}) - \text{THB } 57,000$$

$$= \text{THB } 500,000 - \text{THB } 400,000 - \text{THB } 57,000$$

$$= \text{THB } 43,000$$

5. If the number of people participating drops by 60%, or the people who come to the party equal only 200, the operating income of the foundation will show a loss of THB 17,000, as shown below:

$$(\text{SP} \times \text{Q}) - (\text{VC} \times \text{Q}) - \text{FC} = \text{OI}$$

$$(\text{THB } 1,000 \times 200 \text{ participants}) - (\text{THB } 800 \times 200 \text{ participants}) - \text{THB } 57,000$$

$$= \text{THB } 200,000 - 160,000 - 57,000 = \text{THB } -17,000$$

6. If the people who come to the party equal 200, what price per person should the association charge to break even?

$$\text{The price that the association should charge} = (\text{THB } 57,000 / 200 \text{ persons}) + \text{THB } 800$$

$$= \text{THB } 285 + \text{THB } 800$$

$$= \text{THB } 1,085$$

Therefore, the minimum price that the foundation can charge each person and still break even equals THB 1,085.

7. If there are only 200 participants, what price per person should the foundation charge to ensure that income after deducting for expenses equals THB 50,000? The price that the foundation should charge = THB 1,335, as shown below:

$$\begin{aligned} (\text{SP} \times \text{Q}) - (\text{VC} \times \text{Q}) - \text{FC} &= \text{OI} \\ (\text{SP} \times 200 \text{ participants}) - (\text{THB } 800 \times 200 \text{ participants}) - \text{THB } 57,000 &= \text{THB } 50,000 \\ 200 \text{ SP} - \text{THB } 160,000 - \text{THB } 57,000 &= \text{THB } 50,000 \\ 200 \text{ SP} &= \text{THB } 160,000 + \text{THB } 57,000 + \text{THB } 50,000 \\ \text{SP} &= \text{THB } 1,335 \end{aligned}$$

Therefore, the foundation should charge each of the 200 participants THB 1,335 so that income after deducting for expenses equals THB 50,000.

8. The margin of safety is the excess of budgeted or actual sales dollars over the break-even volume of sales dollars (Brewer et al., 2016).

$$\begin{aligned} \text{The margin of safety in dollars} &= \text{total budgeted sales} - \text{breakeven sales} \\ &= (500 \text{ participants} \times 1,000) - (285 \text{ participants} \\ &\times 1,000) \\ &= \text{THB } 500,000 - \text{THB } 285,000 \\ &= \text{THB } 215,000 \end{aligned}$$

The margin of safety can be stated in percentage form by dividing the margin of safety in dollars by total dollar sales:  $= 215,000 / 500,000 = .43$  or 43 %

This margin of safety means that at the current level of sales and the current level of sales and with the firm's current prices and cost structure, a reduction in sales of 215,000 or 43 %, would result in only breaking even.

## CONCLUSION

The case provides grounds to analyze the nature of costs of a charity party and the estimated break-even point. The main objective of the case is to determine if a stray animal-friendly foundation can achieve profits from the dog smile party to support the payment of medical fees for stray dogs and cats. Another objective is to determine whether the party will succeed if the number of participant drops by 60%. It helps to estimate the minimum price the foundation should charge to break even if participation drops by 60% of the total planned number.

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## **Knowledge management and managerial innovation in the Moroccan SMEs.**

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### **Abstract:**

Nowadays, organizations are experiencing rapid and unparalleled growth in archiving and capitalization. In this sense, they are based on the diversity of notions associated with knowledge, its management, its production or its transfer. In this sense, this paper aims to study the challenges and dimensions of knowledge management within the Moroccan SME, from the perspective of a development strategy constituting the fruit of an innovative management. Based on this context, we will see the impact of the information component, which is the main driver of the SME's economic activity, on staff development. Added to this are the competitiveness and the requirements of the digital age vis-à-vis knowledge management as a center of competence.

Thus, the SME must position itself between tangible knowledge contained in electronic or paper databases and tacit knowledge composed of know-how and skills of staff. We will also see, through this study, whether the growth of the company directly depends on individual skills and experiences, or strategic knowledge related to a new innovative management model, adapted to their performance management mode and related limits. to its application.

**Keywords: *knowledge management - SME- Capitalization- Growth- Limits.***

### **Introduction**

Currently, the world is living under the effect of rapid changes related to globalization, the emergence of the knowledge-based economy and the accelerated evolution of Information and Communication Technologies (ICT). In just a few years, the immaterial has emerged as a driving force in the growth of economies (Bounfour 1998, Bounfour & Edvinsson 2005). The intangible is defined as "the intellectual material - knowledge, information, intellectual property, experiences - that a company can use to create value" (Stewart 1997, p.XI).

In knowledge-based economies, knowledge is the critical factor of production. Human capital is considered the most valuable asset. On the other hand, a large share of gross domestic product (GDP) comes from knowledge-based industries in these economies (high and medium technologies, financial services, education, etc.) and much of the investment is devoted to research and development. Knowledge is thus recognized as a source of competitive advantage, not only for companies, but also for countries. Drucker (1993) states that "more and more, the productivity of knowledge will become for a country, an industry, a company, the factor of competitiveness is decisive. In terms of knowledge, no country, no industry, no enterprise has a "natural" advantage or disadvantage. The only advantage he or she can make is to make knowledge available to all, better than others. "

Private companies, concerned about their competitiveness, have long taken steps to manage their intangible capital and exploit their knowledge in order to improve their performance. This is how knowledge management or knowledge management is born. This approach represents a strategic way to develop and share knowledge. It is an invaluable source or means for advancing the firm's knowledge.

The quality of management of these intangible assets is now an important issue in the managerial literature. Similarly, companies have taken many steps to manage their intangible assets and leverage their knowledge to gain competitive advantage.

The development of this approach was done in private organizations and after more than two decades of practice, it is established that the KM is not a new "fashion", but an approach that contributes to the performance of organizations ( Cong & Pandya 2003). For their part, governments are increasingly realizing the importance of knowledge management in improving decision-making and the quality of services offered to citizens. Several countries have launched strategies and programs that support the implementation of knowledge management approaches in their jurisdictions. In Morocco, the desire to integrate the country into the global information and knowledge society was clearly expressed at the beginning of the second millennium. "We must bring Morocco to the rank of countries that make information technology, Internet and related services, a key factor for economic and social development and competitiveness," said the Moroccan Prime Minister in 2003. On the basis of this clear political will, Morocco has implemented development programs aimed at capitalizing on its intangible capital and developing a knowledge-based economy. The industrial development strategy called "Emergence" places an emphasis on skills development and aims to foster knowledge-based economic activities (IT services, financial services, etc.).

## 1. Background of the study

At the sectoral level, Morocco has put in place several programs to make ICT a driver of economic development. The "E-Morocco" strategy was an ambitious program supported by the signing of a progress contract with professionals (Apebi 2001). The "Maroc Numéric 2013" strategy then came to give a new impetus to the ICT sector and to affirm its importance in the development of an information and knowledge society (Ministry of Industry 2009).

These development strategies can not succeed without a modern and efficient organization. Recognizing this fact, Morocco has initiated political and institutional reforms at both the national and local government levels to modernize its administration. Indeed, Morocco considers the reform of the public administration as "an essential component of improving governance and is at the center of the economic and social reforms that the government is conducting to improve economic performance and improve its capacity for implementation. sustained growth "(World Bank 2010, p.1).

Despite this willingness and government initiatives, some Moroccan companies are often criticized for their lack of efficiency and transparency. The relationship between the organization and the citizens suffers from an apparent lack of confidence of the latter (Ourzrik 2005, p.133). Citizens remain critical of the effectiveness of the services rendered especially by the Public Administration as shown by a field study published in 2006 by the Moroccan Observatory of Public Administration (Ourzrik & Ouazzani Chahdi 2006). The Moroccan public administration is thus called upon to take all steps to modernize and regain the trust of its "clients", which are citizens and businesses. Knowledge management is one of these approaches. It is now advocated to build trust in governments with citizens.

The use of this approach is however rare and limited to scattered initiatives. Modernization programs do not pay attention to this approach. The E-Maroc 2010 strategy, which aimed to include Morocco in the knowledge society, alludes to knowledge management as well as the sectoral ICT development strategy called "Maroc Numéric 2013" currently being implemented. .

Since customer satisfaction has become a living condition of the company. A new "downstream management" context is creating a correlation between front office performance and good (fast and efficient) management of back office information flows. This good management is also constrained by the capitalization and the mobilization of acquired knowledge.

## **2. Problematic:**

Since customer satisfaction has become a living condition of the company. A new "downstream management" context is creating a correlation between front office performance and good (fast and efficient) management of back office information flows. This good management is also constrained by the capitalization and the mobilization of acquired knowledge.

The development of collaborative work requires the implementation of transversal skills. This type of work does not automatically assume that employees are in one place; teleworking as a team requires the possibility of sharing, capitalizing and knowing how to mobilize individual knowledge. The competitive advantage of a firm is based on its portfolio of knowledge. For this benefit to be sustainable, this asset must not be easily appropriated, accessible and imitated by competitors. Knowledge / actors are more concentrated in an SME than in a larger structure. An actor can thus, to ensure alone a whole function even several.

In this article, we will try to answer the question of some SMEs, who wish to set up a knowledge management approach, but who still express doubts about its usefulness and uncertainties about how to put such an approach into practice. square. Our problematic therefore, revolves around the practices of Moroccan SMEs in terms of knowledge management. What use do these organizations make of new information and communication technologies?

We will also make a comparison between the practices of several SME companies established in Morocco, to offer a panel of what is done, the different paths they have set up, and what remains to be done in the past. 'to come up. Through these questions, there are other questions that are underlying, namely, the approaches of these organizations in terms of capitalization of knowledge. In terms of transfer of this knowledge, what are the stakes in the implementation? Finally, we will also see the positioning of these small and medium enterprises in the field of ICT, and if it goes hand in hand with a well studied strategy, focused on the human element, its formation, its autonomy and its orientation. We will also see if these practices are common or singular, the consequences of their implementation, the brakes and limits that hinder their use.

In order to answer these different questions, we chose a mode of analysis centered on the SME, as an organization. The study of each notion and the context will be carried out in relation to the organization of the company.

## **3. Why the SME?**

Many (SMEs) have chosen to engage in the practice of knowledge management to manage and value their intellectual capital. Today, knowledge management or knowledge management translates the transition to a communication economy that favors content, meaning, and the development of knowledge networks. Knowledge is information contained in the human brain and its value is higher through this knowledge, the man has new ideas, new intuitions, and new conclusions that allow him to use the information and prepare the decision making.

Indeed, SMEs are the companies that make up 92% of the Moroccan economic fabric, and contribute to value added by only 20%. Everyone knows that SMEs mean small and medium-sized enterprises, but the unified definition was adopted only after the seminar "SME: Engine of Economic Growth" in December 1999, which culminated in the of the White Paper of the SME. The definition adopted is based on two families of criteria:

*3.1 Quantitative criteria:*

	Any small business	Small Business	Medium-sized enterprise
Workforce	Less than 25 people	Less than 100 people	Less than 200 people
Turnover	Below 5 MDH	Below 25 MDH	Below 50 MDH
Total balance	less than 5 MDH	Less than 15 MDH	Less than 30 MDH

*3.2 The qualitative criteria:*

- 1- An entrepreneur (or an association of entrepreneurs) both owner and manager;
- 2- An independent company in relation to a group or a holding company;
- 3- A company that does not have a dominant position in the market.

In Morocco, the concept of knowledge management or "knowledge management" is still embryonic. The market aspect and the offensive use of knowledge become new concerns of what is called knowledge management. The concept expands from the point of view of the use of knowledge (improving competitiveness), from the point of view of the actors of the company (the whole staff is concerned), of the market players (the publishers of software, consultancies, media) and from the point of view of the company itself, since knowledge management is no longer simply oriented inwards, but turns to the external environment: the market, the customer, the competitors. Nevertheless, we note that in Morocco, the form of the KM project is very different in large companies compared to SMEs, or even the entire fabric of small organizations. If the first have the means, financial and human, to carry out a KM project in the form of engineering, for others, it will be a question of implementing packaged solutions which answer efficiently to problems with strong economic stake (Help Desk, e-business, economic intelligence, innovation, etc.). The other major difference is the pooling of effort.

Large companies have been able to build new "competitive" advantages in cooperation with their suppliers, or even with their competitors; they had to break the divisions between vertical divisions, break the hierarchical pyramids and establish transversal cooperation to improve the quality of services and ensure their survival. Therefore, assuming that the KM applies to the territory and its actors: small businesses, administrations, communities, associative fabric, and that it opens the way to a real territorial intelligence, the establishment of a knowledge management system at the SME level becomes a major strategic issue. To shed light on this vision, we will take a look at the different definitions.

#### **4. Review of the literature**

In order to situate the scope of this research, we will present the definitions of the main concepts and terms used in this work.

##### *4.1 The knowledge :*

According to Ballay (2002) and Dalkir (2011), knowledge is what is present in our mind, consciously or unconsciously, when we are in a position to do,

say, learn, experience, interpret, decide. For Volkov (2011), the terms "knowledge" and "knowledge" are interchangeable to refer to the English term "knowledge". However, we use the term "knowledge" here, which is more frequently used, especially in Quebec and European organizations.

#### *4.2. Tacit knowledge and explicit knowledge:*

According to Nonaka, Takeuchi and Ingham (1997), Von Krogh and Roos (1997) and Dalkir (2011), tacit knowledge is inarticulate and rooted in experience and intuition; it is more attached to the senses, intangible and difficult to transfer by the usual means (reports, procedures, manuals, etc.). Explicit knowledge results from activities described and archived in reports, manuals, procedure guides and e-mails, for example, and is easier to transfer and make available to others using technology. It is this tacit knowledge that is strategic in nature, since it can not be limited or appropriate (Spender and Grant, 1996). The transfer of tacit knowledge generally occurs through informal learning (Alonderiene et al., 2006), in contrast to explicit knowledge transfer described as possession epistemology (Cook and Brown, 1999) and objective perspective (Hislop, 2005).

#### *4.3. The Knowledge Management:*

Knowledge management creates an environment conducive to knowledge capitalization, sharing and transfer, and it reduces the organization's risk of losing individual knowledge. For Dalkir (2011), "knowledge management is the deliberate and systematic coordination of organizational members, technology, processes, and organizational structure to add value through reuse and innovation. innovation.". This value is achieved by promoting the creation, sharing and application of knowledge through the contribution of lessons learned and best practices to the collective memory.

#### *4.4. Knowledge Management in multiple project situations:*

Knowledge management in multi-project mode involves particular challenges, linked in particular to the diversity of team members and the often tight deadlines. This is why Landaeta Feo (2003) proposes a specific process for knowledge management in multi-project mode. He first defines knowledge management in multi-project mode as:

"All proactive activities to support a multi-project organization". For this author, the knowledge needed to carry out a project can be categorized as: "the needs of customers, the state of the technologies, the capacity of realization related to the internal resources, the external capacities of the organization to fill the gap in internal capacities, potential partners and stakeholder needs ". From this list, the project team identifies the critical knowledge needed for the project. These vary according to the stages of the project, the availability of resources and the priorities chosen by the leaders of the organization. The main goal of knowledge management in multi-project mode is to promote learning by equipping projects with essential knowledge at the right time, in the right place, at the right organizational level, and using the appropriate format and model (Landaeta Feo, 2003).

The stages of the process are, in order: the identification of knowledge and the detection of sources of knowledge (explicit and tacit) critical for the project, the transfer, including the collection (pull) and the diffusion (push) of these knowledge, assimilation, the interpretation and understanding of external knowledge, the creation of the necessary knowledge for the project and its validation, and finally the application and sharing. This author represents the sharing of knowledge from one project to another by the pull and push processes. A recipient project pulls its knowledge from other projects while pushing knowledge is done by sharing knowledge from a project to recipient projects. These two paired processes create the reciprocity of the knowledge sharing desired when there is knowledge management across different projects.

#### *4.5. The role of the project manager:*

The knowledge management process in multiple project mode links the various projects through the project managers, who play a leading role. For Barber and Warn (2005), the project manager is the hub of communication, planning, execution and control of the project. Typically appointed early in the process, it clarifies tasks, delegates responsibilities, awards rewards based on effort, and meets the needs of team members (Barber & Warn, 2005). Schindler and Eppler (2003) add that the project manager contributes to performance, improved coordination of services, training of employees and setting up a knowledge management mechanism. The project manager therefore applies a management methodology using documented knowledge. Its leadership ensures that it creates a climate of trust and mobilizes team members to achieve goals, mentors them in the

development of their knowledge and promotes the transfer of tacit knowledge (Eppler et al. Sukowski, 2000). In addition, the project manager plays the role of networking by defining sources of information both inside and outside the project team, and facilitating exchanges.

#### *4.6. The collective memory*

The maintenance and preservation of the collective memory of the organization are important issues in multi-project mode. Indeed, each person, in individual or collective mode and on a formal or informal basis, shares his knowledge and nourishes himself while enriching the collective memory. For Haynes (2010), the collective memory of an organization is the sum of its faculties to recapture past experiences, to capitalize on the capitalization of practices and to deploy them. For Dalkir (2011), organizational value is achieved through the promotion of creation as well as the sharing and application of knowledge. The documentation of lessons learned and best practices feeds the collective memory and promotes the pursuit of organizational learning.

### **5. Assumptions**

Before starting our study, we thought of the following hypotheses: H1: Capitalization of knowledge requires the collection and writing of procedures and job descriptions. H2: Currently, the dissemination and sharing of knowledge is done on computer databases that are integrated with intranet or platforms. H3: The main issue of knowledge management is the preservation of critical knowledge in the company, that is to say the non-loss of essential information for the organization to be sustainable. H4: Knowledge management and management of jobs and skills are steps related to the development of the organization.

### **6. Methodology**

In this study, we tried to take stock of SME practices in knowledge management. Our survey was conducted with twelve Moroccan companies, in order to get a glimpse of what was happening in the field. The companies came from different sectors of activity. In a brief description of the context in which companies operate, we studied the various factors that can influence the company's

human resources policy, namely mobility management, new information technologies and communication or the effects of globalization. Then, we approached the themes of knowledge according to the model of Nonaka and Takeuchi which defined two types of implicit and explicit knowledge and the cycle of transformation of the knowledge in company. Then, we will propose a definition of the competence in company and the forecast management of the jobs and competences in company. Finally, we will propose a method of knowledge management, its stakes and the procedure to follow to implement the knowledge management approach according to the model of Grundstein and Rosenthal-Sabroux (2000).

To conduct our survey, we conducted semi-structured interviews with the interviewees. Then, we transcribed and analyzed their speech using a grid in which we crossed the four hypotheses and the twelve interviews.

The chosen method is content analysis, which is very suitable for qualitative surveys. To do this, we divided the questions into two parts, namely the interviewer's sheet and the analysis and perception of SME managers, on management practices and knowledge transfer.

## **7. Results of the study**

In this section, we collected the answers of the interviewees on a sheet allowing to have a general idea about the companies and the people questioned (generally, company managers, HR managers, managers, supervisors or quality managers). Thus, we have summarized the analysis elements according to the categories and variables used in our interview guide.

