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## **A Motivation Enhancement Of Personnel Under The Office Of Nakhon Ratchasima Provincial Administrative Organization**

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### **Abstract**

This research was a mixed method research with aims to: 1) study motivation enhancement of personnel under the Office of Nakhon Ratchasima Provincial Administrative Organization; 2) create a motivation enhancement of personnel under the Office of Nakhon Ratchasima Provincial Administrative Organization; and 3) evaluate feasibility of a motivation enhancement of personnel under the Office of Nakhon Ratchasima Provincial Administrative Organization. The selection was a purposive sampling. Meantime, the research tools were questionnaire, suitability and feasibility evaluation form and semi-structure interview. The content analysis and the statistics including percentage, mean and standard deviation were applied for data analysis.

The findings indicated that: 1. Study principles, concepts and theories on motivation enhancement of personnel under the Office of Nakhon Ratchasima Provincial Administrative Organization, it was found that the overall was at high level; 2. A motivation enhancement of personnel under the Office of Nakhon Ratchasima Provincial Administrative Organization comprised of 9 components including 1) value perception on civil service profession; 2) role and involvement of explicit operational goal determination; 3) significant job designation or distribution for personnel; 4) good relationship with all levels of colleagues; 5) work culture building with focus on teamwork value; 6) personnel promotion and development on class research; 7) continuous and systematical personnel supervision; 8) performance evaluation with faithfulness, justice, quality and transparency; and 9) motivation with developmental reward; and 3. The overall results of suitability evaluation and practical feasibility on a motivation enhancement of personnel under Nakhon Ratchasima Provincial Administrative Organization were all at the highest level.

**Keywords:** Motivation Enhancement, Personnel under Nakhon Ratchasima Provincial Administrative Organization

# Brazilian Judiciary Performance Antecedents, the workload influence

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## Abstract

This study seeks to discuss the antecedents of the judiciary's performance in Brazil based on the work of Dimitrova-Grajzl, Grajzl, Sustersic and Zajc (2012) about the Slovenian courts. The quantitative results from the structural equations analysis disagree with the work of Dimitrova-Grajzl et al. (2012) depicting that there is a strong positive causal relationship, where  $R^2$  was equal to 0.938 and robust  $f^2$  results were obtained. It also depicted validities of the measurement model between the workforce and performance. On the other hand, the causal relationship observed between the workload and performance was not significant, as such; with the same magnitude of significance being observed on its moderating effect. The robust result of  $R^2$  seems to expand knowledge in the Brazilian judiciary context about human capital intensive use. This result is an opportunity for future works, which could better explain the ambiguities that emanate from this contextual issue thereby differentiating it from context-free causalities.

**Keywords:** Judiciary Performance. Work load. Congestion Ratio. SmartPLS

**Antecedentes do Desempenho do Judiciário Brasileiro, a influência da carga de trabalho.**

## Resumo

Com base no trabalho de Dimitrova-Grajzl, Grajzl, Sustersic e Zajc (2012) sobre tribunais eslovenos, o presente trabalho busca discutir os antecedentes do desempenho do sistema judiciário do Brasil. Os resultados quantitativos de uma análise de equações estruturais não coadunam com o trabalho de Dimitrova-Grajzl et al. (2012) afirmando que existe uma forte relação causal positiva,  $R^2$  igual a 0,938, e com resultados robustos de  $f^2$  e todas as validades do modelo de medição, entre a força de trabalho e o desempenho. Por outro lado, a relação causal entre a carga de trabalho e o desempenho não foi significativa, assim como seu efeito moderador também não resultou em significância. A robustez do  $R^2$  parece expandir o conhecimento sobre o uso intensivo de mão de obra no contexto brasileiro do judiciário. Esse resultado é uma oportunidade para trabalhos futuros, que poderia explicar melhor as ambiguidades decorrentes da questão contextual, diferenciando-as das causalidades livres de contexto.

**Palavras-chave:** Desempenho do Judiciário. Carga de trabalho. Taxa de Congestionamento. SmartPLS

## INTRODUCTION

The purpose of the present article is in agreement with that of Dimitrova-Grajzl et al. (2012) works, which is considered to be a cornerstone for the definition of the constructs used in this work. The epistemological positioning of the present authors is to consider the existence of universal theories, but the work has the sense of different contexts like that which Brazil and Slovenia have. In the international literature review conducted by Dimitrova-Grajzl et al. (2012), they pointed out the ambiguity in results in relation to the court output and its caseload. It is important to emphasize that the constructs were measured differently in both works and the issue of the endogeneity of these constructs is superficially discussed again in this study, considering that any other analysis of modeling work without contextual differences can lead

to a bad application of conceptual validity of the constructs previously seen, taking away original explanatory power from previous work.

The national literature brings out an inefficiency image of the Brazilian Judiciary. However, the international studies of inefficiency are more often than studies of efficiency (Mitsopoulos & Pelagidis, 2007). A possible explanation of this bad image may come from the national judicial system, as a codified law, that may not include the constant social changes. However, it brings it out in a more critical thought this such view is rejected as it seems to be an ethnocentric rationalism established by modern thinking and “accepted” by countries with “less juridical tradition”. This pessimistic view makes “unavoidable” the inefficiency of Brazilian legal system, but getting out of the ideographs the present study is based only on nomothetic and the positivist science approaches. Another common view is a balance between efficiency and quality of these courts, functioning as one characteristic which would necessarily exclude the other. Again the present work understands that this is as a rhetorical proposition, and is created exactly by the “local judicial culture” in relation to expectations and subjective perceptions, different from one environment to the other (Ng, 2011).

## **THEORETICAL REFERENCE AND DEVELOPMENT OF THE MODEL**

### **Congestion Rate**

Defined by the National Council of Justice as a relation between new cases and the number of processes filed, it is a conceptual validity construct immediate from specifications and operationalization of the judicial administration, no need further discussion.

### **Work load**

According to Dimitrova-Grajzl et al. (2012) the pressure caused by the increase of judge’s workload has an impact on performance, and the workload is explained as the number of processes not filed from the previous year and the new processes of the current year. This definition adheres to a direct National Council of Justice indicator.

### **Workforce**

The human resources that assist the judges can be classified in servers, commissioned, outsourced and trainees, it is assumed that the work of all they can directly affect the performance of the Courts. At this point, the research differs again from the approach of Dimitrova-Grajzl et al. (2012) which only considered the number of judges.

### **Productivity**

The CNJ report specified its form of productivity measurement, Judicial Performance, the “Number of Processes filed” indicator.

### **The relation between Workforce and Productivity**

Nogueira, Oliveira, Vasconcelos and Oliveira (2012) affirm that there has been an increase in productivity of the Brazilian Courts of Justice, but they also say that there is no consensus on what are their most important antecedents. Researches about judiciary productivity has examined the role of judges and possible reflections on productivity; on the other hand, as emphasized by Ng (2011) inevitably changes in productivity imply bringing judges to a new management field, becoming productivity responsible, so it’s necessary to evaluate issues about accountability shared with courts or even with National Council of Justice. However, the accountability issue embraces a subjectivity that is out of scope in this paper. Therefore, the present work begins with the hypothesis:

**H1. Workforce (Judges, Servers, Commissioned, Outsourcers and Interns) has a direct positive effect on Court Productivity.**

### **The relation between Judicial Congestion and Workload**

For Dimitrova-Grajzl et al. (2012) there is an ambiguous relation between judicial congestion and the workload. The “due process” and “access to justice” by a reasonable part of the population seems to be in opposite position in the balance of the CNJ that demands productivity and doesn’t shows the same attention to Workload, however the present work understands that this relationship is clear and it’s necessary to confirm the second hypothesis:

## H2. Judicial Congestion has a positive direct effect on Workload.

### The relation between Workload and Productivity

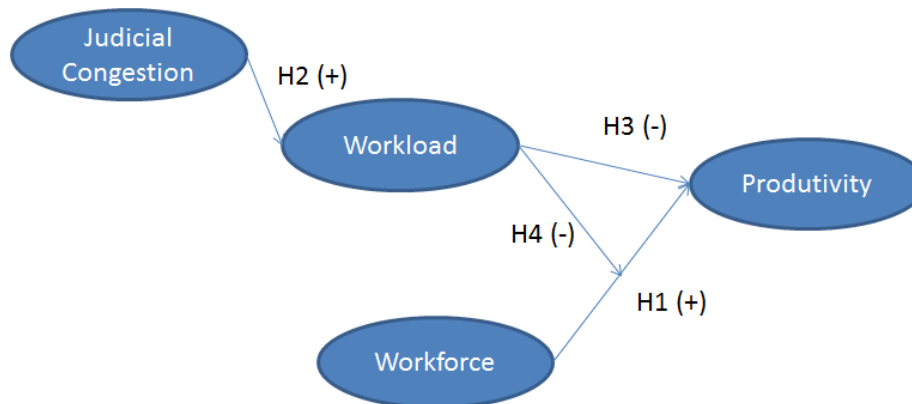
Differently from the clear relation of the H2 hypothesis, the present work boosts the need to test the possibilities of connections between the workload and Productivity, testing the following hypotheses:

**H3. Workload has a direct and negative effect on Productivity.**

**H4. Workload has a moderating effect on the causal relationship between Workforce and Productivity.**

The hypotheses results in the hypothetical model presented in Figure 01.

Figure 01: Research Model



Source: Authors (2017)

## METHODOLOGY

### Data and measurements

To test the hypotheses, it was used the secondary data from the “Justice in Numbers” report, totaling (n = 527) records, quantitative data from State Courts of Justice, Federal Regional Courts and Regional Labor Courts that provided information for seven years, 2009 until 2015. From this amount were found eleven records of the “outsourced” variable as missing data, representing less than 5% of the population, which according to Hair, Black, Babin, Anderson and Tatham (2009) can be classified as lost and non-ignorable data, as randomized data was chosen the substitution by the respective mean.

Table 01 shows the descriptive statistics, showing the referenced codes by the "Justice in Numbers" report and the variables that appear in the measurement model shown in Picture 02, this care is important for the reproducibility of the work.

**Table 01 – Descriptive Statistics**

Descriptive Statistics							
	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Intern	661,324	1266,392	1603747,969	4,337	0,106	23,847	0,212
Outsourced	745,992	1243,307	1545812,639	4,167	0,106	22,548	0,212
Servants	3391,879	5730,757	32841581,115	5,402	0,106	35,412	0,212
Committerions	559,875	1366,908	1868436,927	6,945	0,106	54,404	0,212
Judiciary Congestion	0,544	0,181	0,033	-0,609	0,106	-0,092	0,212
Workload	3036,994	2776,186	7707207,508	1,549	0,106	3,819	0,212
Processes Filed	351235,738	709470,424	503348282038,886	4,847	0,106	28,950	0,212
Judges	246,110	328,708	108049,129	4,549	0,106	26,970	0,212

Source: Authors (2017)

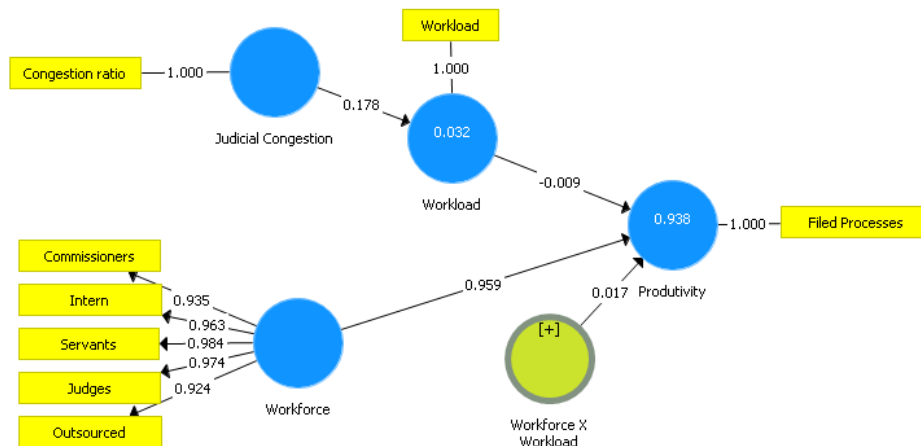
### Results Analysis

The data were investigated using the structural equation modeling (SEM) that was used to test the hypotheses of the model. According to Hair, Black, Babin, Anderson and Tatham (2009) a sample without good normal distribution data and the fact that the model has five latent variables, and therefore, several interrelated dependence relationships. This led to the use of SEM, and the SmartPLS software in its version



3.2.4 was chosen, which brings the PLS statistical method, Partial least squares, which requires relatively few registers/cases, the least pointed out by Hair, Hult, Ringle and Sarstedt (2017), in the worst case, as 10 times the highest number of arrows pointed at any latent variable, what in the present study would be 50 records. The PLS algorithm was executed with the default values following the guidelines of Hair et al. (2017), and the result is shown in Figure 02.

Figure 02: PLS Algorithm Results



Source: Authors (2017)

The only construct with more than one variable, or National Council of Justice report indicator, was considered reflexive by its definition. Validity and reliability results are shown in table 02, which presents Cronbach's Alpha and composite reliability, greater than 0.7 and the Average Variance Extracted (AVE), greater than 0.5.

Still referring to convergent validity, it was found that the external loads, not shown here, are all higher than 0.924, thereby, according to what Hair et al. (2017) affirm that they should be eliminated when it's less than 0.4 and evaluated if less than 0.7.

Table 02 – Reflective Measurement Model

Construct	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Workforce	0,976	0,978	0,982	0,915

Source: Authors (2017)

Still talking about the measurement model, analyzing the discriminant validity, it is showed in table 03 the Fornell-Larcker criterion, according to it the square root of the AVE of the reflexive constructs must be greater than the loads of the other constructs, which was not found for the Workforce (0,956) and Productivity (0,968), however, we understand that the content validity of the Workforce and Productivity constructs do not generate theoretical doubts. The same behavior is repeated in the cross-load test, but we hold to the definitions of both constructs that are based on the National Council of Justice's definitions.

Table 03 –Fornell-Larcker criterion

Constructs	Judicial Congestion	Productivity	Workforce	Workforce X Workload	Workload
Judicial Congestion	1,000				
Productivity	0,218	1,000			
Workforce	0,230	0,968	0,956		

<b>Workforce X Workload</b>	0,111	0,369	0,355	1,000	
<b>Workload</b>	0,178	0,211	0,222	0,222	1,000

Source: Authors (2017)

According to Hair et al. (2017), the first step for the evaluation of the structural model is to evaluate collinearity using the VIF indicator, which parameter must be less than 5, the highest result found was 1,173. The second step is to evaluate the path coefficients, and for this the Bootstrapping procedure was executed with 5000 subsamples with the option “no sign changes”, resulting in Table 04 that shows no significance for the path between “Workload” and “Productivity”, neither for the path between the mediator “Workforce X Workload” and “Productivity”, the other two paths followed the parameters pointed out by Hair et al. (2017), t statistic > 1,96 and p-value < 0,05.

**Table 04 – Bootstrapping**

Path coefficients	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P-Values
<b>Judicial Congestion -&gt; Workload</b>	0,178	0,176	0,046	3,871	0,000
<b>Workforce -&gt; Productivity</b>	0,959	0,963	0,021	45,712	0,000
<b>Workforce X Workload -&gt; Productivity</b>	0,017	0,015	0,025	0,656	0,512
<b>Workload -&gt; Productivity</b>	-0,009	-0,010	0,012	0,738	0,461

Source: Authors (2017)

The third step is to evaluate the coefficient of determination that measures the predictive accuracy of the model, the results show substantial value, according to Hair et al. (2011), for the Productivity construct. For the Workload construct the coefficient of determination is low, but it is necessary to consider that this construct is in the model to test moderation between Workforce and Productivity.

**Table 05 – Determination Coefficients**

R <sup>2</sup>	R Square	R Adjusted Square
<b>Productivity</b>	0,938	0,938
<b>Workload</b>	0,032	0,030

Source: Authors (2017)

Step four attempts to measure the size of the  $f^2$  effect that evaluates if any omitted constructs generate a substantive impact on endogenous constructs, the result was that “Judicial Congestion” has a small effect on the endogenous construct “Workload”, which together with  $R^2$  of this construct can be studied in future works in another context. In the case of Productivity just the Workforce construct is relevant.

**Table 06 – Omitted constructs effect**

$f^2$	Productivity	Workload
<b>Judicial Congestion</b>		0,033
<b>Workforce</b>	12,696	
<b>Workforce X Workload</b>	0,013	
<b>Workload</b>	0,001	

Source: Authors (2017)

In the fifth step, as shown in table 07, the predictive relevance is evaluated using the Blindfolding algorithm using the default configuration, e.g. omission distance equal to seven. This resulted in a  $Q^2$  that represents great relevance for the Productivity construct, and low for the Workload construct. Using the parameter higher than 0,35 according to Hair, Ringle and Sarstedt (2011).

**Table 07 – Blindfolding**

	SSO	SSE	$Q^2$ (=1-SSE/SSO)
<b>Judicial Congestion</b>	527,000	527,000	
<b>Productivity</b>	527,000	44,405	0,916
<b>Workforce</b>	2.635,000	2.635,000	
<b>Workforce Workload</b> X	527,000	527,000	
<b>Workload</b>	527,000	511,742	0,029

Source: Authors (2017)

Another test performed was to analyze whether Workload has a moderator effect, however, after another bootstrapping using the two-stage method, including an interaction term, the p-value of the path coefficient between the moderator effect Workload in the causal relationship between the Workforce exogenous construct and the Productivity endogenous construct resulted in non-significance 0,512.

The performed analysis of SEM resulted in the confirmation of two hypotheses and the rejection of other two hypotheses, shown in table 08.

**Table 08 - Research hypotheses**

Hypotheses	Description	Result
H <sub>1</sub>	Workforce (Judges, Servers, Commissioned, Outsourcers and Interns) has a direct positive effect on Court Productivity.	Fail to reject
H <sub>2</sub>	Judicial Congestion has a positive direct effect on Workload.	Fail to reject
H <sub>3</sub>	Workload has a direct and negative effect on Productivity.	Rejected
H <sub>4</sub>	Workload has a moderating effect on the causal relationship between Workforce and Productivity.	Rejected

Source: Authors (2017)

A parallel discussion about Dimitrova-Grajzl et al. (2012) work is that they pointed a possibility of reverse causality, which was not statistically explained here but was tested, not resulting the mentioned constructs endogeneity, but just the non-significance of Workload as a direct measure or even as a moderator of Workforce in the relationship with Productivity.

After this conclusion, it is possible to exclude the Workload and Judiciary Congestion constructs from this discussion resulting in the possibility of applying a simple regression where the dependent variable is Processes Filed and the independent variables are the various labor profiles. Executed in the software IBM SPSS version 20 the results show similar values of  $R^2$  as pointed in table 09 and the results of the coefficients are shown in table 10.

**Table 09: Simple Regression  $R^2$**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.977 <sup>a</sup>	.954	.953	153022,044

a. Predictors: (Constant), Judges, Outsourced, Commissioners, Inters, Servants

Source: Authors (2017)

Some new discussions arise from this results, the influence level of each labor profile, and the specific result of the commissioners negative coefficient, another important discussion to be clarified in future works is the significance in the case of the Judges, close to the limit of 0,05.

**Table 10: Simple Regression Intercept and Coefficients**

Coefficients <sup>a</sup>					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	-79957,330	9539,006		,000
	Inters	152,833	16,105	,273	,000
	Outsourced	35,225	13,301	,062	,008
	Servants	87,359	6,075	,706	,000
	Comissioners	-77,039	13,631	-,148	,000
	Judges	205,859	85,720	,095	,017

a. Dependent Variable: Processes Filed

Source: Authors (2017)

## DISCUSSIONS AND CONCLUSIONS

In reference to the discussion about different contexts, where Brazil is compared against Slovenia, it is okay to suggest that there are benefits in integrating the contexts of these two countries in the development of a unified theory. However, this theory wouldn't be possible for the current work since it uses secondary data from the National Council of Justice and therefore it wouldn't be possible to have a direct relation with the measurement model of the reference article. From this observation emerges an opportunity for future works, which could better explain some ambiguities that emanate from this contextual question, differentiating them from free of context causality.