### *7.1. The development of skills:*

Some HR managers pass on the knowledge employees need. These are always available and the desired improvements or corrections are transferred to the relevant instances.

Some companies take care of the conservation of all corrective actions daily on a database accessible to the managers.

Other firms fail to master the difficulties associated with the transfer of knowledge, because of the lack of use of ICT or its lack of control by all employees. In some firms, requests for improvement and complaints are made orally.

#### *7.2. The autonomy:*

- Some employees have great autonomy in the work, which positively influences the transfer of knowledge.
- Some managers or business leaders do not give employees the opportunity to take initiatives either as individuals or as collectives.
- Employees are not always actively involved in decision-making or the development of planned programs and projects.
- Team work is not always encouraged in some SMEs, which does not optimize the quality of professional relations and the absence of the sense of cooperation that facilitates the transfer of knowledge.
- Absence of support and supervision at the level of difficulties encountered.
- Relicence vis-à-vis the autonomy of employees in most SMEs and restriction of their scope, which hinder innovation and personal initiative.

#### *7.3. The Knowledge management:*

- All SMEs interviewed expressed the need to improve management tools to address the efficiency of the management process.
- Most respondents confirm that managing through processes will allow them to have new customers through the fluidity of sharing management and transfer of knowledge within the company.

#### *7.4. The relationship with the customers:*

Customer satisfaction, which is a major concern of any company, is sometimes hampered by the lack of tools and means available to an employee in an SME. The lack of control over the customers' requirements and the directions envisaged by the competing firms can cause the SME to lose several customers. Absence of a strategic vision of quality management, aiming to improve the customer relationship to achieve the objectives.

Our first hypothesis according to which the capitalization passes by a collection and the writing of the procedures and job descriptions is validated. SMEs work well in this way to capitalize knowledge but, it must be added that other types of knowledge are also amassed. Our second hypothesis, that knowledge dissemination and sharing passes through a company network or platforms after being stored on a computerized database is not validated. More and more databases are computerized for the sake of ease, flexibility, storage capacity. However, transmission and sharing via new information and communication technologies is not yet observable in the majority of SMEs in question. The third hypothesis according to which the main issue of knowledge management is the preservation of knowledge is validated. Indeed, in the theoretical part, we explained that whatever the organization, the stages of knowledge management remain the same, but the stakes are variable. It is therefore normal not to find consensus in the speeches made by the people interviewed for this question. Finally, the fourth and last assumption that knowledge management and forward-looking management of jobs and skills is linked in the management of the organization is validated. In fact, during our survey, we observed that SMEs that have set up a knowledge management system are using what has been capitalized to put in place a forward-looking management of jobs and skills.

Finally, our study of knowledge management practices of Moroccan SMEs reveals that many factors influence the way to implement a knowledge management system, such as the size of the company, the sector of activity, the means available for the development of the project. Invariants remain present, because a knowledge management approach will always be the same, whatever the context. It's the strategies and the issues that are put in place that are different from one organization to another. The observed results are therefore consistent with the theory studied.

During our interviews, we discussed the difficulties faced by SMEs when setting up a knowledge management strategy. In order to succeed in this project, we must identify the possible obstacles. Some constraints are recognized as lack of involvement and motivation, fear of losing power, or human and financial costs. But it is also possible that some people do not want to share their skills and expertise, some resist changes. Finally, a bad methodology, bad tools or a bad organization can also make a knowledge management project fail.

It would be interesting to take these themes into consideration in order to update the brakes experienced and the solutions proposed to solve these problems. Finally, we think that it would also be interesting to study more deeply the link between forward-looking management of jobs and skills and knowledge management. Indeed, these two approaches influence each other in a very remarkable way.

### **General conclusion**

While preserving the specificities of each company (Marchesnay, 1991), the sharing of knowledge and knowledge (Brezillon, Pomerol, 1999, Pimpeterre, 2011) can certainly help improve the skills of companies and increase their competitiveness (Aribou, 2015). . In the context of improving firms considered as SMEs, it is necessary to highlight the convergences between companies with a similar field of activity, to identify their strengths and weaknesses, in order to create a common culture in terms of cooperation. The specificities of SMEs in relation to collaboration, the complexity of relations, the need for rapid and innovative dissemination of knowledge, require active management of internal and external communication by managers. Collaboration and interactivity based on communication, strategic and economic issues related to management, raise the issue of the efficiency of transmission and sharing of information between people, services and the different levels of the organization chart. Improving the communication process of an SME will therefore have a strategic impact on collective performance. This is achieved through the establishment of a common language device and an inter-organizational communication aimed at evolution and organizational change adapted in terms of activities and tasks with high added value (Savall, Zardet, Bonnet, 2008).

Moreover, we must recognize that we do not do Knowledge Management because it is a fad. Knowledge Management is not an end in itself, but an approach in the service of a strategy. The management of knowledge and skills are variations of the strategic analysis, and this in loop of permanent progress.

However, the main difficulty is to identify the good level of expression of this strategy, between the top management and the shareholders. Each management or project team, which sees in Knowledge Management a response to their need to capitalize their experience and their know-how, to optimize the collaborative work, or to reduce the costs and deadlines, must call upon a synergy allowing 'increase knowledge, by setting up a collaborative platform like social network. Communication engineering could also help to involve employees in the

exchange of information and be close to management, which is an indicator of confidence building. This proximity of collaboration strengthens the personal and professional potentials of the collaborators which allows to create the knowledge (Hatchuel and Weil, 1992), Moidson, 1997) and their sharing. It is the result of collective learning (Argyris and Schon, 2008) and a global performance of the SME.

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**Evaluation des politiques publiques de santé en Algérie : éléments explicatifs**

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**Résumé :**

Les politiques publiques structurent et orientent l'action dans les divers secteurs de la société, elles sont un élément clé pour améliorer la santé des populations. Ces politiques ciblent les déterminants de la santé publique, principalement le système de soins et de services de santé. Cette communication vise à apporter un éclairage quant aux politiques publiques de santé en Algérie à travers une étude empirique auprès de 309 ménages réalisée au niveau national et ce en testant la significativité des différents facteurs et variables sur la probabilité d'accès aux soins. L'objectif consiste, à suggérer des réflexions et actions autour de la production de politiques publiques favorables à la santé.

Mots clés : Politique publique, santé, accès aux soins, Algérie.

**Introduction :**

L'OMS définit la santé comme étant « un état de complet bien-être physique et psychique permettant une vie active ». Ce n'est donc pas seulement l'absence de maladie. Pour atteindre ce but, une politique de santé est mise en œuvre. Cela concerne « l'ensemble des mesures prises par un gouvernement pour permettre à toute la population d'un pays d'accéder au meilleur état de santé possible, compte tenu des ressources disponibles lui permettant de mener une vie socialement et économiquement productive ». Ainsi, l'accès aux soins et l'adoption d'itinéraires thérapeutiques différenciés constituent alors des portes d'entrée pour analyser les effets de l'action publique en matière de santé, car elles restent instrumentales dans la reproduction des choix et des nécessités.

### **1.Revue de la littérature sur les politiques publiques de santé :**

La complexité qui entoure la définition et la structuration des politiques publiques trouve son explication dans le fait que ces dernières relèvent déjà d'un champ suffisamment vaste, conceptuellement et méthodologiquement instable dont les contours sont difficiles à circonscrire avec un certain degré de précision ( Anderson, 2011; Smith et Larimer, 2009; Lemieux, 2002; DeLeon, 1999; Jones, 1997; Brewer et DeLeon, 1983, Howlett et Ramesh, 2003).

Les politiques publiques se situent au confluent des dynamiques sociales, économiques, politiques, culturelles et historiques à partir desquelles elles empruntent leurs principales dimensions. Leur analyse relève par conséquent de domaines variés comme l'économie, la gestion, la sociologie politique, la science politique, etc. Les politiques publiques constituent de ce fait une matrice à plusieurs entrées, et visent des objectifs variés dont la finalité est l'accomplissement de l'être social (LASSWELL, 1942).

La politique publique peut s'illustrer à travers un cycle organisé autour de 4 grandes étapes allant de la mise à l'agenda à l'évaluation, comme le montre la figure 1.

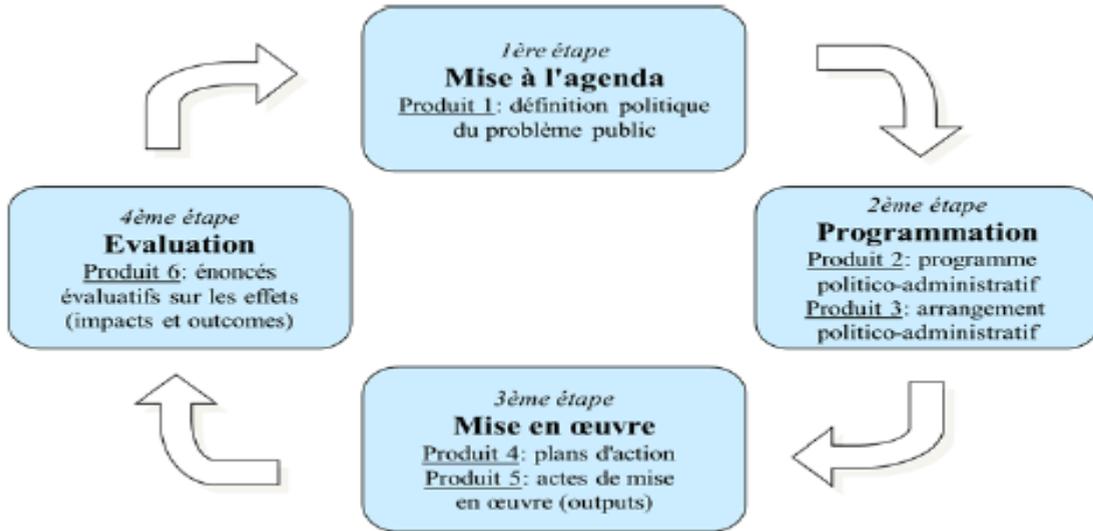


Figure 1: Le cycle d'une politique publique adaptée de Knoepfel et al 2001.

L'évaluation des politiques de santé représente l'étape au cours de laquelle une politique est évaluée pour vérifier si son implantation et ses effets correspondent aux objectifs qui ont été fixés explicitement et implicitement. Cette évaluation peut se faire par l'appareil gouvernemental, par des consultants ou par la société civile (Howlett et Ramesh, 2003).

La littérature existante aborde essentiellement les déterminants de recours à la médecine en mettant en relief la faible accessibilité géographique en milieu rural, la faible accessibilité financière aux soins de base, la qualité inégale des services curatifs et le développement important du secteur informel comme autant de facteurs qui pèsent de façon négative sur l'état de santé de la population. Ces facteurs découlent de l'organisation du système formel de l'offre de soins, des revenus des ménages et de la structure des dépenses de santé des ménages [REMY, 2000 ; COMMEYRAS, 2000 ; NKWENKEU, 2010]. A côté de cette problématique nationale, l'analyse de l'accessibilité aux soins de qualité en Afrique a identifié divers obstacles d'ordre politique (faible appui au secteur de la santé traduit par des

engagements budgétaires limités) [NTANGSI, 1998] , structurel (insuffisance des infrastructures sanitaires, de ressources humaines, et de capacités de contrôle de qualité) [RSM, 2005], socio-culturel (faible niveau d'éducation, perception fataliste de la maladie et de la mort, informations insuffisantes et perverties des prescripteurs sur les médicaments) [MARITOUX, 2000] , et économique [GRUENAI, 2001]. L'amélioration de l'accessibilité aux soins, nécessite une meilleure compréhension des déterminants socio-culturels et socioéconomiques qui dictent l'itinéraire thérapeutique des individus lorsqu'ils font face à une situation morbide. Pour le faire, nous procédons à un travail économétrique en mobilisant les modèles de régression logistique suivant la méthodologie décrite par DAMODAR [2004].

Le niveau de richesse (mesuré par le revenu) reste l'un des facteurs discriminants dans la consommation des soins quel que soit le milieu de résidence du malade. Les plus aisés sont généralement attirés par des soins rares et coûteux alors que les pauvres ont tendance à recourir plus facilement à la médecine parallèle qui offre un avantage comparatif en termes d'accessibilité financière et de mode de paiement (à l'unité, en nature, différé, etc.). Ensuite, viennent les motivations liées aux attitudes des individus à l'égard de la maladie et les représentations socioculturelles que se font les patients (MSP, 2005; VIVEROS, 1990).

Notre recherche s'inscrit alors dans cette optique et nous pousse à poser la problématique suivante :

Quels est l'impact des variables individuelles et socio-économiques sur la variation de probabilité d'accès aux soins en Algérie ?

## **2. Système d'accès aux soins en Algérie :**

Le système de santé en Algérie repose sur un ensemble de structures médicales, techniques et administratives. L'offre de soins est répartie dans trois secteurs d'inégale importance (secteur public dominant, secteur privé en expansion rapide, et secteur parapublic de plus en plus réduit) (Figure 2).

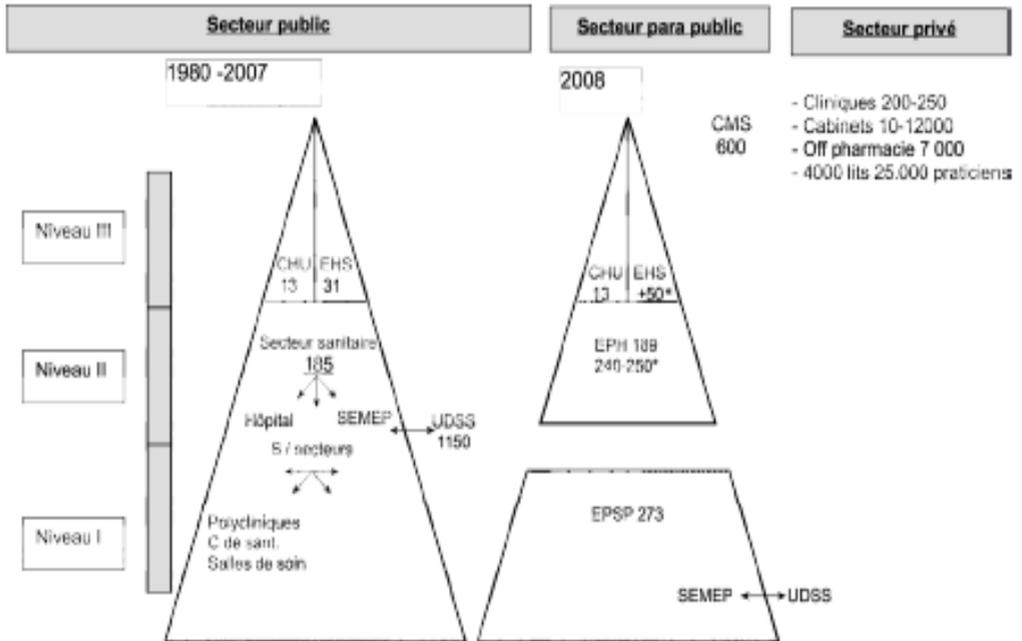


Figure 2 : Système de santé en Algérie

L'organisation générale de protection sociale est issue du modèle français d'avant l'indépendance du pays. On y retrouve les mêmes acteurs liés les uns aux autres selon un schéma rudimentaire qui évolue progressivement vers une participation financière croissante des ménages.(Figure 3)

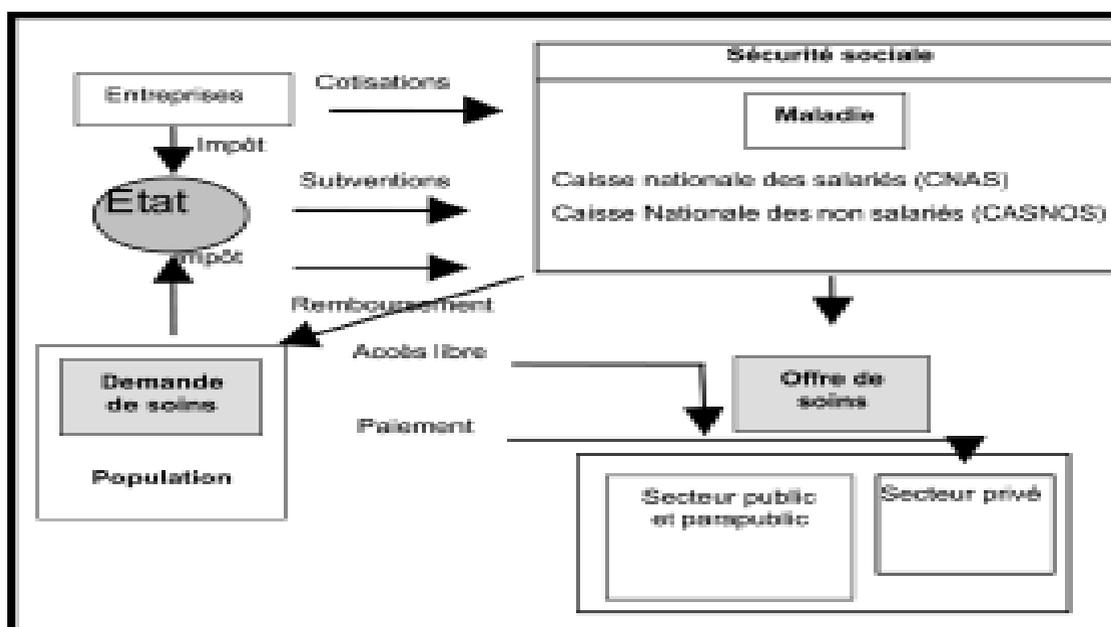


Figure 3 : Principaux acteurs du système de santé en Algérie

## 2.1. La couverture vaccinale en Algérie :

Les objectifs fixés par le Programme Elargi de Vaccination visent l'atteinte d'un taux national et par wilaya de couverture vaccinale d'au moins 95 % pour tous les vaccins, l'éradication de la poliomyélite, l'élimination du tétanos néonatal, l'élimination de la rougeole, l'élimination de la diphtérie, ainsi que la réduction de la mortalité et de la morbidité des infections dues au Hib.

Les résultats obtenus qu'il convient de consolider sont les suivants :

- Zéro cas de diphtérie depuis 2007,
- Eradication de la poliomyélite : 0 cas depuis 1997 : le processus de certification de l'éradication est en cours de mise en oeuvre,

- Elimination du tétanos néonatal depuis 1984 : le processus de certification de l'élimination du tétanos néonatal dans notre pays est en cours de validation par l'OMS,
- Baisse de 99% de l'incidence de la rougeole : passant de 65,5 cas pour 100.000 habitants en 1996 à 0,31 cas en 2009 et à 0,07 cas pour 100.000 habitants en 2012.

Tous ces efforts ont permis d'enregistrer des progrès dans l'atteinte des Objectifs du Millénaire pour le Développement (OMD) dans la mesure où ces derniers ont eu un impact très significatif sur :

- la diminution significative de la morbidité et de la mortalité des maladies contrôlables par la vaccination,
- la réduction de la mortalité infantile qui est passée de 46,8 pour 1000 naissances vivantes en 1990 à 24,8 pour 1000 naissances vivantes en 2009 et à 22 pour 1000 naissances vivantes en 2014.

La figure 4 illustre l'évolution des taux de couverture vaccinale des maladies du PEV 1986-2014.