The present empirical evidence on judiciary productivity is still very limited and often not complete, this work tried to begin the construction of a parsimonious model involving constructs which will result in a stronger  $R^2$ . Thereby workload and performance relationship, or moderation, will be out of the model because the results bring non-significant influence of this construct. But the present work already points out clues for the construction of the  $R^2$  in future works that could evaluate several antecedents or consequents of this important construct. It is not possible to carry out axiological evaluations regarding labor issues related to workload which could be evaluated in future works, especially in a qualitative paper.

In relation to the first hypothesis on the impact of the workforce on productivity, the result showed that it is robust and significant. This contradicts the results of Dimitrova-Grajzl et al. (2012), which showed that workload is the determinant of performance, as hypothesis three, statistically denied in this study. About the second hypothesis which deals with the impact of the congestion rate on workload, it is theoretically consistent and does not involve the discussions within Dimitrova-Grajzl et al. (2012) about the endogeneity of these constructs, an argument that the results of this study minimize. Looking specifically within the workforce construct, it is necessary to consider the limitation of the present work which employed the use of quantitative values, and not taking into the different levels of expenditure for these profiles of labor. Despite these limitations, this study presents a strong coefficient of determination ( $R^2$ ) equivalent to 0.938, and is considerably different from the reference work.

The positive  $R^2$  results are less explained by other constructs, which seems to expand knowledge in the Brazilian context or is biased by CNJ data. From this point of view, in the context of courts management, these results suggest that the discussions about workload and congestion rates are just rhetorical or political discussions. It is also apparent that from the legislator's point of view, such as the National Council of Justice, this study provides a significant indication of a greater need to be able to understand the possible containment of various investments that are not directly related to the workforce.

Gomes and Guimarães (2013) say that financial and human resources are the most discussed items and that the financial resources would not be directly related to the productivity. Again, they affirm that labor within courts would be related to the productivity in a controversial way, thereby demonstrating a positive and significant causal relationship between the two. The discussion of the results in this paper also fills in the blanks on what are the antecedent constructs of national court productivity, thereby investigating its direct connection to overall performance. It also fails to reject two of four hypotheses, concluding that

only the “workforce” among the constructs of this study shall continue to be used in future works that may use this secondary database on the performance of courts in the Brazilian context.

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## **The Roll of a Proactive Multi Criteria Assessment Technique in Emergency preparedness and Response in aircraft DEPOT Lines**

### **Empirical Study in Aviation Field Business**

**Hegazy Zaher, Mohammed Said, Amr Hefnawy**

#### **Abstract:**

Valuables in aviation field are man, product and business itself. Aircraft systems has been classified as complex and critical systems because of the risk always around which is not easily expected causing unexpected crisis in some cases with very high risk to reputation effect. As a result business will be lost in case of poor expectation to the potential risk existed in the place on contrary the organization desire to survive.

This paper's main research question is: "What is the add value of a proactive multi criteria assessment technique in Emergency preparedness and Response?" In order to synchronize future expectations challenges. This paper will introduce a method of measuring future expected risk in which a total proactive risk management system can be achieved on purpose of protecting (personnel, product, service, finance, reputation...etc.) of harm occurring.

**Keywords: Proactive, Readiness and Response, Depot Lines, Risk, Harm, Severity, Likelihood, Risk Ranking, Reputation Impact**

## 1. Introduction.

An airport emergency can be on any occasion or instance which can be natural or man-made and warrants action to save lives and protects property and public health. It is essential to prepare for emergencies in order to be able to respond quickly, efficiently and effectively. A strong emergency preparedness program can assist in limiting the negative impact of these events, including liability and other post-emergency issues. While many airports have emergency plans in place, additional information is required to develop managerial, operational, and business continuity plans to assist the airport operations in planning. [5]

A Proactive Multi Criteria Assessment Technique[2] is a systematic approach of risk based thinking besides its capability to be embedded or integrated to multi frame works of management systems in which real core values like fact based decision, productivity capability, financial revenue maximization, Sustainable reputation, competitors challenges and Stakeholder satisfaction can be achieved in case of organizations commitment. Empirical Study of this technique in aircraft DEPOT Lines for Emergency preparedness and Response in Aviation Field will be discussed in details on purpose of risk mitigation. All in all continual trials and motivated efforts towards risk optimization, continual improvement will help organizations to survive with acceptable sustainable safe conditions.

## 2. Case Study

Emergency preparedness and Response (EPR) one of the important hot issues in aviation field, this is because of valuables in aviation industry. (EPR) program plan is to be done each quarter of the year. It has been found that inability of some aircrafts lifted on jacks to be evacuated from the hangar because of structure repair processes which may go on for an extended duration of time. This observation had been repeated for different types of aircrafts, which means inability of depot lines to face the problem of evacuation the hanger.

### A. Top management commitment

Top management commitment one of the most important core values for solving problems, so a brainstorming was required to face the problem trying to determine

- Sources of hazards because of lifting aircraft on jacks for extended period of time
- Potentials that may dynamically change to be an accident affecting (Productivity capability, financial loss, Reputation ...etc.)

### B. Hazards Recognition that may cause harm inside hangars (aircraft on jacks).

A real archive of real international aircrafts accidents already happened before as illustrated in next figures to recognize the same sources of hazards that may cause harm in case of aircraft on jacks for extended period of time inside hangars. (Brainstorming conclusion)



Figure (1) Accident because of Maintenance or Repair [4]

The aircraft was undergoing landing gear maintenance at America in Phoenix, Arizona the nose landing gear collapsed. The two mechanics aboard the aircraft at the time were injured, and the aircraft suffered serious damage.



Figure (2) Accident because of storm or tornado[8]

Several hangars at the stephens county airport destroyed by a tornado. Some workers were still at the airport when the tornado hit.



Figure (3) Accident because of Ergonomics

Ground collision, this scene repeated all over the world [9]





Figure (4) Accident because of fire in which factors differ [6]  
The fire destroyed 2 Great Lakes Raytheon/Beech 1900D 19 passenger planes inside the hangar valued at 8 million dollars



Figure (5) Accident because of Earth quake [3]  
Hangars at Clark Air Base destroyed by ashfall from Pinatubo eruption. Photo by E.J. Wolfe.



Figure (6) Accident because of Hostilities(War, terrorism) [7]  
Piriharpur destroyed by Japanese raiders at Wheeler Air Field (War). Aircraft destroyed on Sinai, Egypt 2015 (terrorism)

### 3. A Proactive Multi Criteria Assessment Technique Implementation

A Proactive Multi Criteria Assessment Technique phases as follows.

1. Simulation or imitation of expected accident scenarios that have the initial potential causes of accidents on purpose of risk assessment (Brain storming).
2. Expected accident scenarios severity ranking multiplied with occurring likelihood on purpose of risk ranking(Risk Assessment)
3. SWAT and Root Cause Analysis (Focus Team- Brainstorming)
4. Risk Management (Risk identification, recommended risk mitigation action, Report, Control, Monitor) .
5. Improvement measure(Pareto Chart)

#### A. Creating accidents scenarios (1<sup>st</sup> phase).

Next accident scenarios figures created by organization focus team to give more clarification for potentials that may cause harm which will be discussed in details in Appendix A.



Figure (7) Scenario of aircraft twisting because of earth quack , jacks maintenance, ergonomic, storm



Figure (8) Scenario of aircraft twisting because of earth quack , jacks maintenance, ergonomic, storm



Figure (9) Scenario of wind lifting aircraft



Figure (10) Scenario of aircraft falling



Figure (11) Scenario of fire occurring



Figure (12) Scenario of hostilities

### B. Risk assessment results (2<sup>nd</sup> phase).

Maintenance phases for aircraft overhaul in sequence as follows Acceptance, Initial disassembly, Erase Painting, Final disassembly, Inspections, Repairs, Initial Assembly, Final Assembly, Painting, Delivery and Spare two weeks. Next figure indicates phase's duration in which organization designed phases admits at least eight weeks for wheel well compartment to be repaired and aircraft on jacks. Pareto chart fig 7 photos (1:2) demonstrates that 20% of phases (Inspection, Repair) take more than 50% of total duration causing 80% of risk weight numbers. All in all these designed phases durations differs from organization to one other according to different conditions fig 7 photos (3:6).

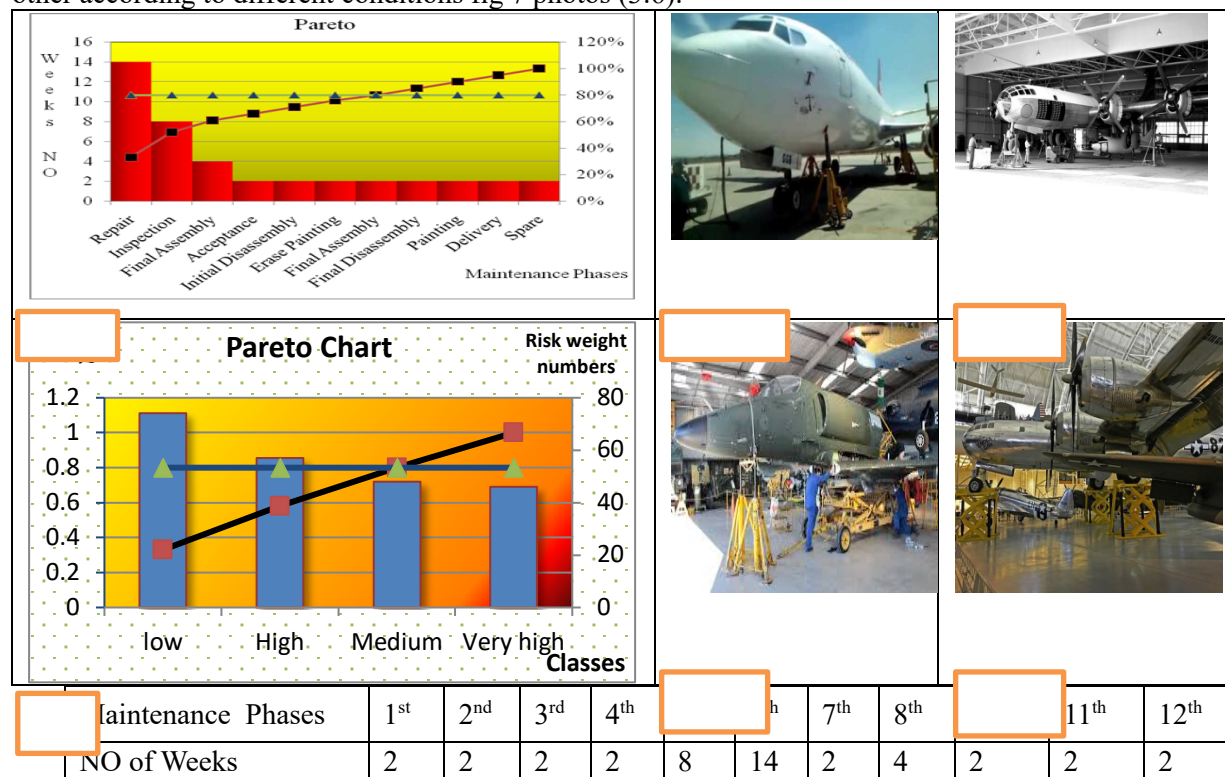


Figure (7) Pareto chart of [designed phases (1) - risk classification Appendix A (2)] – aircrafts on jacks photos