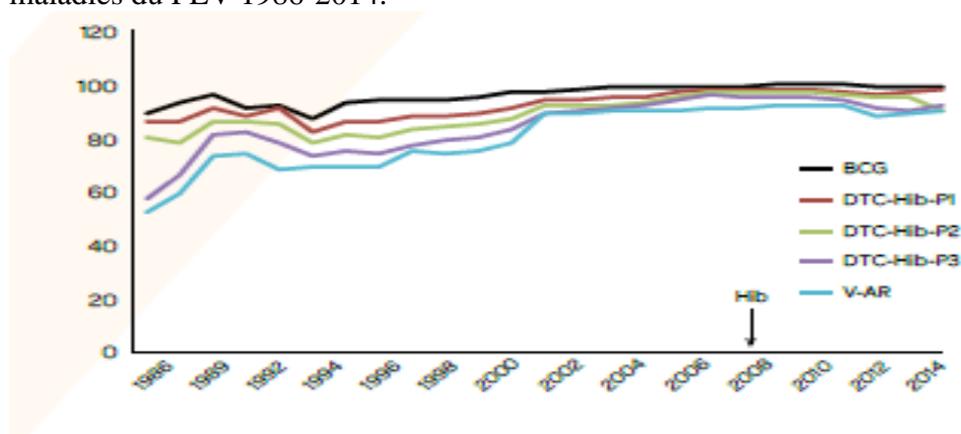


Figure 4: Evolution des taux de couverture vaccinale des maladies du PEV 1986-2014

## 2.2. Mesures en matière de prévention :

En matière de prévention, le secteur déploie des efforts pour consolider la lutte contre les maladies transmissibles et pour engager de manière résolue

un processus de lutte et de prévention contre les maladies non transmissibles. Dans ce cadre, il s'agit de :

- consolider et renforcer des programmes nationaux de prévention qui s'inscrivent dans l'objectif de l'élimination des maladies transmissibles prévalentes, de développer de nouveaux programmes et plans de prévention et mettre en place un dispositif de veille épidémiologique approprié ;
- Mettre en place le cadre de coordination national multisectoriel de lutte contre les maladies non transmissibles institué par décret exécutif et engager la mise en œuvre du plan national de réduction des facteurs de risque communs (tabagisme, sédentarité, mauvaise alimentation)aux maladies non transmissibles prévalentes ainsi que le développement d'un système de surveillance de ces facteurs de risque ;
- Redynamiser et /ou mettre en œuvre les programmes de prévention et de dépistage des cancers et des autres maladies chroniques ;

### **2.3. Mesures en matière de protection maternelle et infantile :**

En matière d'amélioration de la santé de la mère et de l'enfant, le secteur œuvre notamment pour réduire le taux de mortalité maternelle et infantile par :

- Le lancement du plan national de réduction accélérée de la mortalité maternelle 2015-2019 basé notamment sur l'accès universel à des prestations de qualité tout au long de la grossesse et de l'accouchement ;
- Le renforcement et le suivi des grossesses et l'amélioration des prestations de soins néonataux ;
- Le renforcement de la protection vaccinale ;
- Le développement de la prise en charge intégrée de l'enfant en offrant des soins complets à l'enfant notamment préventif,
- L'adoption et la mise en œuvre de mécanismes de maîtrise des causes de décès

### **2.4. Mesures relatives à l'offre de soins, l'organisation et le fonctionnement du système de santé :**

Le développement des soins spécialisés sur l'ensemble du territoire, l'amélioration de la prise en charge des pathologies lourdes et des urgences

cardiaques et médico-chirurgicales constituent des axes prioritaires du secteur. A cet effet, le secteur œuvre en vue de :

- La mise en oeuvre du plan national cancer 2015-2019 dans ses axes relatifs à l'amélioration du diagnostic, du traitement notamment par radiothérapie et à l'allègement du circuit du malade ;
- Le développement de la greffe d'organes ;
- L'amélioration des urgences cardiaques et médico-chirurgicales par une mise à niveau des moyens humains et matériels ;
- Le renforcement du dispositif de jumelage entre les établissements de santé du sud, des hauts plateaux et du nord pour assurer des soins spécialisés ;
- Le renforcement des capacités en infrastructures hospitalières ;
- L'organisation du développement des soins à domicile.
- La modernisation du système d'information sanitaire et la généralisation de la télémédecine ;
- L'amélioration de la répartition des praticiens spécialistes au niveau national ;
- La réactivation du dossier contractualisation avec les organismes de sécurité sociale ;
- l'évaluation et la normalisation de l'activité du secteur privé

### **3. Etude empirique :**

Pour comprendre les facteurs explicatifs de la demande d'accès aux soins de santé, nous procédons à l'analyse économétrique suivant le modèle SPSS, étant donné sa capacité à traiter les corrélations et proposer une interprétation des coefficients explicatifs binaires.

Les données exploitées dans cette analyse concernent 309 ménages répartis sur l'ensemble du territoire national.

Le questionnaire de l'enquête permet de tester la significativité des variables de contrôle pour le recours aux soins.

A cette fin nous retenons les dix variables suivantes :

- quatre variables individuelles : le sexe, l'âge, la situation matrimoniale, le niveau d'instruction
- quatre variables socio-économiques : la taille du ménage, le niveau de vie, le lien de parenté avec le chef de ménage ; la catégorie socio-professionnelle ;
- deux variables spatio-environnementales : le milieu de résidence (rural/urbain) et la région de résidence (circonscription administrative).

Les résultats de notre enquête figurent sur les tableaux 1 et 2 :

<b>Variables</b>	<b>Modalités</b>	<b>Accès aux soins</b>
<b>Région de résidence</b>	Est	Réf
	Centre	1,6 ns
	Ouest	0,6 ns
	Sud	3,1
<b>Milieu de résidence</b>	Rural	Réf
	Urbain	0,2ns
<b>Taille du ménage</b>	1-3 personnes	Réf
	4-9 personnes	1,1*
	supérieur à 10	1,2
<b>Niveau de vie</b>	Non pauvre	Réf
	Pauvre	0,9
<b>sexe</b>	Homme	Réf
	Femme	1,6*

<b>Lien de parenté avec le CM</b>	fil(s)/fil(le)	<b>Réf</b>
	époux	<b>1</b>
	Autres liens de parenté	<b>0,8ns</b>
<b>Age</b>	0-10 ans	<b>Réf</b>
	10-30 ans	<b>1,2*</b>
	30 et plus	<b>1</b>
<b>situation matrimoniale</b>	célibataire	<b>Réf</b>
	Marié	<b>0,8</b>
<b>niveau d'instruction</b>	Sans niveau	<b>Réf</b>
	Primaire	<b>1,3</b>
	Secondaire	<b>1,1*</b>
	Supérieur	<b>0,7</b>
<b>catégorie socio-professionnelle</b>	Cadre	<b>Réf</b>
	Employé	<b>0,8*</b>
	Patron	<b>1,3</b>
	Prob > X <sup>2</sup>	<b>0,0000</b>

Tableau 1 : Probabilités de recours aux soins  
 Source : Notre élaboration à l'aide du logiciel SPSS (N=309)

<b>Composante</b>	<b>Valeurs propres initiales</b>			<b>Somme des carrés des facteurs retenus pour la r</b>		
	Total	% de la variance	%cumulés	Total	% de la variance	%cumulés
1	3,830	34,819	34,819	2,305	20,951	
2	1,724	15,677	50,496	2,183	19,941	
3	1,339	12,175	62,671	1,965	17,866	
4	1,120	10,178	72,849	1,561	14,191	
5	0,939	8,538	81,387			
6	0,671	6,100	87,387			
7	0,550	5,000	92,387			
8	0,297	2,696	95,083			
9	0,233	2,121	97,204			
10	0,194	2,796	100			

Tableau 2: variance totale expliquée  
Source : Notre élaboration à l'aide du logiciel SPSS (N=309)

### **Conclusion :**

Il apparaît au travers de notre étude que l'âge, la situation matrimoniale, le niveau d'instruction et la catégorie socio-professionnelle du patient ne sont plus significatifs. En outre, la région de résidence, le milieu de résidence, la taille du ménage, le niveau de vie, le sexe et le lien de parenté avec le chef de ménage sont significativement liés au recours aux soins.

Cette probabilité de recours aux soins est plus élevée pour les personnes vivant en milieu urbain que ceux du milieu rural. Par ailleurs, le fait de vivre dans les ménages de petite taille ne suffit pas à lui seul pour expliquer les différences de recours. En revanche, cette variable est fortement corrélée avec le niveau de vie du ménage et la promiscuité qui s'en suit. Les personnes vivant dans les ménages pauvres ont moins de chance de recourir aux soins que ceux vivant dans les ménages non pauvres.

Ceci pourrait s'expliquer aussi en analysant le niveau de santé des populations (et des fractions de celle-ci) est fonction de leur conditions de vie générales. Autrement dit, les couches (ou les classes) aisées sont moins exposées à la maladie et leur état général est meilleur que celui de couches plus défavorisées qui, de par les conditions dans lesquelles elles vivent, sont plus exposées aux maladies (risques) et donc leurs besoins en la matière sont plus grands, (encore faut-il que ces besoins soient exprimés et libérés de certaines contraintes économiques et culturelles qui les confinent dans une sorte de latence

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## From Teachers to Teacher Leaders

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### Abstract

President John Quincy Adams once stated that if your actions inspire others to dream more, learn more, do more, and become more, you are a leader. This proposal is a reflection of our leadership experiences as a team leader teaching Mandarin Chinese at Defense Language Institute from 2008 to 2017. The purpose of this proposal is to demonstrate what leadership qualities teacher leaders possess to prepare themselves for being a successful and outstanding teacher leader from students' point of view. The data in this study were drawn from 195 anonymous students' written evaluation from 11 different classes we taught in the past ten years. The key words that students used to describe us can be categorized as **administrative skills**, **personality traits**, and **underlying characteristics**, such as organized and effective, encouraging and caring, as well as engaging and motivating. Our finding indicates that the successful and outstanding teacher leader does not only possess some unique leadership qualities but also know how to apply their leadership qualities to inspire others to dream, to learn, to do, and to become more.

Keywords: Leadership, Leadership qualities, Teacher leaders

## Introduction

Every stage of life is the foundation and preparation for next stage of life. After working for a position for a while, people usually pursue a higher position for a better self and life. It is inevitable to become a leader sooner or later once people pursue a higher position. Gary Yukl (2006) defined leadership as the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives. Peter Northouse (2010) defined leadership as a process whereby an individual influences a group of individuals to achieve a common goal. These definitions suggest that leadership is an interactive event in which a leader guides followers to work together as a team to achieve their goal. Leadership and followership are two sides of the same coin, each intimately connected with the other in a dynamic manner (Kleiner, 2008) and followers' behaviors are related to leader behaviors, and this connection retains some level of variations in the follower styles depending on the leadership styles (Chaleff, 2008). A leader and followers can affect each other positively or negatively. Therefore, building a solid relationship with followers is important for a leader because it reflects how successful a leader can be.

Some people believe that leaders are born, but some believe that leaders are made. The Great Man theory, portraying great leaders as heroic, mythic, and destined to rise to leadership when needed, assumes that the traits of leadership are essential. It means that great leaders are born, not made. Like Thomas Carlyle Wren (1995) claimed, effective leaders are those gifted with divine inspiration and the right characteristic.

These theories simply suggest that people cannot learn how to become great leaders and it's something you were born with or without. The Trait theory proposes that people are either born or are made with certain qualities which position anyone in the shoes of a great leader. Xiong (2008) stated that trait theories emphasize the personal qualities of leaders and put emphasis on attributes that distinguish leaders from non-leaders. The Behavioral theory, however, assumes that leadership is a set of skills that can be learned by training, practice, and experience over time. No matter if leaders are born or made, great leaders do possess certain leadership qualities and skills that make them successful and great.

Pamela Bush (2012) claimed that leadership skills are present at varying degrees in almost everyone. The degrees to which we develop those skills and apply them to the environments that matter to us determine the degree of leadership that will be realized. Vince Lombardi (2001) also claimed that "leadership is not just one quality, but rather a blend of many qualities. And while no one individual possesses all of the talents that are needed for leadership, each man can develop a combination that can make him a leader." A great leader not only possesses qualities and skills that are needed for leadership but also knows when and how to exercise those qualities and skills to guide followers to accomplish their goal. In the workplace like our school, everyone has the opportunity to take a teacher leader position, but not everyone is a perfect fit for the position. During 63 weeks, the teacher leader plays a double role and deals with a double workload. He/she is not only a full-time teacher instructing 6-18 students but also a full-time teacher leader guiding 3-5 teammates. Therefore, it is significant for a teacher leader to know how to exercise his/her leadership skills to make sure that he/she has cooperative teammates in his/her teaching team and effective teachers in every classroom to bring students to success.

## Methodology

The data for this study were drawn from 195 anonymous students' written evaluations from 11 different classes we taught from 2008 through 2017. All the leadership qualities we found in students' written evaluations were categorized as administrative skills, personality traits, and underlying characteristics. For each category, we selected the three qualities that students mentioned most from each of our own students' written evaluations and then picked two out of the three qualities that we have in common. We came up with organized and effective for administrative skills, caring and encouraging for personality traits, and engaging and motivating for underlying characteristics.

Table 1: Leadership Qualities

	<b>Administrative Skills</b>	<b>Personality Traits</b>	<b>Underlying Characteristics</b>
Chang	<b>organized</b> <b>effective</b> problem solver	<b>caring</b> positive <b>encouraging</b>	approachable never give up <b>engaging</b>
Pine	<b>organized</b> <b>effective</b> professional	<b>caring</b> <b>encouraging</b> positive	<b>motivating</b> enthusiastic <b>patient</b>
Liu	<b>organized</b> <b>effective</b> professional	<b>caring</b> <b>encouraging</b> positive	<b>Engaging</b> <b>motivating</b> inspiring

### Administrative Skills

As pointed out in the AERA brief that “at the core of most definitions of leadership are two functions: providing direction and exercising influence. This definition has at least two implications: Leaders do not merely impose goals on followers, but work with others to create a shared sense of purpose and direction. Leaders also establish the conditions that enable others to be effective (Leithwood & Riehl, 2003). Leadership skills are indispensable in language teaching and learning, and the effectiveness of these skills directly affect the quality of language education, the soundness of a program, and the satisfaction level of both teachers and students in the language classrooms and beyond. Examples of an effective leader typically include skills and traits such as knowledge of multiple languages and cultures, adaptability, ability to listen and communicate clearly, ability to work collaboratively, and open mindedness (Yeatman & Berdan, 2007). Under the “administrative skills” category in our study, the two qualities that were mentioned most are “**organized**” and “**effective**”.

Students recognized that teacher leaders’ organizational skills as one of the factors that help them to develop their learning skills and that foster their success in the language learning classroom, especially for those students with weak organizational skills. While students need much more than organizational skills to learn a language, mastery of this set of skills can foster student success in the language learning classroom (Issa, 2009). A successful teacher leader is someone who knows how to create and organize the learning environment to meet every individual needs in an effective manner. When he or she sets up a clear and well-structured learning objective, it not only allows the teaching team to work cooperatively and students to plan their learning in an organized way but also leads the teaching team and students to success more efficiently. As one of our students stated: “she has excellent organizational skills which I

believe is the key to lead us to learn. Our team's daily learning materials were clearly structured and that helps us to plan our own studying more wisely to reach the final goals".

Williams and Burden (1997) claimed that "learners' perceptions and interpretations have been found to have the greatest influence on achievement" (p. 98). It is suggested when teachers and students share the same or similar beliefs and notions of effective teaching, the intersection of the two sets of beliefs has impacts on language learning and the effectiveness of instruction (Horwitz, 1990; Kern, 1995; Schulz, 1996). A successful teacher leader in our study is portrayed as the one who understands learners' learning perceptions and beliefs and who knows how to help students develop learning strategies to maximize their learning outcomes. In such an intensive language learning environment like DLI, it is important and crucial for the team leader to deliver the curriculum in an effective way and help students develop effective learning strategies. As one of our students pointed out, "the team leader understood the nature of the intensive learning environment and the daily class schedule was designed in an effective way that help the whole teaching team to create a positive, professional and effective learning environment in which it \_encourages learning to take place and maximizes the learning outcomes".

### **Personality Traits**

Judge, Bono, Ilies, & Gerhardt (2002) indicated that leadership and personalities have a strong correlation. In addition to the relationship between administrative skills and leadership, our study also aims to explore the relationship between personality traits and leadership that inspires and motivates students to overcome their learning challenges and achieve better academic goals. We found several personality traits that three of us have in common and the top two are "**caring**" and "**encouraging**".

Weinstein, Tomlinson-Clarke and Curran (2004) advocated a "caring community of learners" where students feel respected, trusted, and supported by one another and by the instructor". Irvine (2001) defined "caring teachers" as those who set limits, provided structure, held high expectations and pushed them to achieve. We believe that these qualities are essential for a teacher leader as well. As students illustrated in the written evaluations, "she is one of the best teachers I have ever had. Not only a teacher, but also a great leader who knows how to lead the team. She helps us to build up our self-confidence. She is very caring, open-minded and that creates a positive and relaxing learning environment; she also helps us learn through a structured way and pushes our limits that challenges us to be better". A caring teacher leader not only sets limitations to help students produce the best learning outcomes but also trusts and supports students to be able to reach their best potential. Therefore, we, as teacher leaders, should reflect our roles whenever needed and bear in mind that students are empowered when they realize that we do care, respect and trust them.

Another personality trait that we have identified as an outstanding teacher leader is encouraging. Studies illustrate that enhancing learners' motivation produces more effective language learning results (Deci & Ryan, 1985). Encouragement is one of the factors that enhances motivation (Gottfried, Fleming, & Gottfried, 1994). Adler (1956) was perhaps the first psychologist to theorize on encouragement, and he argued encouragement as a core feature of human development. Main and Boughner (2011) also proposed that people do need encouragement, especially with regard to engaging others. In this vein, a teacher leader's understanding of the different learners' needs and struggles, and the continuous encouragement throughout the course motivate and keep them engaged in the learning contents which produce most meaningful outcomes. As stated in our

students' written evaluations, "her personality is amazing, very caring and encouraging. She creates a positive learning environment that encourages learning to take place and leads us to overcome the challenges we encounter. She always stay positive and that helps us be willing to participate in the teaching contents. She knows how to lead! Care about students and the job!". From students' written evaluations, we can conclude that an encouraging teacher leader is the one who understands students' challenges, provides guidance and is willing to overcome the difficulties with them to create a positive learning environment that fosters learning motivation and encourages learning to take place.

### **Underlying Characteristics**

In addition to administrative skills and personality traits, **motivating** and **engaging** are the other two leadership qualities that were mentioned throughout our students' written evaluations and we just could not overlook. Motivation is described as a state that energizes, directs and sustains behavior. Teacher leaders must set learning goals and design activities that can keep students motivated enough to be able to reach their learning goals. It is extremely crucial for teacher leaders to work with students, identify their learning purposes, and come up with a specific direction to achieve such a purpose. This allows students to clearly see that they have the capabilities and are given an individualized road map to reach the learning goal. Mary Stedul (2013) stated that "Motivation has a direct impact on how an individual learns. The effect of motivation is normally far reaching because it increases an individual's energy level, determines the persistence in reaching a specific goal, affects the types of learning techniques used and an individual's thinking processes." Once the student is properly motivated, the teacher leader becomes a guide providing level appropriate materials and activities that constantly push

students forward in the grueling task of reaching a higher level of proficiency.

Studies demonstrated that engaging students in the learning process increases their attention and concentration, motivates them to practice higher-level critical thinking skills, and promotes meaningful learning experiences. Teacher leaders understand that “ learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves.” (Chickering & Gamson, 1987). Therefore, it is critical for teacher leaders to create an engaging learning environment where they acknowledge the learning diversity within the student population and adapt the teaching design, delivery and evaluation activities accordingly in order to meet different students’ learning needs. This statement is evidenced by one of our students: “A great team leader. Innovative and allows students to have fun. Not afraid to change scheduling and curriculum to adapt to changes in learning. Organized and able to provide low and high students with the materials needed for self-study.”

## Conclusion

Table 2: Means Scores from Students’ Evaluation Form

	<b>Worked well with</b>	<b>A good teacher</b>	<b>Means scores of</b>
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	other members	team	with whom I like to study	students' evaluation
Chan g	3.9/3.8/3.9/3.9		3.9/3.9/3.8/3.7	3.8/3.7/3.8/3.8
Pine	3.9/4.0/4.0/4.0/3. 8 4.0/4.0/4.0/3.8/4. 0		3.8/3.9/4.0/4.0/3. 9 4.0/4.0/3.4/3.6/3. 8	3.9/3.9/4.0/4.0/3. 8 4.0/3.7/3.5/3.7/3. 8
Liu	3.8/3.9/4.0/4.0/4. 0 4.0/4.0/4.0		3.8/3.9/4.0/4.0/4. 0 4.0/3.8/3.8	3.9/3.9/4.0/4.0/4. 0 4.0/4.0/4.0

The successful and outstanding teacher leader in our study is the one who possesses unique administrative skills, personality traits, and some other underlying characteristics and who knows how to apply all these leadership qualities to inspire others to do, to learn, and to become more. In addition, the data in Table 2 suggests that the successful and outstanding teacher leader is also the one who works well with other team members, who is highly appreciated by students, and who motivates and encourages students to strive hard to reach their goals. All teachers have the potential to become great teacher leaders. We hope our findings and analysis can serve as a tool for teachers to self-reflect, to learn, and to eventually become successful and outstanding teacher leaders.

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## **The Behavior of Retired Persons in The Stock Exchange of Thailand**

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**Abstract:** There were a great number of Retired Persons in The Stock Exchange of Thailand. This study investigates the behavior of Retired Persons who traded stocks. The data were collected from Retired Persons in many trading halls in Bangkok and traded via internet by questionnaire and observation. Convenient sampling randomly chose 484 Retired Persons. From the study, most had five to six years' experience in stock trading and they had not been satisfied with stock trading but continued trading over the past years. They would take 21- 30 % of their income for stock trading and expected that they would gain profits from capital gain. They held stocks for less than one week. They traded stocks in the amount of cash limit from 50,000 to 200,000 Thai baht. Besides, they seemed not to trade stocks at the total amount of cash limit. However, they traded them daily. They opened cash account, cash balance and credit balance. Mostly they paid checks when buying stocks. Most of the participants did not trade stocks online; however, some did it because they could send the orders for the stock selling or buying by themselves. Their decision making in trading stock were fundamental analysis and technical analysis ,such as : Candlesticks, Moving average and Support /Resistance level.

**Keywords:** Behavior of investment, Retired persons, Stock Exchange of Thailand, Fundamental analysis, Technical analysis

### **1. Introduction**

The Stock Exchange of Thailand (SET) has started its trading since April 30, 1975. In the early period, there were 16 registered stocks while there were more than 1,936 registered stocks from 649 listed companies in the present (As of 31 August 2016). In 2015, the number of trading in Thailand was highest among Asian countries (44,302 million baht per day). At the end of 2015, there were 797,326 trading accounts and from the total accounts, 25.98% were active accounts. However, from trading accounts, local investors accounted for 54.99% of the total trading value. There were a great number of local investors who were retail investors (working persons and retired persons). Studying behavior of retired persons is beneficial to the administrators of the Stock Exchange of Thailand and stock companies in inviting new investors and giving advice to the current investors in order to have a right decision making when trading stocks.

## **2. The Purpose of the Study**

The purpose of the study was to investigate retired persons' behavior in investing in the Stock Exchange of Thailand.

## **3. Literature Review**

Nopjinraamporn (2003) studied the security investment behavior of individual investors in the Stock Exchange of Thailand. The finding revealed that most investors were businessmen who had investment experiences for more than 5 years and ran their own businesses. The major factor affecting the investors' decision making in buying or selling securities was the consideration of the value and trading volume. Regarding the problem of investment, individual investors preferred to invest in short term. They expected to earn capital gain, not dividend. Moreover, the net settlement and the purchase of liquidity stock were the most popular behavior in security investment. According to the investors, the successful investors always invest in a large company and analyze stock in term of

individual stock. The mistakes in investment were caused by believing in the rumors, speculating and not cutting loss.

Chaiwan (2005) studied the investment behavior in the Stock Exchange of Thailand of individual investors in Chiangmai Trading Rooms. This research concluded that most of the individual investors opened their cash accounts with Thai Commerce Securities Company, Kim Eng Securities (Thailand) Company Limited, and Adkinson Securities Company Limited, of which the investment volume was the highest by 13, 12.8 and 9.7 percent, respectively. This was because their services in general were good, impressive, informative, prompt and up-to-date. Those investors have been investing for more than five years, and their investment was 100,001 – 300,000 Thai baht a day on average. Mostly, their investment derived from their own savings. For their decision making, the individual investors mainly relied on information gathered from brokers and, more often than not, they were inclined to make both short-term and medium-term investments on lucrative basis. Yet, their investment brought about profits rather than suffered a loss. In addition the investors invested in less than five stock exchanges, and a total of investment values did not exceed 500,000 Thai baht. The investors relied on basic assumption and technical analysis for their decision in launching on investment in the stock exchange.

Kaewcha (2013) revealed that the fundamental analysis and technical analysis were employed in decision making. Regarding fundamental analysis, the investors got information from business newspapers, stock newspapers and daily newspapers and all documents in the trading halls. Regarding technical analysis, the investors gain knowledge from the training courses and the review of broker analysts. Both fundamental and technical analysis had moderate effects on their decision making.

## **4. Methodology**

### **4.1 Data Collection**

The sources of data in this study were divided into primary data and secondary data.

1. Primary data were obtained from the questionnaire and observation for retail investors who trade stocks at many trading halls in Bangkok and traded via internet in 2016 - 2017.

2. Secondary data were collected from the relevant documents from previous studies done by others.

## **4.2 Sample and Sampling**

The participants of the study were 484 Retired Persons of stock trading at many trading halls in Bangkok. They were randomly chosen by convenient sampling.

## **4.3 Data Analysis**

Descriptive statistics such as frequency, percentage, mean and standard deviation were employed in the analysis of the data regarding the respondents' information.

## **5. The Results of the Study**

### **5.1 Background information of the participants**

In this study, from 484 participants there were 200 males (41.3%) and 284 females (58.7%). Of the total participants, 40.5 % of them were between 61-65 years old, 37.6 % and 17.8 % were between 66-70 and 55-60 years old respectively. Of the total participants, 70.2% held bachelor's degrees while 19.9 % held master's degrees. 41.5% were retired from private companies, 39.5% were retired from government sector and 13.6% were business owners. Also, 43.7% of the participants earned the income around 10,000-

20,000 Thai baht per month while 26.8% earned 20,001- 30,000 Thai baht and 13.6% earned 30,001-50,000 Thai baht per month.

## 5.2 Experience in stock trading

From the study, 35.1% had 5-6 years' experience in stock trading while 28.9% and 20.2% had 1-2 and 3-4 years' experience in stock trading respectively (Table I).

TABLE I  
EXPERIENCE IN STOCK TRADING

Experience (years)	Number (persons)	Percentage
1-2	140	28.9
3-4	98	20.2
5-6	170	35.1
7-8	27	5.6
8-9	20	4.2
More than 10	29	6.0
Total	484	100.0

## 5.3 Satisfaction for the stock trading outcome during the past years

Satisfaction for the stock trading outcome during the past years, 40.3% of the participants were not satisfied but continued trading, 28.9% were satisfied with their trading, 20.7% were not satisfied and decided to stop trading, and 10.1% had a neutral response for their trading (Table II).

**TABLE II**  
**SATISFACTION FOR THE STOCK TRADING OUTCOME DURING THE PAST YEAR**

Items	Number (person)	Percentage
Not satisfied but continued trading	140	40.3
Satisfied	98	28.9
Not satisfied and decided to stop trading	170	20.7
Neutral response	27	10.1
Total	484	100.0

#### **5.4 Budget for investment**

In investigating how the participants budget their money for stock trading, the study showed that 30.6% of the participants spent 21-30% of their income on trading, 28.7% spent 11-20% of their income on trading, and only 11.4% spent more than 50% of their income on trading (Table III).

**TABLE III**  
**BUDGET FOR STOCK TRADING**

Percentage of income on stock trading	Number (persons)	Percentage
Less than 10	61	12.6
11-20	139	28.7
21-30	148	30.6
31-40	45	9.3
41-50	36	7.4
More than 50	55	11.4
Total	484	100.0

### 5.5 Spending the income earned from the investment

In investigating how the income earned from the investment was spent, the study revealed that 27.3% of the participants spent the money in emergency, 26.2% spent their money on for their retirement, and 18.4% spent their money on their family's tour / travel (Table IV).

TABLE IV  
SPENDING THE INCOME EARNED FORM THE INVESTMENT

Items	Number (persons)	Percentage
In emergency	132	27.3
For their retirement	127	26.2
Their family's tour / travel	89	18.4
Their / their family's daily expenses	45	9.3
Houses/ cars	35	7.2
Doing business	29	6.0
Continue their trading	24	5.0
Others	3	0.6
Total	484	100.0

### 5.6 The expectation of the investors (Retired Persons) for the benefits gained

According to the study, there were various kinds of benefits expected by the investors. The study indicated that 88.8% of the participants expected the profit from capital gain, 9.9% would like to gain dividends, and 1.3% would like to gain the benefits from tax (Table V). This study is in accordance with [2]-[3] showed that retail investors tended to be short term speculators in stock trading rather than long term investors who expected dividends. Regarding [4], 40% of new investors wanted profits, 30% wanted savings, 20% wanted dividends, and 10% wanted to be shareholders from their investment

TABLE V  
THE EXPECTATION OF THE INVESTORS FOR THE BENEFITS GAIN

Items	Number (persons)	Percentage
Capital gain	430	88.8
Dividend	48	9.9
Benefit from tax	6	1.3
Total	484	100.0

### 5.7 Average length of time in stock holding

The study showed various lengths of time that stocks were held by speculators in the sampling group. Most participants held stocks for less than 1 month. Of the total participants, 49.8% held stocks for less than one week on average, 31.4% had stock trading within one day, and 14.9% held stocks from one week to one month (Table VI). The result of this study is similar to that of [2] which indicated that retail investors were likely to have a short term investment; they sold and bought stocks within one day.

TABLE VI  
AVERAGE LENGTHS OF TIME IN STOCK HOLDING

Lengths of time	Number (persons)	Percentage
1 day	152	31.4
Less than 1 week	241	49.8
1-4 weeks	72	14.9
More than 1-3 months	12	2.5
More than 3-6 months	5	1.0
More than 6-1 year	2	0.4
Total	484	100.0

### 5.8 The cash limit of the main account in stock trading

In this study, the cash limit was ranged into 7 levels. When considering the cash limit in trading stocks, the study revealed that 52.1% of the participants had a total amount of 100,000 -500,000 Thai baht. 24.1% and 10.8% of them had a total amount of 600,000 -1,000,000 Thai baht and 1,100,000 - 2,000,000 Thai baht respectively (Table VII). The result of this study is similar to that of [5] which showed that most investors invested their money not more than 500,000 Thai baht in trading.

TABLE VII  
THE CASH LIMIT IN STOCK TRADING

Cash limit (1,000 Thai Baht)	Number (persons)	Percentage
100-500	252	52.1
600-1,000	119	24.6
1,100-2,000	52	10.8
2,100-3,000	21	4.3
3,100-4,000	12	2.5
4,100-5,000	21	4.3
5,100-10,000	7	1.4

Total	484	100.0
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### 5.9 The Type of Accounts Opened by investors (Retired Persons) for Stock Trading

The study indicates that the type of accounts opened by investors for stock trading, 18.5% of them open only cash account, 78.5% open both cash account and cash balance, and 2.9% open cash account, cash balance and credit balance. Most of them (75.5%) have trading via cash balance only (Table VIII).

TABLE VIII  
THE TYPE OF ACCOUNTS OPENED BY SPECULATORS FOR STOCK TRADING

Types	Number (persons)	Percentage
Cash account	90	18.5
Cash account, Cash balance	380	78.5
Cash account, Cash balance, Credit balance	14	2.9
Total	484	100.0

### 5.10 Stock Trading Tools for the investors (Retired Persons)

#### 5.10.1 Fundamental Analysis

##### *1. The Fundamental Analysis Used in Trading Stock*

The results of the study reveal that the fundamental factors regarding **economic analysis** were considered, 13.3% of the sample group focused on the economic situation. Regarding **industry analysis** was considered, 12.1% focused on the type of business. Also, for **company analysis**, 17.2% focused on stock's market price, 7.7% on business reputation, and 5.3% on the administrator/business owner. Lastly, regarding **political analysis**, 15.8% focused on the political situation and 11.7% on government policy (Table IX).

TABLE IX  
THE FUNDAMENTAL ANALYSIS USED IN TRADING STOCK

Fundamental factors	Number (answers) <sup>a</sup>	Percentage
<b>Economic analysis</b>		
The economic situation	76	13.3
The trend of interest rate	38	6.7
<b>Industry analysis</b>		
The type of business	69	12.1
<b>Company analysis</b>		
Business policy	14	2.5
Stock's market price	98	17.2
Business performance	24	4.2
The administrator/ Business owner	30	5.3
Business reputation	44	7.7
Dividend payment	20	3.5
<b>Political analysis</b>		
Political situation	90	15.8
Government policy	67	11.7
Total	570	100.0

<sup>a</sup> Can give more than one answer

## 2. The Understanding in the Data regarding the Fundamental Analysis

The results of the study reveal that 22.1, 26.0, and 46.1% of the sample group had understanding in the data regarding the fundamental analysis in a high, moderate, and low level respectively while 5.8% of them had no understanding about it (Table x).

TABLE X  
THE UNDERSTANDING IN THE FUNDAMENTAL ANALYSIS

Results	Number (persons)	Percentage
High level	107	22.1
Moderate level	126	26.0
Low level	223	46.1
No understanding	28	5.8
Total	484	100.0

### 3. The Source of the Data regarding the Fundamental Analysis

The results of the study reveal that the sample group obtained the data of fundamental analysis from business newspapers / newspapers of stock, radio/TV, and websites of broker companies were 26.6, 18.2, and 17.9% respectively (Table XI).

TABLE XI  
THE SOURCE OF THE DATA REGARDING THE FUNDAMENTAL ANALYSIS

Sources	Number (persons) <sup>a</sup>	Percentage
Business newspapers/ Stock newspapers	165	26.6
Radio/TV	113	18.2
Websites of broker companies	111	17.9

Documents in the brokers' trading halls	90	14.4
Daily newspapers	82	13.2
Websites of SET	52	8.4
Websites of efinancethai.com	8	1.3
Total	621	100.0

<sup>a</sup> Can give more than one answer

### 5.10.2 Technical Analysis

#### *1. The Technical Analysis Instruments for Decision Making in Trading Stock*

The study reveals that the technical analysis instruments employed by the sample group for their decision making in trading stock were candlestick, moving average, and support level/resistance level which accounted for 19.0, 18.1, and 15.6% respectively. (Table XII)

TABLE XII  
THE TECHNICAL ANALYSIS INSTRUMENTS FOR DECISION MAKING

Fundamental factors	Number (answers) <sup>a</sup>	Percentage
Candlestick	389	25.6
Moving average	310	20.4
Support level/Resistance level	252	16.6
RSI	152	10.0
MACD	120	7.9
Trend line	110	7.2
Stochastic	96	6.3
Graph patterns	64	4.2
On balance volume,	22	1.4

Volume		
Fibonacci ratio	5	0.4
Total	570	100.0

<sup>a</sup> Can give more than one answer

### *2. The Understanding in the Technical Analysis*

The study reveals that 35.6, 32.7, and 25.0% of the sample group had understanding of the data regarding the technical analysis in a high, moderate, and low level respectively while 6.7% of them had no understanding about it (Table XIII).

TABLE XIII  
THE UNDERSTANDING IN THE TECHNICAL ANALYSIS

Results	Number (persons)	Percentage
High level	172	35.6
Moderate level	158	32.7
Low level	121	25.0
No understanding	33	6.7
Total	484	100.0

### *3. The Source of Knowledge regarding the Technical Analysis*

The study indicates that the sample group obtained the knowledge of the technical analysis from the analysis of broker analysts, pocket books concerning the technical analysis, and information from marketing officers for 37.6, 22.3, and 19.7% respectively (Table XIV).

TABLE XIV  
THE SOURCE OF KNOWLEDGE REGARDING THE TECHNICAL ANALYSIS

Sources	Number (persons) <sup>a</sup>	Percentage
Analysis of broker analysts	340	37.6
Pocket books concerning the technical analysis	202	22.3
Information from marketing officers	178	19.7
Training courses	70	7.7
Business newspapers/ Stock newspapers	62	6.9
Courses taken in the university	52	5.8
Total	904	100.0

<sup>a</sup> Can give more than one answer

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**CHINESE CULTURE ATTITUDES AND HIGHER EDUCATION INVESTMENT**

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**ABSTRACT**

It has been found that the Chinese culture and human capital theory are very closely related. Human capital theory emphasizes an education and the acquiring of skills which benefit growth of society economically and enhances an individual's social mobility (Psacharopoulos & Woodhall, 1986; Shultz 1971). Similarly, the Chinese culture stresses the gaining of knowledge can enhance an individual's status and wealth. The belief in personal development through education is profound in the Chinese culture. It is believed that without education one cannot have a good future (Bai, 2010; Tilak, 2002). This paper investigated the relationship between Chinese culture attitudes and higher education investment in Hong Kong at a local college. Data were collected via a questionnaire survey and in-depth interviews were used to validate the questionnaire. Names of students involved were changed due to confidentiality.

The principle finding of this paper was that the Chinese culture have influenced higher education investment.

**Keywords**

Culture, higher education investment, filial piety, human capital

**CHINESE CULTURE**

According to the traditional Chinese culture, wealth is equivalent to knowledge gained through education. It is through the access to knowledge and studying that an individual can have the opportunity to progress in society and gain power, wealth and status. This traditional thinking has a long history which dates to the time when the first Imperial Examination was first held in China (Tilak, 2002; Gan, 2008). The Imperial Examination was a system set up for recruiting people to work for the government based on their performance of exams rather than based on their social status (Zhang, 2015). Thus, those who passed the exams could expect to be appointed to prestigious positions. This allowed men of the lower class to rise through the ranks (Ebrey, 1997). At the time, most Chinese people believed that if they work hard enough in their studies, they will have a chance to improve their life and standard of living. The Imperial Examination was used as a vehicle for social mobility, which was accessible to nearly all. It inspired hope in people, especially those who wanted to succeed in life. And this line of thinking still exists in Hong Kong.