Risk weight numbers in this case study is a special case, this because we really do not know the moment of harm occurring and which one of risk categories may happen

### C. SWAT and Root Cause Analysis Results (3<sup>rd</sup> phase)

Results of Pareto risk classification fig 7 indicates that 20% (very high risk) of risk categories express probability of sever harm occurring which considered as a crisis because of (aircraft loss, death or both). These results simply mean a big deal of fund lost, especially if adding work hours, materials of repair. As a result financial threatened. Productivity of the organization is a unit (an aircraft stakeholder property), when lost reputation impact risk will be very high risk and lasts for more than twelve months so business itself may be lost because of delivering customer promise cannot be achieved. So focus team brainstorming



is immediate to face the problem according to risk hierarchy control like engineering substitutions or administrative procedures in order to mitigate the expected risk of aircraft on jacks.

#### D. Risk Management (4<sup>th</sup> phase)

As a result of reporting the percentage accident scenarios expected to happen in the future so brainstorming committee of focus team in the presence of top management have been agreed that the optimal solution for case study problem is to keep the aircraft on its landing gear or on a safe movable carrier besides administrative instructions as follows

1. Overhaul (Inspection, Repair) of wheel well and landing gear planned to be one week through working three shift daily and called (Emergency phase)
2. Flammables' materials stores outside the hangar, its existence inside the hangar only for daily use
3. Safe the hangar in case of hard climate news, no human being work
4. Monitoring security

Next figure demonstrates the desired Readiness and Responsiveness in case of exposure to hazard of (fire, storm, Tornado, hostilities and earthquake) as an example.

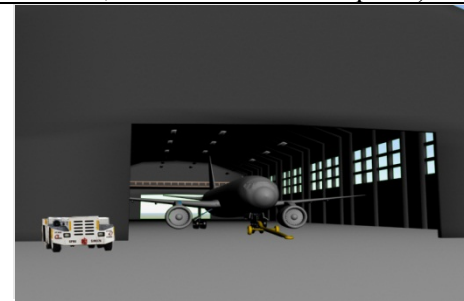


Figure (8) Scenario of readiness & responsiveness (Withdraw stick, truck is so close to the hangar)



Figure (9) Scenario of evacuation in case of hazard

#### E. Improvement Measure (5<sup>th</sup> phase)

According to the enhancement efforts of planned phases it is found that emergency phase shortened the total period of time to be 35 weeks as illustrated in next figure.

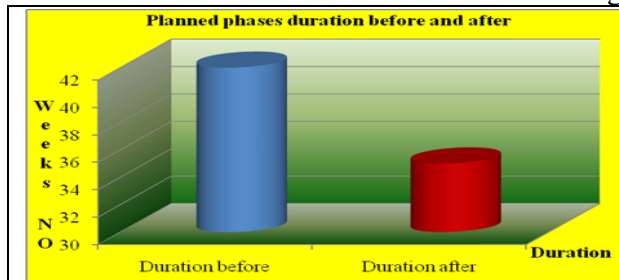


Figure (10) Comparison of planned phases Duration before and after

$$\text{Duration Reduction Percentage} = \frac{\text{Duration [before - after]}}{\text{Before}} = \frac{42 - 35}{42} = 17\%$$

So the total period of time for executing (Overhaul Program) minimized with approximately 17% which exceeds customer expectations.

The 17% of the total period of time for executing (Overhaul Program) aids strongly to mitigate at least 80% of total risk weight numbers.

#### 5. Conclusion

The first duty of business is to survive, and the guiding principle of business economics is not the maximization of profit, it is the avoidance of loss; (Peter Draucker) Said

Scientists of management have been classified and named the systems that work in aviation field as a complex and critical systems. Historical catastrophic accidents of Complex Systems because of in today's society we are all strongly dependent on the correct functioning of technical systems. This dependence has made us vulnerable to system failures, i.e. events by which a system's ability to perform a required function is terminated (IEV 191-04-01) [10]

A guide to our technique what (Hale et al., 1997) [1] said, that safety may be known as "freedom from those conditions that can cause death injury, occupational illness, or damage to or loss of equipment or property, or damage to the environment".

A Proactive Multi Criteria Assessment Technique is a systematic approach of risk based thinking in which real core values like fact based decision, productivity capability, financial revenue maximization,

Sustainable reputation, competitors challenges and Stakeholder satisfaction can be achieved in case of organizations commitment.

Emergency preparedness and Response (EPR) one of the important hot issues in aviation field, this is because of valuables in aviation industry. , additional information is required to develop managerial, operational, and business continuity plans to assist the airport operations in planning.

A real archive of real international aircrafts accidents already happened in order to recognize the same sources of hazards that may cause harm in case of aircraft on jacks for extended period of time inside Depot Lines hangars.

The paper's main research question was: "What is the add value of a proactive multi criteria assessment technique in Emergency preparedness and Response?" In order to synchronize future expectations challenges.

The add value of a proactive multi criteria assessment technique in Emergency preparedness and Response briefed as follows.

1. The total period of time for executing (Overhaul Program) minimized with approximately 17% which exceeds customer expectations.
2. The 17% saving of the total period of time for executing (Overhaul Program) aids strongly to mitigate at least 80% of total risk weight numbers.
3. Capability of synchronizing future expectations challenges on purpose of protecting (personnel, product, service, finance, reputation...etc.) of harm occurring.
4. A future vision of its capability to be embedded or integrated to multi frame works of management systems like (Quality management with risk based thinking, Total proactive risk management, Safety management and Business continuity).

A Proactive Multi Criteria Assessment Technique future challenge is more and more implementations for different areas coverage. All in all continual trials and motivated efforts towards risk optimization, continual improvement will help organizations to survive with acceptable sustainable safe conditions. The real aim of continual trials is to achieve Early Warning Risk Management System to be applied in Aviation Field Business.

## **Socio-cultural considerations in Human Resources: The impact of Wasta on HR processes in the Middle East**

**Elizabeth Kassab PhD– Université Antonine**

The Middle East is thought to be a 'sleeping giant' due to, amongst other factors, (1) the abundance of the yet to be exploited natural resources, (2) post-war construction efforts which will stimulate considerable growth and (3) it's geo-strategic location for trade routes. Hence, an understanding of the Middle Eastern culture is a necessity, in doing business with the 'sleeping giant'. The Middle East favors certain cultural constructs, that need to be explored. These particular constructs are currently not evident, with the same influence, in other cultures.

This paper explores the concept of *Wasta*<sup>1</sup>, an interpersonal influence, infamous in the Middle East region. This research exclusively examines the level of *Wasta* used in the recruitment process within Universities in Lebanon. It clarifies the consequences that *Wasta* has, in a new model, 'The Wasta Framework' depicting the affects of *Wasta* on HR practices. More explicitly this paper tests three hypotheses that examine *Wasta's* influence on HR practices of Training and development; compensation and benefits as well as career development. A mixed methods approach is used through questionnaires and interviews, with various academic and administrative staff in four local universities in Lebanon. A thorough literature review illustrates *Wasta* through cultural aspects (Budhwar and Mellahi, 2006; Leigh, 2009; Tlaiss and Kauser, 2011; Bailey, 2011; Iles, Almhedie and Baruch, 2012 and Mohamed and Mohamed, 2011). Others discuss *Wasta* evasively, not providing clear numerical data to base their research on (Makhoul and Harrison, 2004); even though there are some researchers that state that *Wasta* is not seen as a form of corruption in the Arab countries. This paper is based on a comparative analysis of 349 questionnaires and 20 interviews, where a further quantitative sample has been taken in order to compare previous data from 2014 with more recent data in 2017 to study and assess evolution.

<sup>1</sup> Mohamed and Mohamed (2011) define *Wasta* as the “intervention of a patron in favor of a client in attempt to obtain privileges or resources through a third party” (p.412). Cunningham and Sarayrah (1993) are quoted in Barnett et al (2013) as cleverly rooting the word *Wasta* to the Arabic work “waseet” which means the middleman.

This paper compares *Wasta* with other well known interpersonal influences, *Guanxi*, *Jeitinho*, *pulling strings* and *blat* in order to show the importance and influence that these practices have on employee’s engagement in the workplace and cultural norms (Hutchings and Weir, 2006; Nitsch and Diebel, 2007; Velez-Calle, Robledo-Ardila and Rodrigues-Rios, 2015 and Torres et al, 2015). This paper is the first of its kind illustrating *Wasta* via primary data supporting the negative impact that a so-called *Wasta* can have on employees. The *Wasta* framework will provide individuals with a clear understanding of how *Wasta* should be dealt with. It will be a pillar to build future research. Hence it supports and give added value to the minimal research that is available on HR practices in Lebanon and the Middle East.

**Keywords:** *Wasta*, Clout, Connections, HR practices, Lebanon, Middle East

## Public-Private Transport Service Choice Decisions in Dubai: A Triple- Bounded Discrete Choice Elicitation Method

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### Abstract:

This study used a multivariate logit model (a triple-bounded discrete choice with open-end follow-up elicitation method) to examine passengers’ willingness to use and pay for improved public transport service as opposed to private cars. Data obtained from a contingent valuation (CV) survey conducted on a representative sample of passengers in Dubai is used to undertake the empirical demonstration. The study will shed light on whether a triple-bounded discrete choice with open-ended follow-up elicitation techniques (without assuming perfect correlation among the error terms of the responses) can improve efficiency of the related welfare measurement to its optimum. The result is expected to generate findings with significant ramifications for policy makers who may be interested about the determining factors in disincentivizing personal vehicle ownership demand as well as encouraging public transport services. As stated in the RTA strategic plan: 2014-2018, “Smooth transport for all” is a strategic goal of RTA and its strategic initiative is, among others, to decrease demand for private car ownership vis-à-vis increasing demand for public transport services. This study is an addition to the very limited information available in the literature on public versus private transportation choice decisions in the Gulf Cooperation Council (GCC) countries such as the UAE.