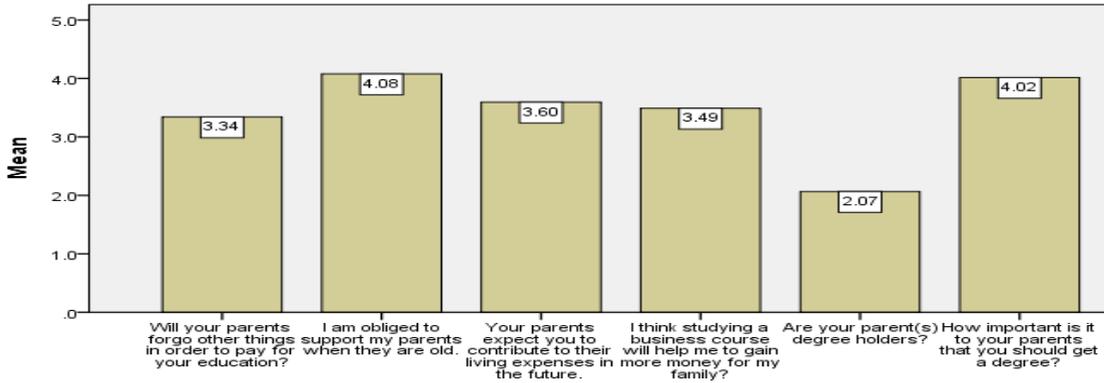
From a study carried out by Ho (2006), she examined the social disparity of family involvement in education in Hong Kong to see how education is viewed. She looked at family resources and networks and their effects on educational opportunities. She found that most Chinese people believed

that academic qualifications are most important aspirations. And academic success still remains the route to a good job in Hong Kong. This cultural norm leads people to devote time and energy to supervise their children's learning at home as many parents hold high aspirations for their children.

According to Ho the more well off is the family, the more are resources and effort, it puts aside for children's education (Ho, 2006). The 'family' investment in education is not just for the child's personal benefit. It is also seen as 'old age insurance' which is a form of guarantee that when parents are old, they will be supported by their children. This is very typical of Hong Kong which is essentially a Chinese society.

In addition, Chinese societies are very much into the notion of filial piety and this notion is prevalent in Hong Kong. Yung (2002) reported that the filial attitudes of elderly people were positively correlated with higher expectations of social and psychological support from their family members. Most parents do their very best to educate and take care of their children. Education is seen as investment (Hwang, 1999) and this is the reason why children see studying as their 'duty'. They must study hard. Most children assume the obligations of filial piety and are willing to repay and support their aging parents. When any family member encounters trouble in life, other family members are obliged to help (Hwang, 1999). Thus, this explains why the Chinese see education as something they could not do without and it explains why young people see studying as part of their so called 'duty', to be fulfilled.

Below is Appendix A, designed to answer the question: Is there a relationship between the Chinese culture and higher education enrolment? Areas examined are listed in Appendix A:



From the questionnaire survey (Appendix A), it was found that the highest percentage rated by students was for the question 'I am obliged to support my parents when they are old'; the mean score for this was 4.08%. The second highest percentage was for how important it was to your parents that you should get a degree. The mean for this was 4.02%. The other question, 'your parents expect you to contribute to their living expenses in the future' was the third highest. This had a mean of 3.60%. Students think

studying a business course will help them to gain more money for their family was rated by students the fourth highest, indicating a mean of 3.49% which was just below the 3.5% mean score. The fifth highest was for the question 'will your parents forgo other things in order to pay for your education'. This indicated a mean of 3.34% and again it was below 3.5%. The lowest mean was 2.07% given to the factor 'are your parents degree holders?' This could be due to the fact that parents had very little opportunity to study in the past owing to economic reasons before the economic boom in South East Asia at round the 1940s-50s (Tilak, 2002) and in those days only the rich could afford to have education and thus, many had to give up their studies in order to work.

Appendix A was designed to determine whether there was a link between the Chinese culture and higher education enrolment. Students ranked the statement, 'I am obliged to support my parents when they become old' as the most important, and they also ranked having a degree as important to their parents. It was also found that it was important for students to contribute to their parents' living expenses once they start working. This appears to suggest that students were influenced by the Chinese culture and its emphasis on filial piety. Further evidence of this was obtained from the in-depth interviews, thus, validating the questionnaire survey as well as gaining greater understanding of how the students felt in this respect.

The questions asked in Appendix B (in-depth interviews) answer the research question whether Chinese cultural attitudes exert any influence on tertiary education. The first question was - Do you think people in Hong

Kong have been affected by the traditional family value of education? From the interview, it was found that most students said their parents wanted them to study hard and that education was important.

‘Yes, most family members are degree holders, so my family told me I must get a degree and cannot be worse off than them’ (Jason Lee). He further added: ‘Yes, it was important for me to have a degree, as this was what my parents expected of me’.

‘Many parents force their children to play piano, do sports, and learn a foreign language, so as to equip them to get into a good school, and a good university later on. Yes, it was important to my parents that I should be a degree holder’ (Wing Ip).

Joe Li simply said that his parents’ see a degree as being ‘equal to money’. And another student said that his parents would forgo some things so that he could study, such as not going on so many holidays as they need to pay for his college fees (John Chan). Their comments validate the questionnaire survey, which showed that parents place a high priority on their children’s education.

The above words of students overall confirmed the view that parents believed that having a degree was important and this matched the questionnaire survey (4.02).

From both the in-depth interview and questionnaire survey it has been found that all parents had paid for all their children's education fees. This not only validates the questionnaire survey, but it also tells us how education is valued by parents as well. The next question asked under Appendix B – was 'Do you need to support your parents when they are old?' All students at the interviews said that they would either need to or they had an obligation to support their parents. Their views can be summed up in the following:

'Yes of course, it is my responsibility and duty to look after them' (Wing Ip).

'...Not at the beginning, but after getting a degree I will help to contribute to home expenses and ... I will buy them a house when they are old'. My parents have contributed so much for me, so I need to repay them' (Marvin Leung).

'I feel responsible that I should look after them when they are old' (Heidi Sung).

'Yes, boys are still regarded as the main breadwinner – they need to earn and support the family. All males need to support the family and it would

not be good if your wife was to support you. It would be shameful' (Marvin Leung).

The above sample confirmed that Chinese cultural attitudes still have an impact and that students were willing to look after their parents when they become old. This was evidence of the Chinese culture, linked to the notion of filial piety.

The fifth question I asked in the interview was on a similar line to the previous question: 'Do your parents expect you to contribute to their living expenses in the future when you start work?' Most students said they would contribute or have said something on a similar line:

'Yes, my parents expected me to contribute to their living expenses' (Heidi Sung).

'My dad expects me to contribute later when I start work' (Jason Lee).

'My dad is a good son and he takes care of his mother, he takes her to doctors, spends time with her, so I will do the same and I will contribute part of my salary as well if I am earning' (Samantha Wong).

Their comments again validate the questionnaire.

The sixth question asked in the interview was whether students thought that studying for a business degree would help them earn more money for their family. It seems that most were not too sure about earning more money, owing to competitions in the labour market. Their views were reflected in comments made by both Joe Li and Heidi Sung who said:

‘Nowadays a degree is not enough, it was important to study above that level, say getting an MA or a PhD’. Jason Lee echoed this view: ‘It is common to see students with a degree everywhere (in his words: ‘The streets are full of them!’) Without studying further, we cannot compete, so there is a need to go higher e.g. obtaining an MA or a PhD etc. And another student, Freida Chan, said she did not think it will help her to gain more money. However, she did say that the potential for earning money was there, as Hong Kong is a financial centre’.

Heidi Sung thought that a BBA degree could help her to earn a good living, as there are more openings and opportunities available. The potential for earning can be great. Similarly, Samantha Wong said: ‘Hopefully I can earn more money, if there was no economic downturn.’

## **CONCLUSION**

Tilak (2002) has previously said that the Chinese culture has a strong influence on higher education investment. Both the questionnaire survey and in-depth interviews confirmed this view. It has been found that all

parents had paid for the students' fees and this view reflected the importance of education in parents' eyes, and in Hong Kong all parents would actually pay for their children's education (Ho, 2006). It is their duty to do this as parents. To parents, education is an investment (Hwang, 1999) and this is the reason why children see studying as their duty. They study hard to earn so that they could assume the obligations of filial piety, and they are willing to support their parents when they are old. This seems to confirm what Ho (2006) had said in his study regarding the notion of 'old age insurance'. All students said they would support their parents, regardless of whether it was requested explicitly or not. Here are the words of two students from the interview: "Yes, I feel responsible that I should look after them when they are old" (Heidi Sung). And another student: "Yes, of course it is my responsibility and duty to look after them" (Wing Ip). Their views concurred with Yung's (2002) finding that the Chinese society adheres to the notion of filial piety, and this notion is prevalent in Hong Kong, as these students are very much affected by this line of thinking. However, the study also found that apart from cultural reasons, the need to compete economically is another reason for higher education investment in Hong Kong. This phenomenon corresponded with studies carried out on social mobility (Psacharopoulos & Woodhall, 1986; Shultz, 1971; Ebrey, 1997; Bai, 2010).

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## **Major Environmental issues of Kaziranga National Park , Assam, india**

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### **Abstract**

Kaziranga National Park is a World Heritage Site in the Golaghat and Nagaon districts of the state of Assam, India. It is the single largest undivided and representative area of the Brahmaputra valley floodplain, grassland, and forest which supports variety of wildlife. The park represents one of the last unmodified natural areas in North Eastern regions of India. It is inhabited by the world's largest population of one-horned rhinoceroses as well as many mammals including tigers, elephants, panthers and bears, and thousands of birds. Major threats to Kaziranga National Park primarily affect its significant natural habitat and its rare and endangered species. Poaching, spread of invasive species, livestock grazing, highway traffic, unplanned tourism infrastructure and seasonal flooding are the major environmental issues in India which continues primarily in the region of Kaziranga National Park. Likewise, potential threats to the site which may pose challenge include the changing demographic and economic profile of the local population, illegal fishing and stone quarrying adjacent to the park, tourist pressure and river bank erosion. The location of various threats is both inside and outside the site. The predominantly anthropogenic drivers of these threats have long-term implications for the site from a conservation perspective. This paper attempts to analyze the various threats to the biodiversity of Kaziranga National Park, its conservation strategies and sustainable development. The proposed study adopted the empirical method to collect data and information .

*Key words : Kaziranga National Park, environmental issues, conservation strategies.*

### **Introduction**

The Kaziranga National Park (KNP) is a world renowned protected area in Assam, India situated on the southern bank of Brahmaputra River and at the foothills of the Karbi Anglong Hills in the eastern part of North east India. The park is spread over two districts—Golaghat and Nagaon—with majority of the area falling within the administrative boundaries of Golaghat. Kaziranga is located between latitudes 26°30' N and 26°45' N, and longitudes 93°08' E to 93°36' E within two districts in the Indian state of Assam—the Kaliabor subdivision of Nagaon district and the Bokakhat subdivision of Golaghat district. The park is approximately 40 km (25 mi) in length from east to west, and 13 km (8 mi) in breadth from north to south. Kaziranga covers an area of 378 km<sup>2</sup> (146 sq mi), with approximately 51.14 km<sup>2</sup> (20 sq mi) lost to erosion in recent years. A Biodiversity hotspot, it is the single largest undivided and representative area of the Brahmaputra valley floodplain, grassland and forest with associated diversity.

It is a vast wet alluvial tall grasslands, interspersed with numerous water bodies and patches of deciduous to semi-evergreen woodlands. It has 52% tall grassland, 5% short grass or marshes, 7% sand cover, 29% woodland, 7% waterbodies and nearby hilly areas form complexes of habitats which supports variety of wildlife (Kushwaha,1997). It is a UNESCO World Heritage site and was inscribed for being the world's major stronghold of the Indian one-horned rhino, having the single largest population of this species, currently estimated at over 2413(2018 estimation). There are five surviving species of rhinoceros left in the world. Assam takes great pride in conserving the great Indian one-horned rhino (*Rhinoceros unicornis*) as it is home to more than two-thirds of the wild population in the world. Besides Rhino it is inhabited by many other mammals including tigers, elephants, panthers and bears, and thousands of birds . Kaziranga is home to the

highest density of tigers among protected areas in the world, and was declared a Tiger Reserve in 2007. The park is home to large breeding populations of elephants, wild water buffalo, and swamp deer. Kaziranga is recognized as an Important Bird Area by Bird Life International for conservation of avifaunal species. When compared with other protected areas in India, Kaziranga has achieved notable success in wildlife conservation.

Kaziranga National Park has completed 100 years of its existence in February 2005 and it has achieved Spectacular conservation success anywhere in the world. Major threats to Kaziranga National Park primarily affect its significant natural habitat and its rare and endangered species. Rhino poaching in Assam is one of the major environmental issues in India which continues in the region of Kaziranga National Park, Manas National Park and some other grasslands of Assam. Sport hunting became common in the late 1800s and early 1900s (Talukdar *et al.*,2008). Besides, spread of invasive species, livestock grazing, highway traffic, unplanned tourism infrastructure and seasonal flooding are the major environmental issues in India which continues primarily in the region of Kaziranga National Park. The proliferation of various weeds like Mikania, Mimosa cause ecological degradation of the habitat and is a major problem confronting the park authorities.

However, the biodiversity hot spot Kaziranga National Park is a unique place for its diverse flora and fauna and it attracts large number of tourists every year. It is an wonderful tourist spot in Assam. Thus Kaziranga National Park needs systematic and scientific approach for biodiversity conservation and long-term sustainable development.

**Aims and Objective of the Study:**

The main aim of the present study is to know the Major Environmental issues of Kaziranga National Park and the conservation measures. Accordingly the objectives of the present study are as follows:

1. To study the Major threats of Kaziranga National Park.
2. To study the conservation strategies of Kaziranga National Park.

**Hypothesis:** Major threats to Kaziranga National Park primarily affect its significant natural habitat and its rare and endangered species. Thus Kaziranga National Park needs systematic and scientific approach for biodiversity conservation for its sustainable development.

**Methodology of the Study :**

The present study is a kind of library based exploratory study as well as field study. Socio-cultural and biological features associated with each sacred forest was collected through a questionnaire, followed by field visits and interactions with elderly people and prominent citizens. The species composition was studied in all the visited sacred forests through visual observations . The desk work primarily included the collection of literature/reference materials in the form of hard and soft copies. The hard copies included the books, reports, reprint of published research papers, leaflets etc whereas the soft copies included web pages, pdf files (e-reprints) downloaded from the internet. The literature so collected was referred and critically analyzed and the issues were understood from the perspectives of the objectives and hypothesis of the present study.

**Observational Finding and discussion:**

**i) Rhino Poaching :**

One horned Rhinoceros of the Kaziranga National Park face dual threat to their lives- from the flood and , the more dreaded one, from poacher. A total of 239 one-horned rhinos have been killed by poachers in Assam from 2001 to 2016, and despite high security, most were from Kaziranga National Park, which accounted for 161. Besides, the year 2017 saw more than 15

poaching cases, a little less as compared to the 18 incidents that took place in 2016.

**ii) Flood :**

Floods have been one of the most exogenous sources of constraints to the development of KNP. Causes of flood in Kaziranga NP are mainly natural and human activities or anthropogenic. Due to the deforestation in the upper catchments area of the Brahmaputra, the intensity of the flood is continuously on the rise. It has been years, KNP submerges for over 10 days which created panic and chaos among the animals. During flood most of the animals including the Rhinos have to migrate from the Park and take shelter on the adjacent high grounds in Karbi Anglong Hills or wherever they may find shelter. These areas are populated and protection of the animals during the period of migration from and back to the Park becomes an uphill task as enforcement network is almost non-existent in such areas. Many animals, especially the deer and particularly the young, old and sick lose their lives by drowning, poaching or run over by vehicular traffic on the National Highway.

Flood is also necessary and beneficial for maintaining the ecology of the grasslands and forests though it has some adverse effect. The gradual rising of the water level and quick recession is undoubtedly beneficial but floods of severe intensity which submerge the entire Park for a prolonged period deprive the animals from food and shelter. Recent floods ( 2017) in Assam have claimed the lives of 124 animals, including nine rhinos, in Kaziranga National Park . Besides, 130 other animals were injured in KNP when the river waters submerged 85 per cent of the World Heritage site, KNP. Of the nine rhinos found dead, four got drowned and four others died unable to flee from rising water because of their old age. The ninth one was killed by a tiger on a highland, the KNP official said. The authorities had kept ready nearly 200 highlands for the animals to take shelter during the floods, but several of the highlands got submerged by the waters of Brahmaputra and Diflo rivers for a couple of weeks

**iii)Numaligarh Refinery :** The Numaligarh Refinery Limited (NRL) is located in the self titled town of Numaligarh falling under the Bokakhat sub-division of Golaghat district. The KNP is not more than 20 km from the refinery. Although the proposed site was in close proximity to the KNP, the site visit report downplayed this factor and gave the green signal. The matter was taken up by an environmental group called the Bombay Environmental Action Group (BEAG) who insisted that the government should prohibit the setting up of the Refinery in such an ecologically sensitive zone under the Environment (Protection) Rules, 1986. Moreover, the state-owned NRL made a decision to locate the bioethanol plant without prior notice opens in a new window to the local people. In February 2016, the State of Assam granted land area for the refinery project at the north of NRL's industrial area. The site is located inside the Kaziranga National Park's protection area, the "No-Development Zone". Construction on it is prohibited by the Indian Government's previous decision. The release of liquid petroleum hydrocarbons from Numaligarh petroleum refinery into the environment cause pollution of Brahmaputra river and other waterbodies of the park, the cost of which is very high for removing it.

#### **iv)Plantations**

Tea is a major cash crop of Assam and the state alone accounts for more than half of the area under tea cultivation in India and also produces more than 50 % of the total tea production of the country. While the tea industry has definitely contributed to the economic development of Assam, it has also had detrimental effects on the environment. In Golaghat paddy fields and unclassified forest areas, both in the foothills of KA and as well as near North Nambor Wildlife Sanctuary, were being gradually converted to tea gardens (Gogoi . M, 2015).

Apart from tea, rubber plantation is being vigorously promoted in Assam by the government. The monoculture rubber plantations have been proved to

have negative environmental consequences like biodiversity loss, climate change and ground water depletion (Majumder et al 2014). The promotion of rubber plantation in biodiversity rich areas such as KA can do irreparable harm to the flora and fauna of the region.

### **v)Jhum Cultivation**

Jhum or shifting cultivation in Assam is practised in two districts: KA and NC Hills. In KA, like in other parts of the country, there has been a rise in population, coupled with scarcity of land which has resulted in shorter jhum cycles. The shorter jhum cycles limits the natural regeneration of plants which can check the negative impacts like soil erosion and depletion of biodiversity. As productivity is dropping due to shorter cycle, newer areas are being brought under cultivation leading to further loss of forest cover

### **vi)Crop Raiding:**

The animal depredation on crop and property and occasional cattle lifting by large predators cause considerable hardship to the poor people who reside on the fringe of the National Park. These people depend on their crop for living and most work their land with plough animals. When their crops are destroyed by animals or their plough animals killed by predators, their economy is shattered. Antagonism towards wildlife is a natural reaction. No amount of preaching and education on conservation can retrieve the situation. Thus it is essential for the Department to provide some material help to these people through compensation for crop losses and loss of livestock because of animal predation. Therefore, to encourage cordial relation between the Park authorities and the villagers living in the fringe areas of the Park and also to involve these people actively in conservation efforts, Eco-development works by the Park managers in the peripheral areas of the Park needs to be taken up on a larger scale.

### **Wildlife Conservation Strategies:**

According to Official Support Committee, Kaziranga National Park , the wild life conservation strategies consist of mainly following components

- Anti- poaching activites
- Habitat Management - weed eradication, clearance of water channels and water bodies
- Flood or monsoon management
- Eco-development
- Sustainable eco-tourism
- Man –animal conflict management and

**Anti poaching activities:**

Anti Poaching activities have been the main agenda in management of park since long. With the increase in poaching activities from 1980s to late 1990s with a number rising to 48 rhinos in the year 1992 anti-poaching activities both inside the Park and outside were strengthened. According to the authorities of Kaziranga National Park anti-poaching drive has been intensified with 1,247 personnel, a number that includes forest guards as well as other park staffers. They are deployed on round-the-clock vigils, patrolling by foot, elephant, vehicle and boat. Two Belgian Malinois dogs and their trainers are also a part of their team. The park contains 178 anti-poaching camps, including floating ones on the Brahmaputra and adjoining streams. Electronic Eye surveillance cameras are also used to step up continuous monitoring of the park. The state government is on its way to adopting the Rhino DNA Indexing System. With this technology, an individual rhino's unique DNA profile is compiled in a ready-to-reference database. Though the poaching number have come down maintenance of these arrangements require resources in the form of man power, logistic support to the camp, mobility of the staff, infrastructures (buildings, roads, patrolling paths), equipment etc. to keep the high moral and efficiency for performing the most difficult tasks. The present situation is highly inadequate and may adversely affect the protection mechanism if it continues for long.

Besides, a system of reward for the staff as an incentive to recognize their efforts in apprehending rhino poachers, is also required. There are number

of cases where the anti-poaching staffs are bitten and injured by rhinos, tiger and other wild animals rendering them invalid for normal duty. The meager medical allowance they receive is not at all sufficient for proper treatment. As such provision for medical help is very essential. The anti-poaching infrastructure in newly acquired additions and reserve forests is highly inadequate and practically non-existent in many areas.

### **Habitat Management**

As Rhinoceros is umbrella species, protection of Rhinoceros equally benefitted all other Biodiversity value . Habitat management in Kaziranga is basically restoration of grasslands- main habitat of most of the Habivores which includes

- Controlled Burning
- De-siltation of water-bodies and channels
- Weed control & eradication
- Water retention temporary dam

### **Controlled Burning**

Tall grasses which comprises several species like *Imperata cylindrica*, *Erianthus ravennae*, *Phragmites kharka*, *Arundo donax* etc start to dry out from January onwards. To facilitate growth of new palatable sprout and arrest succession of woody species, grasslands are burned in a planned and pre determined manner. For this purpose, whole Park has been divided into 30 major multipurpose blocks which have been defined on the basis of natural features, vegetation etc.

## **De-siltation**

Brahmaputra River and tributaries originate in one of the most heavy rain fall area in the World, these rivers carry a large amount of silt every year and as Kaziranga National Park is situated in flood plain, considerable amount is deposited in water bodies of the park.

An action plan has been prepared under the guidance of Kaziranga Management Plan to control the problem and restore to original position as far as possible. Every year manual de-siltation works has been carried out in water bodies in a priority basis.

## **Weed Eradication:-**

The invasion of *Bombax cebia* and *Lagerstroemia speciosa* woodlands into the grassland space has been a problem for Mega herbivores in Central and Western Ranges of KNP. Other invasive weeds such as *Ipomia carnea*, *Glochidion indica*, *Ricinus communis*, *Eichornea crassipes*, *Rosa bracteata*, *Mikania micrantha* are the cause of botheration and mechanical removal is practicing. Moreover, two invasive species of the Mimosaceae family namely *Mimosa invisa* (fig-1) and *Mimosa rubicaulis himalayana* have spreaded into 120 ha. prime habitat of tall grassland and threatening very existence of the park. Management has spending considerable time and resources to control this problem. Till now, only manual eradication has been employed. This method involves two times cutting, uprooting before or maturing flowering.

## **Grassland Management:-**

Grassland management is one of the prime objectives at the park especially, when it supports a large concentration of various species of herbivores. The fact that the grasslands at Kaziranga are a seral stage makes it even more essential to have management interventions so that the process of natural succession is arrested at that stage. Range wise burning schedule for different block will be prepared to provide sufficient areas for movement,

shelter and food for various animals. The possibility for converting the existing blocks in to uniform grids (1Kmx 1Km) will be explored and will be executed where ever possible for effective management of burning.

### **Wet Land Management**

**i) Bund Construction:** With the onset of dry season, bunds are also constructed in some of the *Beels* (water bodies) to retain water to attract various species of migratory avifauna.

**ii) Flood or monsoon management:** Flood and monsoon management in Kaziranga National Park has to be seen as continuous process and exercise to be generated every year. Flood management is associated with health management since large number of animals within the park and human being resided in the nearby villages succumb to water borne diseases every year as water resource become contaminated

**iii) Highland Construction:** Some highlands have been constructed inside the Park to provide shelter to the animals during high flood (fig-3). However, some more highlands with bigger dimension are required to be constructed to provide shelter to the marooned animals.

**Man –Animal Conflict:** A huge market exists for wildlife and wildlife products in west Asia, central, south and Southeast Asia from the context of traditional medicinal practices. Insurgent groups have identified wildlife harvesting as an easy and comfortable funding source with the help of local villagers, fringe dwellers, pastoralists, farmers, trackers and trappers. This has been transforming ordinary villagers into professional poachers and is one of the primary factors behind the incessant man-animal conflicts reported across the nation. Among the animals killed by poachers, rhinos accounted for the highest number. As many as 21 rhinos were poached in 2015, another 22 in 2016 and nine more in 2017. The highest numbers of rhino poaching incidents were reported from Kaziranga National Park where 28 pachyderms were killed in 2016 and 2017.

### **Conclusion:**

K.N.P. needs systematic and scientific approach for long-term sustainable development. The recurring flood and erosion of river Brahmaputra, Poaching, weed Menace, Pollution of the neighboring areas etc. are the major threats for conservation of biodiversity of this world heritage site. Priority should be given for the protection and conservation of wildlife and natural resources of this park. One-horned rhinos are the pride of the nation. It is not clear that rhino horn serves any medicinal purpose. Finally, no environmental legislation irrespective of how effectively it is implemented will stop the ongoing assault on the environment under the cover of development unless mindsets of people won't be changed. It is high time that we should give-up our present lifestyle which could contribute degradation of our environment and biodiversity.

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## **Board gender diversity and CSR performance: A comparison of industrial age and creative economy firms**

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### **Abstract**

Legislation in major economies aimed at addressing gender imbalances at the highest levels of organizations creates incentives for corporations to increase the number of women on boards of directors. Much research has focused on the impact of board gender diversity on financial performance. Recently there has been a shift to studying the effect on corporate social responsibility (CSR). To date findings are equivocal with some studies demonstrating a positive effect and others reporting a negative or no effect. This paper contributes to the debate by studying the impact of board gender diversity on corporate environmental performance and the emerging area of gendered CSR (GCSR). We take an innovative approach by studying a sample of industrial and creative economy firms. The former tending to be male gender skewed and the latter tending to be female gender skewed promised to more clearly capture the influence of gender on corporate behavior. We used a sample of 458 companies appearing in the 2018 RobecoSam sustainability report. Our findings indicate creative economy companies perform better than industrial companies on environmental

performance and some aspects of GCSR-higher representation of women in the overall workforce and in management.

**Keywords:** Corporate social responsibility, environmental performance, gendered CSR, board of director diversity, creative economy.

## **1. Introduction**

An emerging topic in the board composition literature is the influence of board gender diversity on corporate social responsibility performance (Bear et al., 2010; Catanzariti and Lo, 2011). Recent studies on the topic (Cucari et al, 2017; Fernández et al 2018; Harjoto et al, 2015) support the belief that gender diversity has a positive influence on CSR. Furlotti et al (2018) demonstrated a positive relationship between the existence of female board members and gender related CSR initiatives. Landri et al (2016) indicated that the higher the proportion of women directors, the greater the likelihood that a company would be recognized in the Most Admired Companies, the Most Ethical Companies, the Best Companies to Work for, and the Best Corporate Citizens. Additionally, several studies suggest diverse boards bring more ideas, resources, and a wider perspective to corporate decisions that give rise to a broader range of solutions, higher financial performance (Erhardt, et al., 2003; Hussain, et al, 2018; Mahadeo, et al., 2012); more prosocial actions and higher CSR performance (Adams et al., 2015; Galbreath, 2011; Terjesen et al., 2009). Despite this, the benefits of gender diversity on corporate boards is equivocal. Haslam et al, (2010) in their study of FTSE 100 companies discovered a 37% valuation premium of firms with male only boards. Triana et al, (2013) uncovered a negative relationship between strategic change and board diversity. Chapelle and Humphrey (2014) found a negative correlation between board diversity and financial performance in some industries but not in others. Liu et al (2014) demonstrated no impact of gender diversity on the performance of Chinese state-controlled firms. A meta analysis by Pletzer et

al, (2015) demonstrated no relationship between corporate financial performance and the presence of women on corporate boards.

This study seeks to bring some resolution to the equivocal findings by examining the influence of board of director diversity on corporate social responsibility in industrial firms versus creative economy firms. Previous studies correctly employed samples of firms from a variety of industries which differ in terms of market orientation (MO) (Kiessling, et al, 2016). Since CSR and MO share similarities such as a proactive orientation (Narver, et al, 2004) and strives to develop a common response to environmental pressures (Pinto and Curto, 2007) examining the topic in multiple industries, while promising, may not adequately capture women's influence on corporate decisions and may actually reflect differences in board best practices and company responses to environmental and social legislation. This paper aims to isolate the impact of gender differences by comparing CSR outcomes across a sample of industrial and creative economy firms. We chose the latter because those firms are increasingly at the forefront of corporate polarization characterized by male-dominant and female-dominant companies (Carbonell and Castro, 2008; Holden and McCarthy, 2007; Silverstein and Sayre, 2009). This suggests the larger female representation at all employment levels in creative economy firms will result in a less ambiguous expression of women's values and decision processes compared to industrial firms. In particular, we suggest women's higher representation in all managerial strata in creative economy firms brings distinct participative and democratic leadership styles that imply greater awareness of stakeholder needs (Wang and Calvano, 2015) which in turn may lead to higher CSR performance (Bear et al, 2010; Larrieta-Rubín de Celis, 2015). In essence this study compares CSR performance in male gender skewed versus female gender skewed industries (Ko et al, 2015). We explore the question "Does board of director diversity lead to higher corporate social responsibility performance in industrial versus creative economy companies?" by examining the performance of 458 firms reported in the

2018 Robecosam annual corporate sustainability assessment. This paper is organized as follows. Section 2 presents a review of the literature and hypotheses. Section 3 discusses variable development and data selection. Section 4 details methods, results, and future research directions.

## **2. Literature Review and Hypotheses**

### **2.1 Gender Diversity and Environmental CSR**

Men and women differ in terms of their attitudes, choices, and behaviors concerning environmental sustainability with women demonstrating a larger propensity to take pro-environment actions (Brough et al, 2016; Lee and Holden, 1999). Studies of the impact of board gender diversity on corporate social responsibility performance demonstrated a positive relationship (Ciocirlan and Pettersson, 2012; Diamantopoulos et al., 2003; Glass et al., 2016; Harjoto et al., 2015). This may be attributable to women's greater concern with ethical behavior (Ford and Richardson, 1994; Gifford and Nilsson, 2014; Setó-Pamies, 2015), stronger pro-social corporate behaviors (Landry et al, 2016; Rao and Tilt; 2016), and heightened attention to stakeholders (Galbreath, 2011). Therefore, higher representation of women on boards increases CSR activities (Amran et al., 2014; Landry et al., 2016) and environmental performance (Bear et al., 2010; Boulouta, 2013; Ciocirlan and Pettersson, 2012; Cucari et al., 2017). This leads to the following hypotheses.

H1: Creative economy firms will exhibit higher environmental performance than industrial firms.

## **2.2 Gender Diversity and Gendered CSR**

Growing interest in gender equality within business has given rise to Gendered Social Responsibility (Grosser and Moon, 2017; Karam and Jamali, 2013). It is defined as the incorporation of gender equality goals that guarantee equal opportunities for women and men in an organization's internal and external corporate social responsibility initiatives (Pearson, 2007; Velasco et al., 2013). Women on boards are likely to propose and support initiatives germane to the advancement of women in the organization. Furthermore, their presence is likely to increase board sensitivity to women's issues (Bernardi and Threadgill 2010; Jamali et al., 2007; Konrad et al., 2008) and promote business practices that reduce female employee turnover (Nie et al., 2018). Consequently, organizations pursuing gendered CSR initiatives may exhibit a higher percentage of female employees, lower employee turnover, and a greater number of women in managerial ranks. The latter was chosen because female employees, disproportionately impacted by work/family issues, often make decisions to continue employment based on corporate policies related to flexible work hours (Batt and Valcour, 2003; Frye and Breugh, 2004) and the presence of female supervisors who exert a greater impact than male supervisors (Hearn et al., 2015; Nie et al., 2018). This suggests industrial and creative economy companies with greater board gender diversity will exhibit a higher on percentage of women in the workforce, lower female turnover, and a greater percentage of women in management. In addition, creative economy firms which tend to have a larger female representation than industrial firms are expected to exhibit higher scores. This leads to the following hypotheses:

H2a: Creative economy firms will exhibit lower female employee turnover than industrial firms.

H2b: Creative economy firms will exhibit a higher percentage of female employees than industrial firms.

H2c: Creative economy firms will exhibit a higher percentage of female managers than industrial firms.

### **3. Variable Development and Methods**

#### **3.1 Sample**

The data used in this study is derived from the 2018 RobecoSam sustainability report which has been used in previous studies (Churet and Eccles, 2014; Eccles, et al., 2015; Russell and Friend, 2018; Taylor, et al., 2018). The sample consists of 458 companies which were assigned to a creative economy or industrial category based on the methodology developed by Markusen, et al., (2008). Among the sample's 239 industrial firms 19.8% of board members were women. Ninety seven firms are European, seventy eight Asian, thirty nine are North American, sixteen Latin American, seven are from Australia/New Zealand, and two are South African. Of the sample's creative economy 219 firms of 31.3% board members were women. Ninety eight firms are European, sixty seven Asian, thirty three are North American, eight Latin American, thirteen are from Australia/New Zealand, and four are South African.

#### **3.2 Dependent Variables**

The dependent variables of interest are environmental performance percentage of female employees, percentage of female managers, and female employee turnover. Environmental performance is measured by the ratio of greenhouse gas

emissions per unit of revenue as reported in Bloomberg Terminal. Percentage of female employees was calculated as the number of female employees divided by the total number of employees. Percentage of female managers was reported in the RobecoSam database. Female employee turnover was computed as the product of percentage of female employees and employee turnover.

### **3.3 Independent Variables**

The two independent variables used in this study number of women directors and ratio of women directors and were collected from company annual reports and company disclosures reported in Bloomberg Terminal. The ratio of women directors was computed by dividing the number of women directors by the total number of directors.

## **4 Methods, results, and future research directions.**

### **4.1 Methods**

Hypotheses were tested by analyzing the mean and t-ratios for the variables- environmental performance, percentage of female employees, percentage of female managers, and female employee turnover. Results of the statistical analysis appear in Table 1.

### **4.2 Results and future research directions**

Hypothesis 1: Creative economy firms will exhibit higher environmental performance than industrial firms was supported. Creative economy firms generated an average of 35.59 tons of greenhouse gasses per \$ million revenue as opposed to an average of 318.12 for industrial firms ( $t = 0.00$ ). This finding is

unsurprising given that creative economy firms typically operate in so-called clean industries.

Hypothesis 2a: Creative economy firms will exhibit lower female employee turnover than industrial firms was not supported. Industrial firms reported mean female turnover of 11.95% versus 14.75% for creative economy companies ( $t = 0.00$ ). This unexpected finding may be attributable to the greater impact of economic fluctuations on industrial firms as opposed to creative economy firms which tend to concentrate on services.

Hypothesis 2b: Creative economy firms will exhibit a higher percentage of female employees than industrial firms was supported. Industrial firms reported a mean female employee population of 25.3% versus 44.59% ( $t = 0.00$ ).

Hypothesis 2c: Creative economy firms will exhibit a higher percentage of female managers than industrial firms was supported. Industrial firms reported a mean of 14.7% female managers as opposed to 23.26% for creative economy companies ( $t = 0.00$ ).

These findings lend support for the research stream that suggests a positive impact of gender diverse boards on CSR as it relates to environmental performance and gendered CSR. The methodology which breaks the sample into male-skewed and female-skewed companies introduces a new variable. This is important because it extends creative economy research which has traditionally focused on the creative class, the creative city, and cultural industries (Lazzeretti, et al., 2016) to now include corporate social responsibility and gendered CSR.

Future directions for research include comparing CSR and gendered CSR performance across both types of firms in different nation states to identify the role of legislation on board behavior. We expect European Union firms to perform better than North American firms because of the longer history and greater intensity of environmental and gender equality legislation.

**Table 1. Difference Between Variable Mean Scores for Industrial and Creative Economy Firms**

Variable	Company Type	Sample Size	Mean	Mean Diff	t-r
Environ Performance	Industrial	239	318.12	282.53	0.0
	Creative	219	35.59		
% Fem Director	Industrial	239	19.19	-3.23	0.0
	Creative	219	22.42		
% Fem Employees	Industrial	239	25.3	-19.29	0.0
	Creative	219	44.59		
	Industrial	239	14.7		

% Fem Managers

Creative	219	23.26
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% Female Turnover

Industrial	239	11.95	-2.8	0.0
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Creative	219	14.75
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\*\* Significant at the 0.01 confidence level.

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**Factors Affecting Working Capital Requirements of Thai listed  
Health Companies**

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**ABSTRACT**

Working capital helps smooth daily business operations. The objective of this research was to study the factors affecting the working capital size of Thai-listed firms in the health sector of the stock exchange of Thailand. The data obtained from this study included panel data on 29 firms' observations during the two-year period from 2016 through 2017. The statistic used was multiple regression. The results of the study revealed that operating cash flow, firm size, and profitability have an influence on the working capital size of Thai health firms.

Keywords: working capital, Thai, health

**INTRODUCTION**

The chief factor in financial management is working capital management since it has impact on profitability of a firm (Knauer & Wohrmann, 2013) as well as risk of the firm and firm value (Smith, 1980; Garcia-Teruel & Martinez-Solono, 2007; Akinlo, 2012). Efficient working capital management means that management can design and manipulate a firm's current assets and liabilities to match short-term obligations while also evading excessive investment in short-term assets (Eljelly, 2004). Firms must pay attention to current liabilities, which is the significant external source of firm funding (Fazzari & Petersen, 1993). Insufficient working capital not only harms the firm's profitability but also results in productions interruptions and inefficiencies and sales disturbances (Akinlo, 2012).