## **Impact of specialization on humanitarian and development aid: evidence from the response to the Syrian crisis in Lebanon**

**Ghinwa El Chlouk**

### **Abstract**

Specialization and comparative advantages have been extensively studied with respect to their impact on trade between nations. The seminal works of Ricardo, and consequently Dornbusch, Fisher and Samuelson have assessed the impact of specialization on trade partners.

In accordance with the Ricardian model we identify the competitive margin that countries hold in the supply of aid based on a cost assessment of inputs. We assume in our model that donor agencies (and especially governmental aid agencies) have competitive margins in different fields in aid. Specialization will ensure a higher impact for aid. Inputs used in the production of “aid”, from labor to capital, are used to measure the opportunity cost of each agency. Throughout our model we assume zero transport costs and minimal variations in the exchange rate.

We study, through empirical evidence, the impact that specialization in humanitarian and development aid by donor agencies, could have on the recipients of aid. We have chosen the Syrian crisis as it is the largest humanitarian crisis in the world today and have chosen the case of neighboring Lebanon, which is hosting the largest number of refugees per capita, receiving upwards of 3 billion USD in development aid every year.

The model first depicts a two donor - two projects equilibrium, then presents a model with a continuum of projects and donor agencies. The results illustrate the considerable increase in the impact of aid that could be derived through more specialization and cooperation between different agents.

**Key words: Comparative advantage – Ricardo – Aid – Development – Donor agencies**

## Foreign Exchange Rate Forecasting, Risk Premium Factor and Carry Trade: Opportunities and Applications

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**Shengxiong Wu**, Texas Wesleyan university, Forth Worth, Texas, USA

### **Abstract**

This paper evaluates the performance of carry trade strategies with macro fundamentals in a Markov switching dynamic factor augmented regression framework and compares the performance statistics with the benchmark model of a random walk. We make simulations with the Japanese Yen as funding currency against target currencies of both developed and emerging market currencies. Carry trade, a currency speculation strategy between the high-interest rate and low-interest rate currencies, generates high payoffs on average but has a possibility of crash risk. We argue that risk adjusted returns, mean returns and downside risk may perform better when exchange rate forecast models are augmented with a dynamic regime switching factor derived from risk premium of carry trading and estimated by Maximum Likelihood with Kalman and Hamilton Filter.

**Key Words:** *Exchange Rate Models, Carry trade, Taylor Rule, Markov-Switching Dynamic Factor*

**JEL codes:** C22, E32, E37, E43, F31, F37, G15

## **Chain logistic model from colombian fruits, "Mango".**

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**Edwin Causado Rodríguez**, PhD. Universidad del Magdalena,

**Jhon Jairo Vargas Sánchez**, PhD. Universidad del Magdalena,

### **Abstract**

The article defines a chain logistic management model from colombian fruits, "mango". The objective is to search the best distribution net based the characteristic of products, customers and information systems. For its development will be used an operations research model that jointly solves problems of location and capacity of facilities, in addition to the optimum number of vehicles with their routes, that satisfies and guarantees the needs of the customers and the delivery of their orders.

### **Keywords**

Logistic management model; operations research; problems of location and capacity of facilities.

## Currency Substitution, Monetary Independence, and Real Exchange Rate Dynamics□

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Keywords: currency substitution; monetary independence; (in)determinacy; exchange rate dynamics

JEL classification: E5, F3, F31, F41

### Abstract

Since 1 October 2016, China's renminbi (RMB) has been effectively included in the Special Drawing Right (SDR) basket along with the U.S. dollar, the euro, the Japanese yen, and the British pound. The change in the RMB's international status, along with the expectation of increased RMB volatility and loosened capital control in China, complicates the physical environment faced by Taiwan. Currency substitution and a change in the exchange rate linked to 'renminbisation' might occur in Taiwan's selection of portfolio. This paper analyses how the dynamic consequences of currency substitution affect the independence of the monetary policy of the Central Bank of the Republic of China (Taiwan) and the exchange rate volatility. The dynamic general equilibrium model indicates that whether the RMB and the U.S. dollar exhibit complementarity or substitutability with the New Taiwan dollar (NTD) plays an important role in evaluating the monetary independence. It also indicates that when the Marshall–Lerner condition holds, the adjustment of real exchange rates follows a unique saddle path. By contrast, when the Marshall–Lerner condition does not hold, the adjustment of real exchange rates may be either unstable or indeterminate. The relative magnitude between currency substitution elasticities and trade elasticities critically determines the dynamic properties of real exchange rates.

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## **Playing the Long Game: China's Infrastructure Footprint and Its Role in Nigeria's Economic Expansion**

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Infrastructure development plays a major role in promoting growth and reducing poverty. In Nigeria, however, underdeveloped infrastructure continues to be a binding constraint on sustainable development. Notably, Nigeria, through the continent's Agenda 2063, recognizes that developing infrastructure – transport, energy, water, and e-connectivity – will be critical for Nigeria to assume a lasting place in the global economic system. The report reviewed documents addressing the country's infrastructure gap and provides an important insight into the rapidly growing presence of Chinese official financing in Nigeria's infrastructure as well as the distinctive character of the Chinese commitment. It assesses infrastructure's role in the country's economic expansion and argued that infrastructure is crucial for Nigeria's structural transformation. The paper highlighted the importance of sound infrastructure policy, realistic goal-setting and political commitment to lasting change.

Keywords: China, Economic Growth, financing, Infrastructure, Nigeria

JEL Classification: H49, H54, G30, G38



# Effect of Marketing Communications on Student Decision to Enroll at the Faculty of Business Administration in a Small University: A Case Study of Rajamangala University of Technology Phra Nakhon

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## Abstract

Thai universities are in crisis as student enrollments decline. The problem underpins the purpose of this research which is to study the effect of marketing communications on student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, Rajamangala University of Technology Phra Nakhon in Thailand, and to determine other factors affecting such decision of grade 12 students and year 3 vocational certificate students in Thailand. The research tool used in this study is a questionnaire to provide descriptive statistics and enable analysis by way of a chi-square test. From the desired sample of 400 students, the findings show that subjects are influenced in their choice to study by advertising, public relations, online communication of the university, as well as viral marketing. Chi-square test results further show, with a level of significance at 0.05, that student decision with regard to enrollment in a bachelor degree at the university depends on all marketing communications tools, except public relations.

**Keywords:** marketing communications, decision to enroll, undergraduate, faculty of business, university

## 1. Introduction

Thailand academics are currently confronting a problem common to many Asian countries. Because of a decline in the number of students, universities are facing steady class size reductions. In order to address this, top management of local universities are now being urged to find ways to increase student numbers (Asian Correspondent, 2016). However, smaller universities like Rajamangala University of Technology Phra Nakhon (RMUTP) are restricted in what they can do by budget limitations. The need for effective policies in attracting prospective students is imperative.

Asian Correspondent (2016) reports that Thai universities are in crisis as student enrollments decline. University administrators and policy makers are concerned about the significant decrease in incoming students and possible attributing factors. Two key points that emerged are an ageing society (The World Bank, 2016) and an oversupply of universities in Thailand. Across the country, there are 170 institutions offering up to 4,100 programs (Asian Correspondent, 2016), and according to education officials, Thailand universities have up to 156,216 spots open for prospective students. However, in 2015, only 105,046 students applied to take the entrance exams, leaving more than 50,000 empty places (Study International, 2017). If this trend continues, it can be predicted that newer and smaller universities may be forced to shut down as weaker competitors.

The Thai government has introduced market mechanisms in education by increasing the number of universities to 120 in 2016 (Thai Association of Governing Boards of Universities and Colleges, 2017), believing that encouraging competition will increase efficiency of education. However, most prior reviews of research literature in this area conclude that the effects of market mechanisms on increasing efficiency in education are marginal, if found at all (Waslander et al, 2010), while entailing problems associated with oversupply of universities.

Such oversupply has seen a noticeable decrease in student applications for courses, especially with regard to smaller universities such as RMUTP. This is, in part, due to the belief of many students that bigger is better. However, this does not always hold true for universities. Even though large universities will often staff professors who are at the top of their fields, including renowned researchers, writers and experts (O'Brien, 2017), there are benefits associated with smaller institutions, such as reduced class sizes, greater familiarity between advisers and students, a close sense of community, and a friendly atmosphere. These strong points have been a feature of RMUTP but, even so, enrollment numbers remain a cause for concern.

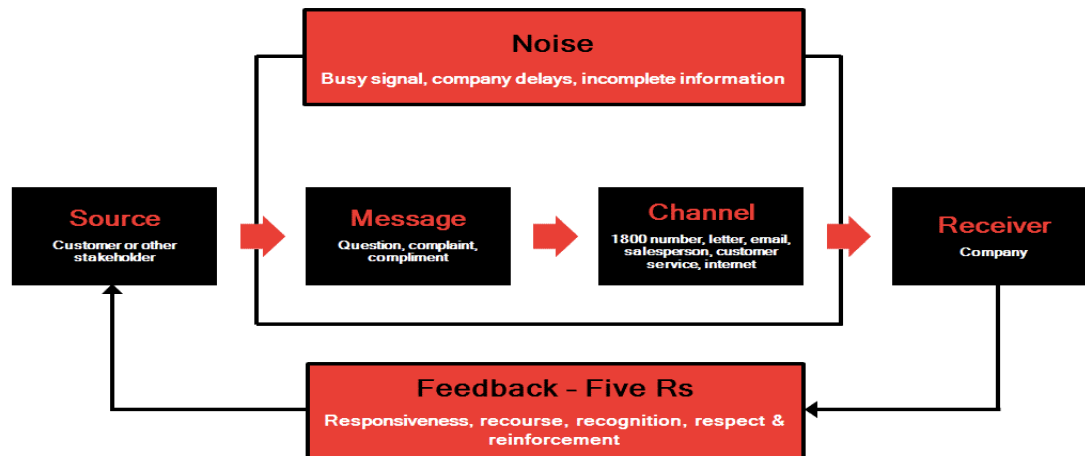
This particular university sets an example that small size does not equate with low quality. Even though RMUTP was established in 1975, the Faculty of Business Administration has a history of more than 117 years, being known originally as The Bangkok Commercial School. It became the first school of accounting in Thailand in 1900, and remains one of the foremost in academic achievement to this day. In order to maintain this level of merit, however, it is imperative that the problem of falling student numbers be redressed. The purpose of this research is to study the effect of marketing communications on student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, RMUTP in Thailand.