Current assets are a major part of total assets of a firm (Garcia-Teruel & Martinez-Solano, 2007). High level of current assets can help a firm achieve a substantial return on investment (Akinlo, 2012).

However, excessive current assets can also be harmful to a firm's profitability (Bhattacharya & Nicodano, 2001; Nazir & Afza, 2009; Erasmus, 2010). Claessens et al. (2012) demonstrate that during the financial crisis, disruptions to the supply of working capital lessened sales levels of the firms. Working capital management is managed strategically to enhance competitive position and profitability. Firms can reduce their financing costs and/or increase the funds obtainable for expansion of appealing projects by minimizing the amount of investment attached in current assets. Most of the financial managers' time and efforts are spent in pinpointing the non-optimal levels of current assets and liabilities and bringing them to optimal levels (Lamberson, 1995).

The main objective of this study is to investigate the determinants of working capital level of Thai health firms. The outcome of this study will be beneficial for owners, managers and other stakeholders of the company to comprehend the factors that affect working capital requirements.

## **LITERATURE REVIEW**

Working capital is defined as the difference between current assets and current liabilities and is normally utilized as a measurement of liquidity level of a firm (Mum & Jang, 2015). Working capital management is viewed as the management of current assets and current liabilities of a firm (Brigham & Houston, 2014). A firm's value cannot reach the optimal point in the long run unless it lasts in the short run. Firms collapse most often because they are unable to meet the working capital needs; thus, healthy working capital management is a requisite for firm survival (Brigham & Houston, 2014).

As far as the study of working capital management is concerned, Chiou et al., (2006), using the working capital size as the proxy of working capital management, examined the characteristics of the factors that impact working capital size of Taiwanese firms. They found that debt ratio and

operating cash flow affected working capital management. Nazir and Afza (2009) studied the factors determining working capital size of listed companies on the Karachi Stock Exchange. The regression results showed that the return on assets, debt ratio, operating cycle, and industry type influenced working capital size. Akinlo (2012) investigated the determinants of working capital requirements of firms in Nigeria. The results found that sales, growth, operating cycle, economic activity, size, and permanent working capital are firm-specific characteristics that positively propelled working capital policy. Wasiuzzaman (2013) investigated factors influencing the level of investment in net operating working capital in Malaysian firms and found that smaller and younger companies with few tangible assets, low debt, high and fast sales growth, high operating cash flows, and more stable incomes will have the greatest investments in operating working capital.

## **HYPOTHESIS DEVELOPMENT**

If a business can manufacture and sell its products quickly as well as promptly collect money from sales, e.g., customers pay in advance or cash collection is expedited from accounts receivable, the need to keep working capital for daily operation during the awaiting time will be reduced (Brigham & Ehrhardt, 2005). Therefore, the operating cycle, which is calculated from manufacturing and sale periods plus days of sales outstanding, will probably have a negative relationship with working capital size.

Operating cash flow is a gauge of the amount of cash engendered by a company's regular business operations. Operating cash flow represents the company's ability to generate cash and its working capital management policy. Having a lot of operating cash flow indicates that a firm that has sound working capital management, e.g., ability to expand the payable deferral period, resulting in less requirements for working capital. Therefore, operating cash flow more likely has a negative relationship with working capital size (Chiou et al., 2006).

Good working capital management prevents the need to expand working capital which result in external borrowing. Thus, the debt ratio seemingly has a negative relationship with the size of working capital (Chiou et al., 2006).

Firms that have a high growth rate should require more working capital than those with a low growth rate. Higher growth rates are associated with higher levels of inventories because enterprises hold more raw materials and inventories to cope with the expected growth rate (Elbadry, 2018). In addition, higher growth rate will need more capital to invest in account receivables resulting from increased credit sales (Banos-Caballero et al., 2011) However, in contrast, some previous studies (Petersen & Rajan, 1997; Cuñat, 2007) stated that firms with high growth opportunities exercise more trade credit as a source of financing and tend to grant less trade credit to their customers (Molina & Preve, 2009). Thus, they expect these companies to have a lower working capital requirement.

Companies with good operating performance attract external sources of funds (Shin & Soenen, 1998). It is not necessary for these companies to store much cash. Therefore, companies with good operating results proxy by the returns on investment are more likely to have a negative relationship with the size of the working capital (Charitou et al., 2006).

Previous research revealed that company size influences working capital size. For example, Erdogan et al., (2015) found that increase in size produces increments in the purchases on credit from suppliers and payment advances from patrons in financing of working capital. Therefore, the size of the company should have a negative association with the working capital size (Chiou et al., 2006).

From the information above, the following hypotheses were formulated shown in Table 1.

Table 1 Hypotheses of the research

Operating cycle	H1a	Operating cycle is positively associated with capital size.
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	H1b	Operating cycle is negatively associated with capital size.
Operating cash flow	H2a	Operating cash flow is negatively related to working capital size.
	H2b	Operating cash flow is positively related to working capital size.
Debt	H3a	Debt is negatively associated with working capital size.
	H3b	Debt is positively associated with working capital size.
Growth of firms	H4a	Growth of firm is positively related to working capital size.
	H4b	Growth of firm is negatively related to working capital size.
Firm size	H5a	Firm size is negatively related to working capital size.
	H5b	Firm size is positively related to working capital size.
Profitability	H6a	Profitability has a negative link to working capital size.
	H6b	Profitability has a positive link to working capital size.

## RESEARCH METHODOLOGY

### *Data Collection*

The sample of the study is composed of the listed health firms in the stock exchange of Thailand. The data set includes the period between years 2016-2017. Seventeen health firms are left with 29 observations.

### *Variables*

Following Shulman and Cox (1985), Working Capital Requirements (WCR) were included as a dependent variable as a measure of working capital requirement (cash and equivalents + marketable securities + inventories + accounts receivables) – (accounts payables + other payables). Working capital requirements are deflated by total assets to control the size effect.

The operating cycle (OPC) is the sum of days in inventory and days in accounts receivables.

Operating cash flows (OPF) is the sum of net profit after tax and depreciation and amortization.

Growth (GROWTH) is firm's sales variability measured by changes in annual sales.

The debt ratio (DEBT), which is calculated by dividing total debt by total capital, was used to evaluate the influence of long-term capital structure decisions.

Size is the natural log of total assets of firm.

#### Data analysis

In this study, regression analysis was performed to explore the determinants of working capital size.

#### Empirical results

Table 2. Regression Analysis of Determinants of Working Capital Size.

Variables	Coefficient	t-values	Sig
Constant	13.665	1.142	.266
Operating cycle (OC)	.120	-1.308	.204
Cash flow (CF)	541.279	6.086	.000**
Debt	-21.262	-1.623	.082
Growth	-.324	-1.357	.188
Logass	-6.246	-2.116	.046*

ROA	-2.919	-3.307	.003**
N =29, D-W =1.815, R Square =.779, Adjusted R Square =.719, F-Value =12.916			

Table II demonstrates that  $R^2$  has significant with 71.9, specifying that the working capital size could be well explained by independent variables in the regression model. The results of the study rejected H1a and H1b, indicating that operating cycle has no relationship with working capital size. The results of the study supported H2b: operating cash flow is positively associated with working capital size. These results support the work of Hill et al. (2010) who found that high operating cash flows allow a firm to use a conservative operating working capital strategy, and support Fazzari and Petersen (1993) who found that firms with higher cash flows have more ability to engender internal cash flows and thus would have higher levels of current assets, possibly resulting from the lower costs of funds invested in the working capital. The results of the study did not support H3a, H3b, H4b, and H4.

The results indicated that debt as well as growth of firms have no relationship with working capital size. The outcomes of the study support H5a, showing that size has negative relationship with working capital size, meaning that big companies require less working capital level. This finding is similar to that of previous researchers (Opler et al., 1999; Pinkowitz & Williamson, 2001) who found that small firms and firms with clear growth opportunities and riskier cash flows hold larger amounts of cash. It also corroborates the finding of Almeida et al. (2004) who found that larger companies are less financially constrained and therefore hold less cash than smaller ones. The results of the study confirmed H6a, that profitability has a negative link with capital size. This finding substantiates previous research (Shin & Soenen, 1998; Charitou et al., 2006) who uncovered that profitable companies have no need to stock much cash.

## CONCLUSION AND DISCUSSION

Every enterprise attempts to keep a suitable working capital level to engender higher profit and liquidity. Excessive working capital will reduce firm value. Also, if a firm has insufficient working capital level, the business will face difficulty with short-term debt disbursement, which can be detrimental to daily business operations. Therefore, working capital is significant for any firm. Based on the study of listed health firms, this research found that firm size and profitability negatively influence working capital size, while operating cash flow is positively associated with working capital requirement.

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## **The optimal diet program**

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### **ABSTRACT**

Prevention is better than a cure! With the high number of obesity in the community and lack of awareness, this study is conducted to illustrate the suitable nutritional value for people and cheapest price. The awareness to consider diet program that provide balance into the body with needed nutrition and prevent people from sickness. Linear programming is the approach used for the study. The model is consisting of 15 different types of food, which discovered with their prices and nutritional values. The findings illustrated that the large number of obesity cases affects to the community. The lack of proper awareness to diet program lead to unhealthy food habits.

**Key words:** Diet; optimization; linear programming.

### **INTRODUCTION**

Linear Programing (LP) methods are way to find better solutions for many problems in life. The problems sometime can be devastating to firms. LP in general help Firms to achieve their goal that is to maximize profit and to minimize cost. The problem under study need to be formulated carefully for LP with identified constraints.

Problems in general may have more than one constraint that must be satisfied to get the best result, and there are many ways to accomplish it.

One way is LP to translate the case study into numbers and formulas, to be solved for optimality. The diet program is the case study that needs to be formulated for optimal solution by LP. The constraints for this study is defined to consider healthy food and to minimize cost of food. The needed information for LP formulation are collected from online and physical local stores. Meals and prices are checked for all the possible healthy diet program.

The remainder of this paper is organized as follows. The next section presents the diet program and operations research. In Section 3, the problem description is illustrated. Then, the results and analysis are presented in Section 4. The discussion is shown in Section 5.

### **THE DIET PROGRAM AND OPERATIONS RESEARCH**

The Diet program is the amount of food consumed by the human body (Vartanian, Spanos, Herman, & Polivy, 2017). The term diet regularly indicates the use of particular intake of nutrition for weight-management or health reasons. Many people like to eat food that is not animal sources, such as vegetarian, and that because of health issues, environmental, or other (Cordell, Drangert, & White, 2009).

A diet program is set for either weight loss or gain. Some foods are recommended for the diet program and some exercises. Some diet program for weight loss can be unhealthy while others are healthy. The healthy diet program provide the human body with balanced amounts of mineral, vitamins, and other (Vuuren-Cassar, Petrovic, Skovgaard, & others, 2016). Losing weight is not an easy way, however there are some tricks that might help along. Food that contain protein, carbs, or fiber is a tactic to boost the metabolism and keep feeling full all the day (Apovian, 2015). Nevertheless, when trying to stick to a budget, meal planning is the golden ticket. The figure bellow shows a weakly of about 1500 calorie budget diet meal plan (“7daymealplan.pdf,” n.d.).

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
BREAKFAST	1 single-serving container vanilla Dannon Greek (Light & Fit) yogurt 1 medium apple ¼ C cranberry trail mix (305 cal)	½ Veggie frittata 1 Whole Wheat English Muffin ½ T honey (340 cal)	1.5C whole grain oatmeal 1/8 cup chopped walnuts 1 packet Stevia ¼C blueberries (311 cal)	½ Greek omelet 2T plain Greek yogurt (287 cal)	1 Lemon blueberry yogurt muffin 2 poached eggs (332 cal)	Green detox smoothie 2 Pieces turkey bacon (240 cal)	5 Bananas 2 Pieces turkey bacon 2 oz. suet (240 cal)
SNACK	5 small stalks celery 2T creamy peanut butter (210 cal)	1 medium orange 24 almonds (225 cal)	1 stick string cheese 10 cherry tomatoes (80 cal)	1 large pear 1 hard-boiled egg (210 cal)	¾C edamame (190 cal)	1 small banana 1T peanut butter 8 Wheat thins (254 cal)	2/3C banana 2T peanut butter 10 Wheat thins (190 cal)
LUNCH	Creamy butternut squash soup (305 cal)	Two-bean veggie nachos (281 cal)	Sunshine salad (282 cal)	1.5C roasted tomato-bread soup 3C mixed greens 5 cherry tomatoes ¼C diced cucumber 1.5T Balsamic vinaigrette 1 oz light feta cheese (253 cal)	Baked chicken tenders 3C mixed greens 5 cherry tomatoes ¼C diced cucumber 1T light French dressing (455 cal)	Spinach salad with avocado ranch dressing (207 cal)	Black bean quinoa 2T olive oil 1T plain (400 cal)
SNACK	Chocolate mint protein shake (273 cal)	1 small apple 1T peanut butter (155 cal)	6C popcorn (183 cal)	½ sliced cucumber 2T hummus (90 cal)	1 slice whole-wheat toast 2T apple butter (170 cal)	1 Luna bar (180 cal)	8 Cookies 4T coconut oil (180 cal)
DINNER	8-ingredient meatless fajitas (342 cal)	Asparagus farro risotto (297 cal)	Baked buffalo wings 5 stalks celery 2T light bleu cheese dressing (642 cal)	Greek tortilla pizza (295 cal)	2C Creamy cauliflower soup (200 cal)	Whatever you want. That's right, folks! It's a cheat meal. Note: it's a cheat MEAL, not a cheat DAY. Indulge in moderation.	Quinoa 2T olive oil 1T plain (400 cal)
DESSERT	1C raspberries	Banana chocolate ice cream (134 cal)	1C strawberries (45 cal)	1 Fudgy flourless black bean brownie (174 cal)	8 Hershey's dark kisses (184 cal)	2 mini cheesecake cups	1 Large 4T lite 1/8C chocolate (100 cal)
TOTAL CALS	1,495 calories	1,432 calories	1,543 calories	1,491 calories	1,531 calories	~2,000 calories	1,470 calories

Figure 1. Seven day meal plan.

Whatever type of food human consume may lead to diet concerns. Some people skip meals, or eat fast and that can be part of the diet concern. Many other eat no enough fruits, vegetables, and fiber while eats much of sugar. Healthy food can prevent many diet concerns. However, linear programming methods of operations research is a way to find the optimal solution of the diet problem. The central objective of operations research is to do things best under the given circumstances (Bordin et al., 2017).

## **THE PROBLEM DESCRIPTION**

Starting a diet can be difficult most of the time, because a lot of people don't really know why those specific foods were chosen for their diet program. A key component in understanding how a diet works, is understanding the nutritious elements of foods, such as Fat, Carbohydrates, and Protein, also, how each element affects the result of the diet program. In this study, the least expensive diet program is built with the best nutritious value, while to consider the menu of a known local restaurant (Diet Centre).

The first step in constructing a good diet program, is to understand how calories work, and how the body burn calories, and turn excess calories into fat reservoirs. Proteins and Carbohydrates both provide 4 calories per gram, and fat provides 9 calories per gram (Pinheiro & Wilson, 2017). On the other hand, the basal metabolic rate (BMR) is an important factor, which represents the minimum amount of energy needed to keep the body functioning normally, whereas a study conducted in the United States suggests that the BMR of an average man is around 1662 calories, and 1493 for women (Connolly, n.d.). So, to lose weight without exercising and engaging in physical activity, a person must consume less than 1662 (or 1493, depending on gender) calories. This study is performed to build a balanced diet program; a diet that provides the body with the nutrients that needs, without exceeding the calories cap.

According to Australia-New Zealand Food Standards Code (FSC) the daily intake levels are shown in Table 1 ("Federal Register of Legislation," n.d.).

Table 1. The daily intake levels.

<b>Nutrient</b>	<b>Quantity Per Day</b>
Protein	50 grams

Fat	70 grams
Carbohydrates	230 grams

The previous table represents the optimal daily intake for an average adult, therefore, the diet program of this study can come close as possible to these standards to become viable. Therefore, the nutrients are divided to be acquired throughout the day in 3 meals, breakfast, lunch, and dinner. The primary goal is to make the best meal possible, for the lowest cost.

## RESULTS AND ANALYSIS

First meal of the day is crucial, because it supplies the body with the required energy to begin the day. Lack in nutrients in the first meal of the day results in tiredness, fatigue and even headaches, which can have a strong negative effect throughout the day (Mather, 2017).

A balanced meal in the morning can help by raising the energy level throughout the day. Therefore, a healthy breakfast meal is shown in the table 2 that supplies the body with all the required nutrients to start the day.

Table 2. The healthy breakfast.

Food for breakfast	100g of egg	100g of bread	100g of banana	100g of Fresh	Required Unit

				<b>milk</b>	
Cost (SR)	3	0.25	1	0.50	4.18
Calories	143	234	75	45	556
Protein (g)	12.6	12.6	0.9	4.4	38.1
Carbohydrate (g)	0.7	33	19.4	4.5	59.8
Fat (g)	9.5	2.2	0.3	1	14.8
Fiber (g)	0	12.9	2.2	0	14.4
Sodium (g)	0.142	0.363	0.0008	0.052	1.5

The table above shows the price, nutrients and required units for breakfast meal, which is made of eggs, bread, banana, and fresh milk.

The QM software is used to show the optimal price and portion food needed as per the healthy breakfast data and is shown in table 3. Therefore, X1 represents eggs, X2 bread, X3 banana, and X4 fresh milk.

Table 3. QM for breakfast.

	X1	X2	X3	X4		RHS	Dual
Minimize	3	25	1	5			
calories	143	234	75	45	>=	556	0
protein (g)	12.6	12.6	.9	4.4	>=	38.1	0
carbohydrate (g)	.7	33	19.4	4.5	>=	59.8	0
Fat (g)	9.5	2.2	.3	1	>=	14.8	-.3359
Fiber (g)	0	12.9	2.2	0	>=	14.4	0
sodium (g)	.142	.363	.0008	.052	<=	1.5	1.3472
Solution->	6608	3.8737	0	0		2.9509	

The best breakfast meal as shown above with, price wise, is to eat 66.08 grams of egg, and 387.37 grams of bread, and cut out the banana and milk out of the breakfast meal, to ensure the minimum cost which is SAR 2.9508.

The next meal that enrich the body through the day is lunch, it is just as important as breakfast. The lunch is an important meal because it provides nutrition to the body and brain while reduces the stress. The lunch meal offers a break from activities during the day and energize the body for the afternoon.

Table 4 shows the food items that are chosen to deliver a healthy lunch.

Table 4. The healthy lunch.

<b>Food for lunch</b>	<b>100g of Abu kass</b>	<b>100g of Breast, Raw (Chicken)</b>	<b>100g of Mixed vegetables</b>	<b>100g of Orange</b>	<b>Required Unit</b>
Cost (SR)	0.655	1.65	2.5	1	
Calories	359	110	55	62	558
Protein (g)	7.2	23	3	1.2	32.9
Carbohydrate (g)	79.5	0	8.7	15.4	99.2
Fat (g)	0.7	1	0.2	0.2	2
Fiber (g)	1.4	0	3	3.1	6
Sodium (g)	0	0.065	0.055	0	1.5

The table above shows detailed information about each food item that is chosen for lunch.