## 2. Literature Review

Marketing communications (MC) employs different marketing channels and tools in combination, with a focus on any way a business can communicate a message to a desired market or the market in general. Such tools can include advertising, personal selling, direct marketing, sponsorship, communication, promotion and public relations (Tomse, D., & Snoj, B., 2014). The International Chamber of Commerce (ICC) states that marketing communications such as advertising, sales promotion, sponsorship or direct marketing should be produced directly by, or on behalf of, marketers intended primarily to promote products or to influence consumer behaviour (ICC, 2006). The various types of communications and messages are unified to realize the concept of integrated marketing communications (IMC) which can be viewed as a strongly interactive process between an organization and its customers, stakeholders and staff (Belch et al., 2008).

The customer-initiated marketing communication model was introduced by Duncan (2005) and explains how consumers communicate to the company brand using different social media tools. According to the model (see figure 1), the sender is the source of encoded messages like questions and complaints in communicating with organizations through channels both personal and non-personal. Personal channels of communication are direct and target individual groups. They involve two or more persons who communicate directly with each other face-to-face or person-to-person through telephone, email or fax. Social channels also fall under the category of personal communications, where friends, neighbours, associates, co-workers, and family members are all included (Krizan et al., 2008).

Figure 1: Customer-Initiated Marketing Communication Model



Source: Customer Initiated Communication (2011)

In the customer-initiated marketing communication model, the customer or other stakeholder transmits the communication and the company receives it. According to this model, a two-way process of engagement can be achieved with the company providing feedback by way of the five Rs - responsiveness, recourse, recognition, respect and reinforcement (Worldpress.com, 2017).

In the case of universities, Redmond (2010) studied the influence of marketing communications on students' decisions to enroll at Durban University of Technology. Her results indicate that marketing communications strategies must continually be modified in response to a changing market. Al-Hawary and Batayneh (2010) recognize the importance of marketing communications where potential students are the customers who need to be communicated to effectively and efficiently in order to influence decisions in favour of certain institutions. Fleming (2016) uses the term "Conversion Marketing" to help grow enrollments and launch new programs for institutions of all types and sizes despite limited budgets and resources. She suggests four immediate actions institutions can take. These involve website attention, effective use of social media, assessment and improvement, and being proactive and specific. All of the above studies can provide support for Duncan's model.

With regard to RMUTP, the focus is on the effects of four marketing communications tools. These are advertising, public relations, online communication, and viral marketing. Kotler and Keller (2009) define advertising as a paid, non-personal communication through various media with the intention of informing or persuading members of a particular audience. Messah and Immaculate (2011) argue that good public relations with an educational institution's stakeholders enables the institution to project a favourable and positive image in the media and consequently enhance student enrollment. Online communication refers to reading, writing, and communication via networked computers – something which is very popular among Thai students nowadays. Viral marketing (or word of mouth) is the passing of information from person to person by oral communication, and it depends on the extent of customer satisfaction with the product or service (Stach and Serenko, 2010), and on the degree of its perceived value (Turel et al., 2010).

### 3. Methodology

#### 3.1 Data

The research tool used in this study is a questionnaire from the target sample of 400 prospective students made up of grade 12 students and year 3 vocational certificate students, in Thailand.

#### 3.2 Statistical Tools

In data analysis, we employ frequency count, percentage and chi-square ( $X^2$ ) test analysis to examine the effect of the four marketing communications tools on student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, RMUTP.

#### 3.3 Conceptual Framework

Figure 2: Conceptual Framework

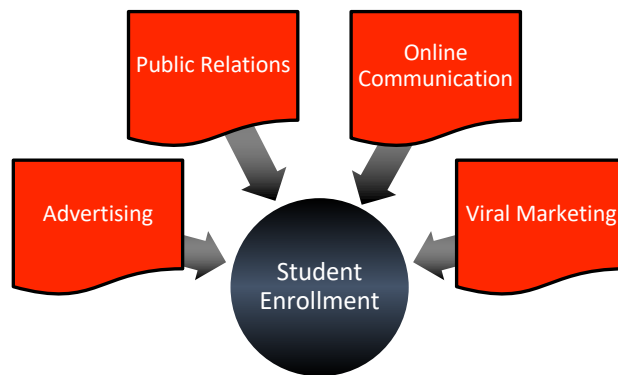


Figure 2 shows the conceptual framework for this study. Following the hypotheses, there exist relationships between the four marketing communications tools (advertising, public relations, online communication, and viral marketing) and student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, RMUTP.

#### 4. Results

##### 1) Hypothesis 1

H<sub>0</sub>: There is no relationship between advertising and student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, RMUTP.

H<sub>1</sub>: There is a relationship between these variables.

Table 1: Test of significant relationship between advertising and student decision in relation to enrollment.

Effect of Advertising	Rank Selection in Relation to Enrollment					X <sup>2</sup> value	X <sup>2</sup> prob
	1	2	3	4	more than 5		
highly disagree	1	0	0	1	0	40.91	0.00
disagree	0.4%	0.0%	0.0%	12.5%	0.0%		
disagree	18	2	1	0	12		
	6.9%	8.0%	4.0%	0.0%	14.6%		
neutral	95	13	13	2	33		
	36.5%	52.0%	52.0%	25.0%	40.2%		
agree	128	9	7	4	34		
	49.2%	36.0%	28.0%	50.0%	41.5%		
highly agree	18	1	4	1	3		
	6.9%	4.0%	16.0%	12.5%	3.7%		
Total	260	25	25	8	82		
	100.0%	100.0%	100.0%	100.0%	100.0%		

Table 1 shows the chi-square p-value (0.00) is less than our  $\alpha$  value (0.05). Therefore,  $H_0$  is rejected indicating that there is a significant relationship between advertising and student decision to enroll for a bachelor degree at the Faculty of Business Administration, RMUTP. The highest percentage of students (49.2%) who selected to enroll for their first choice, agree that there is an effect of advertising for their decision.

## 2) Hypothesis 2

$H_0$ : There is no relationship between public relations and student decision to enroll for a bachelor degree at the Faculty of Business Administration, RMUTP.

$H_1$ : There is a relationship between these variables.

Table 2: Test of significant relationship between public relations (PR) and student decision in relation to enrollment.

Effect of PR	Rank Selection in Relation to Enrollment					X <sup>2</sup> value	X <sup>2</sup> prob
	1	2	3	4	more than 5		
highly	1	0	0	0	0	21.69	0.15
disagree	0.4%	0.0%	0.0%	0.0%	0.0%		
disagree	18	0	2	2	11		
	6.9%	0.0%	8.0%	25.0%	13.4%		
neutral	99	15	15	3	38		
	38.1%	60.0%	60.0%	37.5%	46.3%		
agree	127	9	6	2	31		
	48.8%	36.0%	24.0%	25.0%	37.8%		
highly agree	15	1	2	1	2		
	5.8%	4.0%	8.0%	12.5%	2.4%		
much	260	26	25	8	82		
disagree	100.0%	100.0%	100.0%	100.0%	100.0%		

Table 2 shows the chi-square p-value (0.15) is higher than our  $\alpha$  value (0.05). Therefore,  $H_0$  is not rejected indicating that there is no significant relationship between public relations and student decision to enroll for a bachelor degree at the Faculty of Business Administration, RMUTP. The highest percentage of students (48.8%) who selected to enroll for their first choice, agree that there is an effect of public relations for their decision.

## 3) Hypothesis 3

$H_0$ : There is no relationship between online communication and student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, RMUTP.

$H_1$ : There is a relationship between these variables.

Table 3: Test of significant relationship between online communication and student decision in relation to enrollment.

Effect of Online Communication	Rank Selection in Relation to Enrollment					X <sup>2</sup> value	X <sup>2</sup> prob
	1	2	3	4	more than 5		
highly disagree	0	0	0	0	1	44.68	0.00
	0.0%	0.0%	0.0%	0.0%	1.2%		
disagree	3	0	2	0	9		
	1.2%	0.0%	8.0%	0.0%	11.1%		
neutral	58	4	6	1	27		
	22.3%	16.0%	24.0%	12.5%	33.3%		
agree	135	18	15	3	36		
	51.9%	72.0%	60.0%	37.5%	44.4%		
highly agree	64	3	2	4	8		
	24.6%	12.0%	8.0%	50.0%	9.9%		
much disagree	260	25	25	8	81		
	100.0%	100.0%	100.0%	100.0%	100.0%		

Table 3 shows the chi-square p-value (0.00) is less than our  $\alpha$  value (0.05). Therefore,  $H_0$  is rejected indicating that there is a significant relationship between online communication and student decision to enroll for a bachelor degree at the Faculty of Business Administration, RMUTP. Most of the students (51.9%) who selected to enroll for their first choice, agree that there is an effect of online communication for their decision.

#### 4) Hypothesis 4

$H_0$ : There is no relationship between viral marketing and student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, RMUTP.

$H_1$ : There is a relationship between these variables.

Table 4: Test of significant relationship between viral marketing and student decision in relation to enrollment.

Effect of Viral Marketing	Rank Selection in Relation to Enrollment					X <sup>2</sup> value	X <sup>2</sup> prob
	1	2	3	4	more than 5		
highly	1	0	0	1	3	51.69	0.00

disagree	0.4%	0.0%	0.0%	12.5%	3.7%
disagree	7	1	2	0	10
	2.7%	4.0%	8.0%	0.0%	12.2%
neutral	69	12	12	2	34
	26.5%	48.0%	48.0%	25.0%	41.5%
agree	137	11	9	5	32
	52.7%	44.0%	36.0%	62.5%	39.0%
highly agree	46	1	2	0	3
	17.7%	4.0%	8.0%	0.0%	3.7%
Total	260	25	25	8	82
disagree	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4 shows the chi-square p-value (0.00) is less than our  $\alpha$  value (0.05). Therefore,  $H_0$  is rejected indicating that there is a significant relationship between viral marketing and student decision to enroll for a bachelor degree at the Faculty of Business Administration, RMUTP. Most of the students (52.7%) who selected to enroll for their first choice, agree that there is an effect of viral marketing for their decision.

## 5. Discussion

From the target sample of 400 students, the findings of this study show that subjects are influenced in their choice to enroll by viral marketing, online communication, and advertising respectively. Hence, marketing communications is a key factor in influencing students to enroll for a bachelor degree at the Faculty of Business Administration, RMUTP.

Prospective students of RMUTP pay the most attention to viral marketing or word of mouth marketing. This communications tool has both advantages and disadvantages. The most valuable benefits are lower advertising costs, fast growth, mainstream media exposure, increased credibility, and rapid lead generation. However, viral marketing also has limitations that RMUTP must consider. The success of viral marketing depends on the transfer of messages from person to person. The efficiency of this process is diluted when not all messages reach the target market, and when unwarranted negative comments are passed on. Even though viral marketing holds risks, it has the ability to attract many prospective students at a convincingly low cost, thus extending the reach of RMUTP.

With regard to online communication (such as websites and Facebook), this marketing tool is very suitable for smaller universities like RMUTP which is restricted in what it can do by budget limitations. An internet presence instantly gives RMUTP not only prospective students, but also a global audience. In addition, online communication operates continuously with cost effectiveness. Opening and maintaining an online site costs a fraction of the budget requirement for other marketing communication tools, especially advertising and public relations.

## 6. Conclusion

RMUTP is currently facing a problem of declining student enrollments. In attempting to address the issue, this research investigates the effect of marketing communications on student decision in relation to enrollment for a bachelor degree at the Faculty of Business Administration, RMUT in Thailand, and to determine other factors affecting such decision of grade 12 students and year 3 vocational certificate students in Thailand. Chi-square test results show that marketing communications is a vital tool for the university in attracting prospective students to enroll in their institution. Based on analysis and discussion of



the study, it is concluded that viral marketing is the most effective marketing communication element in terms of reaching out to prospective students, followed by online communication and advertising respectively.

## 7. Acknowledgement

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## 8. Brief Biography

Kwanruetai Boonyasana was born in Tak, Thailand. Her major research fields are energy economics and international trade, and she is also interested in doing research in marketing. She was offered a scholarship to study at the University of Leicester in the United Kingdom and completed a PhD in Economics from that university in 2013. While there, she received best presentation award from the Graduate Research Festival in 2011, and scholarships from the International Association for Energy Economics for international conferences in Canada, Sweden, the United States and Australia. In 2013, she returned to Thailand to take a position as lecturer at Rajamangala University of Technology Phra Nakhon, and recently was granted the distinguished award for 2016 by the National Research Council of Thailand for her PhD thesis “World Electricity Co-operation”.

Napapach Thirapattanapokin is from Bangkok. Her major research field is marketing communications. She graduated with a bachelor degree from Siam University in 1994, and gained her master degree from Rajamangala University of Technology Phra Nakhon (RMUTP) in 2016. She received best poster presentation award for her thesis “Effect of Marketing Communications on Student Decision to Enroll at Rajamangala University of Technology Phra Nakhon: A Case Study of Students in Bangkok” from National Conference of Si Ayutthaya Rajabhat Group 2016 (NCSAG-2016). After working in Marketing File for longer than 20 years, she was promoted to Director of Communication Affairs Division, RMUTP, in 2016.

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## The Balanced Scorecard in Norwegian municipalities: A research note

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**Abstract:** The overall purpose of this research note is to provide an overview of the use of the Balanced Scorecard (BSC) in Norwegian municipalities. The study draws on data from an e-survey sent out to all 428 municipalities in Norway, which yielded a response rate of nearly 26 percent. The data generally show that the BSC is widely used by Norwegian municipalities. However, the BSC is mainly used as a performance management system, and newer elements of the BSC such as causal relationships and strategy maps are rarely used.

**Keywords:** Balanced Scorecard, municipalities, diffusion, implementation

## **BASO Model-Based Strategic Planning Training Impact on Rural Mosque Effectiveness.**

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### **ABSTRACT**

This research discusses the impact of BASO model-based strategic planning training on rural mosque effectiveness. This research also examined the effect of training follow up session as mediating factor towards rural mosque effectiveness. This study applied quasi experimental field research involved 160 mosque leaders revealed that BASO Model-based strategic planning significantly influenced the rural mosque effectiveness. This study also found that training follow up session significantly mediated the relationship between BASO Model-based strategic planning training and rural mosque effectiveness.

*Keywords: Organisational Effectiveness, Strategic Planning Training, Training Follow up.*

## INTRODUCTION

Mosque is very important institution for Muslims community and it is an indicator of the growth values of Islamic civilisation whether in Malaysia or global. In order to be an effective and excellent institution, the mosques as non-profit organisation (NPOs) need to strengthen their strategic planning, organisational structure, organisational systems, management ability of the mosque leaders, and focus on organisational developments, and their leadership drive (Cunningham, 1977; Cunningham 2009; Cumming & Worley, 2008). Mosques must be compelled to transform and review their state of affairs in order to meet the new challenges particularly in response to expectations of the community, the public, and stakeholders (Brown & Harvey, 2006). Within the context of Malaysia, mosques do function as a place for prayers and celebrating Muslim festivals (Ahmad Zaki, 2007). Similarly, the mosques function as the centres for the weekly congregation such as the Friday prayer, apart from being supposedly a premise that is conducive for Quran recital and remembrance, Islamic culture and community developments centre (Sheikh Ismail, 2008). Yusuf AL Qardhawi, 2007 revealed that a mosque is not merely a place of worship but rather extended to provide facilities for the well-being of each and every Muslim. Evidently, the needs of the community are fulfilled by the management of the mosque which encompasses zakat collection and distribution, marriage, family disputes, welfare, propagation, education, Islamic culture centre, community centre and funeral service.

The researcher is bent towards examining the training intervention because there is a dearth of previous studies from the perspective of mosque institutions that provides empirical evidence to the argument that strategic planning training is indeed a prerequisite to improving the capability and capacity of mosque leaders to enhance rural community mosque effectiveness. It is argued that the development of the rural community mosques is hampered by: (i) non-existence of strategic planning, (ii) weak and ineffective leadership, (iii) poor managerial ability among the mosque leaders, (iv) poor organisational systems, (v) poor organisational structure, and (vi) poor organisational developments.

BASO Model-based strategic planning training is compartmentalised into the following sub-modules: (i) basic planning, (ii) alignment planning, (iii) scenario planning, and (iv) organic planning. The BASO model itself is rated as a more comprehensive strategic planning as compared with other models which are mostly limited to basic goal-setting juncture. This basic BASO model-based strategic planning is argued to have a consequential effect particularly, in the transformation of the mosque leaders to be more dynamic, democratic, and effective group decision-making that is based on consensus. The second perspective of the strategic planning is the so-called alignment planning which consists of the following elements: (i) planned strategy, (ii) emergent strategy, (iii) improved work process, and (iv) improved organisational systems and tactical adjustment for execution plans. The proclivity to adopt BASO Model-based strategic planning training programme, and follow-up sessions based on Kirkpatrick's (1959) assertion that such training is a pre-requisite to organisational effectiveness. Furthermore, Martin (2010) argued that training impact can be improved through effective follow-up techniques which justifies the researcher's adoption of training follow-up sessions. This present study applies an integrated adoption of three theories as the basis for the theoretical framework. The first theory relates to the four levels of training evaluation which was developed by Kirkpatrick (1961; 1976) to evaluate BASO Model Strategic Planning Training (BMSPT) intervention. The training evaluation variables used in this study consist of (i) reaction, (ii) knowledge, (iii) behaviour, and (iv) results. The second theory pertains to training follow-up theory which was developed by Martin (2010), consisting of variables as follows: (i) peer review meetings, (ii) technical consultancy, and (iv) management support. The third theory is drawn from organisational effectiveness model which was postulated by Cunningham (2009), and for this present study, the theory justifies the integration of the following variables: (i) documented strategic intention, (ii) structure, (iii) systems, (iv) managerial ability, and (v) organisational developments.

## RESEARCH OBJECTIVES

- RO1: To verify whether there are any significant differences between the pre- test and post-test means for the underlying dimensions of: (i) BASO Model-based strategic planning, and (ii) mosque organisational effectiveness.
- RO2: To estimate whether the underlying dimensions of BASO Model-based strategic planning training are significantly related to one another, and related to the underlying dimensions of follow-up sessions.

RO3: To verify whether the underlying dimensions of mosque organisational effectiveness are significantly related to one another, and related to the underlying dimensions of BASO Model-based strategic planning training, and the underlying dimensions of follow-up sessions.

## RESEARCH QUESTIONS

- RQ1: Are there any significant difference between each pair of the pre-test and post-test means of the underlying dimensions of BASO Model-based strategic planning training, and mosque organisational effectiveness?
- RQ2: Are the underlying dimensions of BASO Model-based strategic planning training significantly related to one another, and related to the underlying dimensions of follow-up sessions?
- RQ3: Are the underlying dimensions of mosque organisational effectiveness significantly related to one another, and related to the underlying dimensions of BASO Model-based strategic planning training, and the underlying dimensions of follow-up sessions?