The QM software is used to show the optimal price and portion food needed as per the healthy lunch data and is shown in table 5. Therefore, X5 represents rice, X6 chicken, X7 mixed vegetables, and X8 oranges.

Table 5. QM for lunch.

The screenshot shows a window titled "Linear Programming Results" with a sub-header "(untitled) Solution". The table below represents the data shown in the window:

	X5	X6	X7	X8		RHS	Dual
Minimize	1.65	2.5	2.5	1			
Calories	359	110	55	62	>=	558	-0.016
protein (g)	7.2	23	3	1.2	>=	32.9	-0.1011
carbohydrate (g)	79.5	0	8.7	15.4	>=	99.2	0
Fat (g)	.7	1	.2	.2	>=	2	0
Fiber(g)	1.4	0	3	3.1	>=	6	-0.2517
sodium (g)	0	.0007	.0006	.052	<=	1.5	0
Solution->	97.53	1.0471	0	1.495		5.7221	

This result shows that the best and cheapest lunch is to have 97.53 grams of rice, 104.71 grams of chicken and 149.5 grams of orange. However, QM have completely discarded the mixed vegetables, because other foods can be more nutritious and much cheaper. The total price for this lunch is found to be SAR 5.7221.

The last meal is as important as the previous ones whereas the dinner meal has several essential functions. Dinner is to ensure a steady supply of glucose for the body to use as fuel while asleep. Table 6 shows the food items that are chosen to deliver a healthy dinner.

Table 6. The healthy dinner.

Food for dinner	100g of tuna	100g of macaroni	Required Unit
Cost (SR)	3.5	1.5	–
Calories	110	350	553

Protein (g)	24.8	13	58.9
Carbohydrate (g)	0	70.4	70.4
Fat (g)	1.2	1.8	4
Fiber (g)	0	3.1	3.1
Sodium (mg)	0.39	0.003	1.5

The table above shows detailed information about each food item that is selected for dinner.

The QM software is used to show the optimal price and portion food needed as per the healthy dinner data and is shown in table 7. Therefore, X9 represents tuna fish, and X10 macaroni.

Table 7. QM for dinner.

	X9	X10		RHS	Dual
Minimize	3.5	1.5			
Calories	110	350	>=	553	0
protein (g)	24.8	13	>=	58.9	-1154
carbohydrate (g)	0	70.4	>=	70.4	0
Fat (g)	1.2	1.8	>=	4	0
Fiber(g)	0	3.1	>=	3.1	0
sodium (g)	.39	.003	<=	1.5	0
Solution->	0	4.5308		6.7962	

The result shown above represents the optimal meal portion for dinner, which is 453.08 grams of macaroni, with costs of SAR 6.7962. The result took out the tuna fish to reduce cost. So, macaroni alone delivers all the nutrients needed, and is also the cheapest meal for dinner.

## DISCUSSION

The study conducted shows a total cost of SAR 15.4691 when to eat the three different healthy meals throughout the day, that supplies the body with required nutrients.

Linear programming (LP) is an important technique that is optimal to use in day-to-day life, and how impactful it could be in major firms or companies. Understanding the root of the problem helps in achieving many goals, such as minimizing cost or maximizing profit, and that is what makes LP so important.

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## **Collaborative Online Groups. Case Study of a WhatsApp Group of Advanced EFL Learners**

By Anfal Alowaishez, King Saud University, Saudi Arabia

### **Abstract**

Teachers and educators have been searching for the perfect method to teach languages for decades. During this search, they explored and are still exploring many techniques. One of them is cooperative based groups, where members help each other's learn. With the wide spread of technology, online groups are used by language students with and without teachers' supervision. Little research has been done on collaborative online groups. This paper tries to investigate collaborative online groups that by analyzing interactions between online group members as an indication of learning. The online group under discussion is created with WhatsApp and has 12 members studying English as a Foreign Language (EFL). The Community of Inquiry (CoI) content analysis method is used to measure the interaction. Content analysis of the interactions in the group revealed that this platform provides a new place to set up learning groups. In online groups, the exchange of information and experiences is intertwined with the practice of social skills just as with traditional groups. This mix offers learners the opportunity to gain more knowledge. The number of comments exchanged between members indicated the high activity in the group. Although many comments were irrelative, but the majority contributed meaningfully to the discussion.

**Keywords:** WhatsApp, EFL, TEFL, Language Learning, Advanced learners, online groups

### **Introduction**

The cooperative language learning method has developed as a reaction to traditional learning that makes students passive learners. In this method,

students work in groups to exchange knowledge and experiences independently of the teacher. Cooperative language learning considers learning as a sociocultural process whereby learners of various levels interact with each other, allowing for scaffolding learning. Scaffolding learning occurs when less proficient learners improve because of their interactions with the more advanced. (Richards *et al.*, 2014). Some people make the distinction between cooperative and collaborative methods. However, the two terms are used interchangeably in this paper.

One type of activities in cooperative language learning is the cooperative based group. It is defined by Richards *et al.* as a “long-term, and consist of heterogeneous learning group with stable membership whose primary purpose is to allow members to give each other the support, help, encouragement, and assistance they need to succeed academically.” (Richards *et al.*, 2014: 249). He also identified factors of successful group-based learning. In successful groups, learners are interdependent, and everybody is held accountable for her performance as well as the group’s.

Robert E. Slavin (1991) measured students’ interaction as an indicator of learning presence. In cooperative groups, learning occurs when students explain ideas to other members of the groups. This extensive explanation is the ultimate behavior of acquisition.

With the increase of online applications in life, students use applications in learning and have online groups in different platforms. Successful online groups have similar characteristics to traditional groups. Online group members are motivated more by instructions, not by grades. Moreover, students participate more in smaller groups. Participation in online groups enhances students’ sense of community, helps them to be more autonomous learners, and increases their confidence. (Brindley and Walti, 2009).

The wide use of online social networks created more opportunities for learners to engage in online groups. One of the widely used online social networks is WhatsApp. WhatsApp is a software application created by

Brian Acton and Jan Koum in 2009 to replace Short Message Service (SMS). It provides a platform to exchange messages freely between mobile phones. With later updates, it operates in more electronic systems and offers diverse features (Yeboah and Ewur, 2014). Users send text, locations, as well as multi-media messages. The feature that is of our concern in this study is creating groups. WhatsApp allows users to create groups that has up to 256 members. Users create groups for their different social circles or based on shared interests to exchange information and experiences.

A lot of research has been done on online courses, Learning Management Systems (LMS), and Massive Online Open Courses (MOOCs). Online learning groups and communities have been investigated under those areas. Little research has been done on the effectiveness of online groups with traditional classes. This paper attempts to fill this gap by measuring the interactions of a WhatsApp group of Saudi students studying English as a Foreign Language (EFL) to indicate the effectiveness of cooperative online groups.

### **Literature Review**

Many studies examined learners' interactions online using different measurements. O'Riordan et al. (2016) measured interactions of a (MOOC) with four content analysis methods. The four methods are the Digital Artefacts for Learning Engagement (DiAL-e) framework, Bloom's Taxonomy, Structure of Observed Learning Outcomes (SOLO) and Community of Inquiry (CoI). They rated a sample of 600 comments of the MOOC forum four times, each time according to one method. The scoring was relative between the four methods. They concluded that learning did occur when students interacted online.

Studies that focused on WhatsApp showed contrastive results. One of the studies that did not recommend WhatsApp use in education was conducted by Yeboah and Ewur (2014). Yeboah and Ewur (2014) interviewed 50 students on their use of WhatsApp, and the effects it had on their academic performance. They also collected 500 questionnaires

answered by students at public universities in Ghana. The questionnaires investigated the time students spend using the software, and the reasons for using it. They found out that although it had positive effects on facilitating communication and sharing ideas between students, it had more negative effects. It negatively consumed students time, weakened their spelling, especially for first year students, and distracted them during classes. They recommended forbidding phones in the class and resorting to handwriting. They also recommended teaching students time management classes and giving pop up quizzes to keep students alert.

Another study that considered the use of WhatsApp by language learners was conducted by Aburezeq and Ishtaiwa (2013). Their study focused on Second Language (L2) teachers' acceptance of incorporating WhatsApp in the course, and the difficulties it imposed on learners. Their results revealed that most teachers and students believed that interactions with instructors or fellow learners in WhatsApp provided more opportunities for practicing L2. However, some teachers were against it as they believed that WhatsApp distracted learners and produced more responsibilities for teachers.

On the other side of the spectrum, Rambe and Chipunza (2013) examined the role of WhatsApp in bridging the gap between privileged university students, and off-campus students with less access to resources. They analyzed WhatsApp chat logs and blog postings reflecting on learning by 4<sup>th</sup> year management students at a South African university. They wanted to know if interactions on WhatsApp helped to bridge the gap between these two groups of students. They found out that access to online communities helped in sharing information. Moreover, the interactions served as a technical support for students to reach other online platforms like Blackboard. Students were giving each other feedback by taking advisory roles. Rambe and Chipunza (2013) concluded that WhatsApp has provided off-campus students access to resources to complete their assignments, especially in case of power cuts in their areas. Subjects reported that using WhatsApp has allowed them to interact with freedom, not found inside traditional classroom groups. It allowed them to play instructor roles, solve

problems, and advise peers. This created an informal setting for autonomous learning. Some drawbacks to these advantages were that some students did not have smart phones, or any devices to use the app, or sometimes there was no network coverage in their area.

Research is still going on investigating the integration of online groups in education. This paper tries to contribute to this subject by looking at interactions in a WhatsApp group of Saudi advanced EFL learners to determine the benefits of such groups.

### **Research Question**

Do WhatsApp groups provide a successful environment for collaborative online groups?

### **Methodology**

#### **Participants**

The subjects in this study were 12 EFL graduate students at King Saud University (KSU). All 12 participants were advanced learners of English. Their proficiency level ranges from B2 to C1 in The Common European Framework of Reference for Languages (CEFR). The subjects set up a chat group on WhatsApp at the beginning of the school semester to exchange information related to courses and manage group tasks. The online group was informal, no instructors participated with students. There were no grades for participating, nor it was part of the syllabus.

#### **Instruments**

The study applied CoI content analysis method on the chat script of the group to measure students' online interaction. The CoI is an instrument to analyze content gathered in online courses. It was first devised by Garrison, Anderson, and Archer in 2010 and used to measure students' activity online. It hypothesized that learning takes place in online communities when social and cognitive skill are integrated with the interaction. In this study, a version of this instrument developed by Tim O'Riordan, David E. Millard & John Schulz (2016) was used. This instrument was chosen because it

focused on measuring critical thinking abilities, which is of the highest learning skills. CoI categorizes comments into five types: off-topic, triggering event, exploration, integration, and resolution. Each category is decided upon according to a fixed description and scored from 0-4 as shown in table 1. Zero is given to comments with no actual contribution to the interaction, and four scores to comments with the most contribution to the interaction.

CoI score	Descriptor
0 – Off-topic	There is written content, but not relevant to the subject under discussion.
1 – Triggering event	A contribution that exhibits a sense of puzzlement deriving from an issue, dilemma or problem. Includes contributions that present background information, ask questions or move the discussion in a new direction.
2 – Exploration	A comment that is seeking a fuller explanation of relevant information. This can include brainstorming, questioning and exchanging information. Contributions are unstructured and may include: unsubstantiated contradictions of previous contributions, different unsupported ideas or themes, and personal stories.
3 – Integration	Previously developed ideas are connected. Contributions include: references to previous messages followed by substantiated agreements or disagreements; developing and justifying established themes; cautious hypotheses providing tentative solutions to an issue.
4 – Resolution	New ideas are applied, tested and defended with real world examples. Involves methodically testing hypotheses, critiquing content in a systematic manner, and expressing supported intuition and insight.

*Table 1. CoI instrument, taken from O’Riordan et al. (2016)*

Two software programs are used to analyze and code the comments. The comments are cleaned up, anonymized, and rated with Microsoft Excel. The software PSPP is used to calculate results and generate figures and graphs.

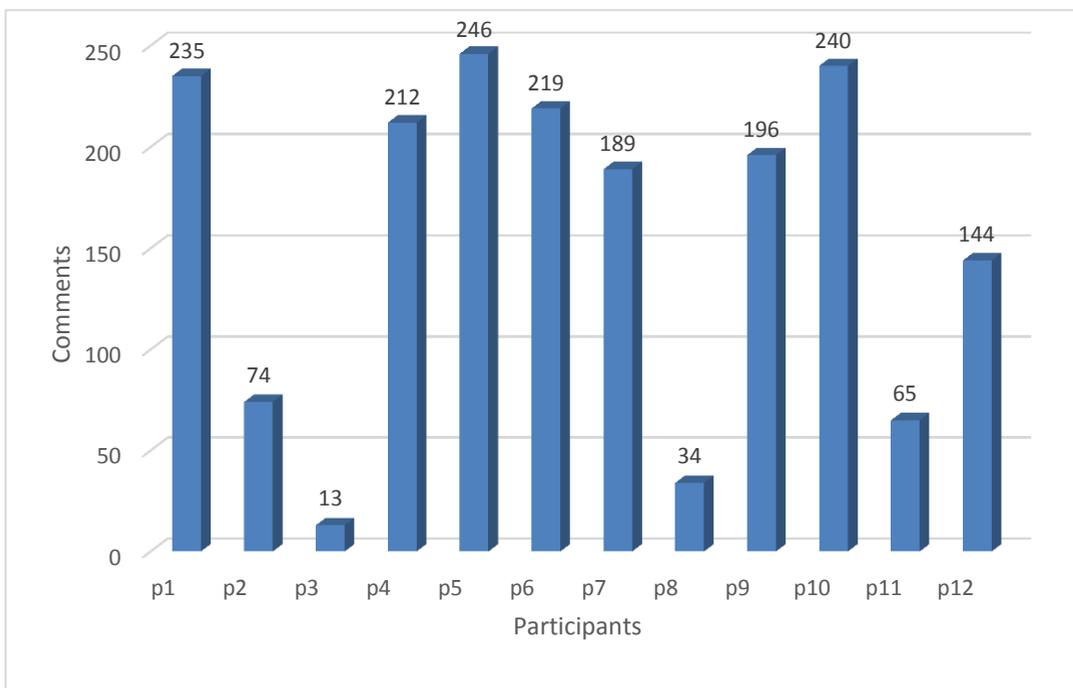
### **Procedure**

The chat script of the WhatsApp group was collected for two months. Then, it was imported from WhatsApp as text via e-mail. Each time a

participant sent something is considered a comment. The total comments for all 12 subjects for the two months were 1867 comments. Only a sample of 350 comments were scored. The scored sample was taken from the first week of every month. The sample was fed to Excel, so that each line contains one comment. Each comment was coded one of these values (0,1,2,3,4) in accordance with the CoI content analysis scoring as shown in (table. 1). The count for each category was calculated to see the quality of students' interactions online. Also, the count for each participant was calculated to find out the volume of the interaction.

## Findings and discussion

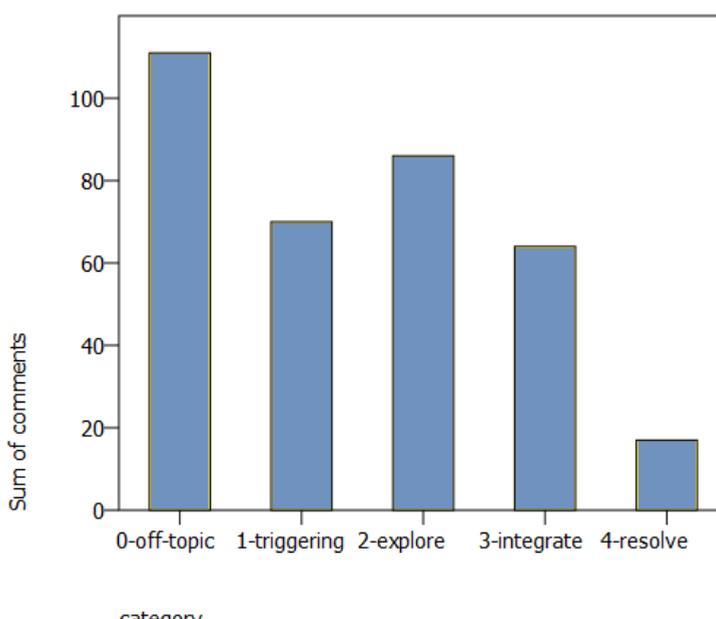
Students interactions varied as shown in (figure. 1). Some students were active participants, while others did not contribute much to discussions. The most active student wrote 246 comments during the two months. While the least active student wrote 13 comments during the period of the study. The rest of the participants contributed a sum of comments between those two numbers, as illustrated in (figure. 1).



**Figure 1. the number of comments per subject**

Regarding the content of the comments, most contributions are off-topic. Triggering event, exploration, and integration categories have similar count. The least category found in the sample is the resolution, as shown in figure 2. One of the explanations for the high off-topic comments is that most of them were exchanging greetings at the beginning or thanking at the end of discussions. The nature of the last category, resolution, makes it occur at the end of discussions. Whereas the categories: triggering, exploration, and integration, occur repeatedly during discussions which is shown by their higher count. Example comments of each category is shown in (table. 2).

CoI score	example
<b>0- off-topic</b>	You're welcome
<b>1- triggering event</b>	Ladies, Should we consider the article 'when citing it', A published paper source, or Online data source, Because there is difference in italicization when i used easybib.com.
<b>2- exploration</b>	Yea or go back to the book.
<b>3- integration</b>	I feel it's of no point redoing the same thing, I prefer that we disregard this article and move on with the new ones, what do you think?
<b>4- resolution</b>	I meant it's already short weak paper & we have a copy of the critique with few editing & quick reading to add more points won't take more than an hour.



**Figure 2. the number of comments for each category**

*Table 2. Examples of each category*

These findings indicate that meaningful interactions do happen in online cooperative groups just as much as traditional groups. Online groups can provide an accessible, more feasible alternative to traditional cooperative groups. Course planners and syllabus designers should consider that when designing courses and try to make use of such platforms as WhatsApp by incorporating them into the course and motivate students to use them.

Nevertheless, the results of this study are far from conclusive due to the limited time and sample. For more decisive results, ratings should be judged by more than one person to ensure objectivity. Furthermore, more than one instrument could be used to score comments. Also, subjects' opinion could be elicited by questionnaires or interviews and further analysis conducted on the reasons behind choosing to contribute or not in an online group.

Due to the limited nature of this study, it only examined text comment. However, online platforms enable more means of exchanging information, such as voice notes, pictures, videos, and links to other resources. Future research could be done to investigate these other kinds of media either with text or in isolation.

### **Conclusion**

The research of online groups as part of traditional courses is still in its infancy. This paper tries to add to the topic by analyzing a sample of university students' interaction on a WhatsApp group. The results indicate that academic cooperation and learning occurs in WhatsApp groups even without formal instruction. WhatsApp groups are an opportunity for educators to utilize this kind of interaction as part of their course material. Nevertheless, further research must be undertaken to explore the challenges and benefits of such platforms.

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