## METHODS

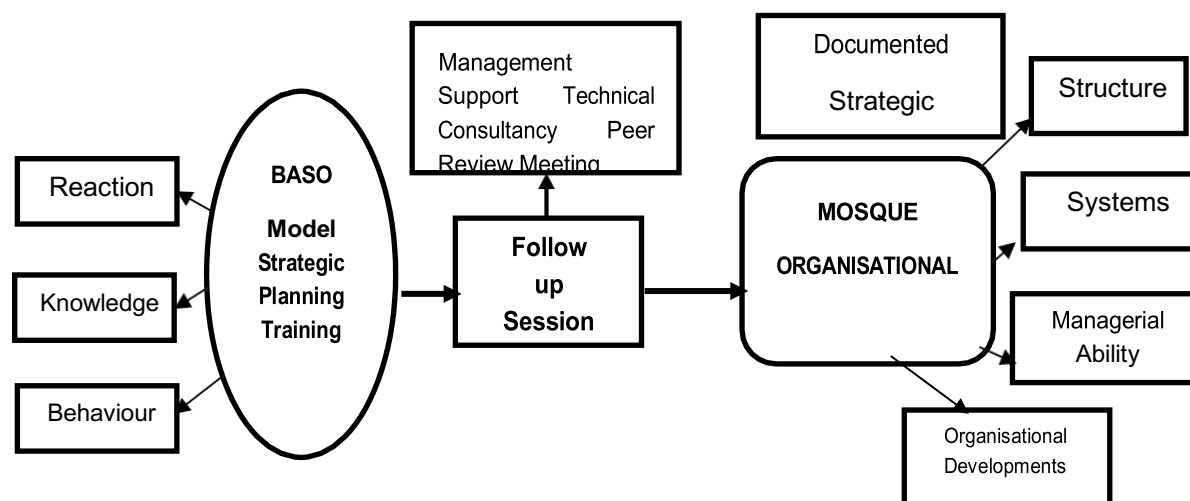
The approach for this present study is quasi-experimental field research. Despite being a systematic inquiry, the researcher have been given four selected participating mosques by the Federal Land Development Authority (FELDA) management and Department of Islamic Development Malaysia (JAKIM). Four mosques are represented by 160 participants who are required to attend BASO Model-based strategic planning training programme. The same set of participants also attended a series of follow-up sessions which pretest and posttest set of data are collected. In this quasi-experimental study, the effect of treatments can be measured by measuring the difference between post-test and pre-test ( $O_2 - O_1$ ). Quasi-experimental pre-test and post-test are both useful means of guarding against threats to reliability and validity (Cook & Campbell, 1979; Burrell & Morgan, 1979; Cunningham, 1997; Smith & Glass, 1987). There are four time-lines or entries for data collection processes within the six-month period of time. The first time-line (T1) is before the experimentation. The second time-line (T2), the post-test data is collected from all 160 respondents at the end of the strategic planning training programme. The third time-line (T3) takes place two months after the participants completed the strategic planning training programme. The researcher collected data on the impact of the follow-up sessions for each sample mosque at the end of the assessment month by using the second set of questionnaire or the Set B questionnaire. The time-frame four (T4) takes place at the end of six month which is allotted as the duration of this present studies' so-called experiment. This assessment used questionnaire Set C which is open-ended and close-ended, comprising of pre-test and post-test criteria which are adapted from Kirkpatrick's (1961;1976) four-level training evaluation on results.

This present study adopted purposive sampling which is deemed to systematically creating the samples for quantitatively testing the scale items (Sekaran, 2013). Example of purposive sampling units are community leaders, experts, professional known for their work with and expertise on the problem of the investigation (Rubin & Babbie, 2009). The purposive sampling is used to justify the inclusion of rich source of data that can be obtained to generate or test out the explanatory frameworks (Patton, 2002), (Gerrish, & Lathlean, 2015). Personally administered questionnaire set and face to face interviews with the 160 respondents resulted 100 percent questionnaires return in all four time-lines of data collection processes.

This study 160 respondents are reliable to answer for the mosque organisational effectiveness developments, issues and problems of the rural community mosque. These sources of reliability and validity are taken into consideration in order to achieve the objectives of this investigation in terms of its adequacy of a sampling procedure. Furthermore, the judgement or purposive sampling has to consider not only the feasibility, and the resource-intensiveness of alternative sampling techniques but more importantly, the overall goal of the study (Parcell et al., 1999). Researcher used SPSS and SEM version 22.0 as the statistical technique adopted for this present study in the wake of the 160 respondents, it is incumbent upon the researcher to actually establish that it is reasonable to have it as the sample size of this present study (Anderson and Gerbing, 1988), (Baumgartner & Homburg, 1996), (Wolf et. al., 2013). This longitudinal study duration was six months, with 160 respondents which fall beyond the range of 100 and 150 as the minimum number of respondents for structural equation modelling as posited by Anderson and

Gerbing (1988).

## THEORETICAL FRAMEWORK



## RESULTS

The results of the structural modelling revealed that 17 out of 24 hypotheses tested for the direct relationships were supported and 7 hypotheses were rejected.

Table 1: 24 Hypotheses Tested

No	Structural Paths	Standardised Coefficient	Critical Ratio	P	Results
H1	rea → beh	0.233	1.989	0.047	Supported
H2	kno → beh	0.603	4.378	0.001	Supported
H3	beh → tco	0.254	2.575	0.001	Supported
H4	rea → tco	0.612	5.730	0.001	Supported
H5	tco → msu	0.403	3.358	0.001	Supported
H6	kno → msu	0.211	1.782	0.075	Supported
H7	rea → prm	0.391	3.332	0.001	Supported
H8	beh → prm	0.515	3.710	0.001	Supported
H9	tco → prm	0.302	2.602	0.009	Supported
H10	kno → prm (I)	-0.253	-1.839	0.066	Supported



H11	msu → prm	0.036	0.522	0.601	Rejected
H12	tco → dsi	0.297	1.708	0.082	Supported
H13	msu → dsi	0.166	1.806	0.073	Supported
H14	prm → dsi	-0.582	-1.853	0.064	Supported
H15	kno → dsi	0.062	0.272	0.786	Rejected
H16	rea → dsi	0.401	1.857	0.063	Supported
H17	beh → dsi	0.262	0.942	0.346	Rejected
H18	prm → mpe	-0.027	-0.111	0.911	Rejected
H19	rea → mpe	0.083	0.501	0.616	Rejected
H20	kno → mpe	0.389	2.206	0.027	Supported
H21	beh → mpe	0.270	1.790	0.204	Supported
H22	tco → mpe	0.017	0.111	0.912	Rejected
H23	dsi → mpe	0.191	2.115	0.034	Supported
H24	msu → mpe	-0.042	-0.501	0.616	Rejected

Note:

1.rea: Reaction, 2.kno: Knowledge, 3. beh: Behaviour, 4. tco: Technical Consultancy, 5. msu: Management Support, 6. prm: Peer Review Meeting,,7 dsi: Documented Strategic Intention, and 8. mpe: Mosque Performance.

Table 2: Summary of Statistics for All Constructs

No		Mea n	SD	Item s	$\alpha$	Skewness	Kurtosis
<b>A</b>	Documented Strategic Intention			5	0.798		
<b>dsi1</b>	Complete characteristics	5.670	1.136			-0.846	-0.846
<b>dsi2</b>	Information dissemination	5.840	1.043			-1.196	-1.196
<b>dsi3</b>	Adhere to planning	5.960	1.107			-1.125	-1.125
<b>dsi4</b>	BASO model	5.840	1.136			-1.410	-1.410
<b>dsi5</b>	Planning documentation	6.280	0.855			-1.249	-1.249
<b>B</b>	Mosque Performance (mpe)			4	0.887		
<b>ost</b>	Organisational structure (ost)	5.945	0.783			-1.302	2.665
<b>osy</b>	Organisational system (osy)	5.891	0.920			-0.947	0.190
<b>mab</b>	Managerial ability (mab)	5.846	0.798			-2.193	9.331
<b>ode</b>	Organisational development (ode)	5.951	0.651			-0.777	-0.129
<b>C</b>	Reaction (rea)			8	0.937		
<b>gre</b>	General reaction	5.853	0.648			-0.527	0.192
<b>oac</b>	Objectives achievement	5.669	0.701			-0.749	0.969
<b>tme</b>	Training management evaluation	5.686	0.727			-0.715	0.693
<b>tpe</b>	Trainers performance	5.920	0.715			-0.545	-0.242
<b>met</b>	Methodology	5.744	0.717			-0.477	0.138
<b>pch</b>	Programme characteristics	5.846	0.689			-0.427	0.011
<b>Tto</b>	Training topics	5.766	0.639			-0.346	0.112
<b>att</b>	Attitudes	5.951	0.651			0.415	-0.129

<b>D</b>	Knowledge		5	0.796		
<b>kno1</b>	ICT enhancement	5.590	0.89 9		-1.047	3.743
<b>kno2</b>	5S Culture	5.820	0.78 4		-0.382	0.306
<b>kno3</b>	Dakwah development	5.770	0.81 0		-0.485	- 0.068
<b>kno4</b>	Strategic planning	5.900	0.76 2		-0.002	- 0.884
<b>kno6</b>	Management excellence	5.880	0.78 0		-0.433	- 0.033
<b>E</b>	Behaviour (beh)		5	0.784		
<b>beh1</b>	Interpersonal skills	5.610	0.82 5		-0.379	- 0.013
<b>beh2</b>	Public speaking	5.760	0.82 8		-0.339	- 0.334
<b>beh3</b>	Meeting technique	5.780	0.78 2		-0.391	- 0.079
<b>beh5</b>	Transformational leadership	5.860	0.80 0		-0.631	1.017
<b>F</b>	Technical Consultancy (tco)		7	0.859		
<b>tco1</b>	Appreciate technical support	5.850	0.88 5		-0.253	- 0.767
<b>tco2</b>	Useful technical guidelines	5.830	0.89 9		-0.344	- 0.411
<b>tco3</b>	Understand BASO model	5.730	0.95 1		-0.399	- 0.327
<b>tco4</b>	Mosque strategic planning	5.850	0.80 3		-0.461	- 0.071
<b>tco5</b>	Mosque effective planning	5.640	0.92 8		-0.266	- 0.534
<b>tco6</b>	Plan of action	5.870	1.02 6		-0.877	0.802
<b>tco7</b>	Development of guidelines	6.010	0.97 8		-0.925	0.307
<b>G</b>	Management Support (msu)		5	0.863		
<b>msu1</b>	Working group meeting	5.650	1.08 3		-1.553	4.895
<b>msu2</b>	Meeting venue and facilities	5.770	1.08 7		-1.385	3.935
<b>msu3</b>	Working team evaluation	5.860	0.98 3		-1.034	1.396
<b>msu4</b>	Resources	5.630	0.96 3		-1.109	3.234
<b>msu5</b>	Complete documentation	5.862	0.94 8		-0.751	0.742
<b>H</b>	Peer Meeting Review (prm)		6	0.862		
<b>prm1</b>	Strategic planning skills	5.590	1.11 8		-1.114	1.511
<b>prm2</b>	Facilities and techniques	5.650	1.02 3		-0.752	0.689
<b>prm</b>	Steering committee	5.820	0.92		-0.696	0.630



<b>3</b>			<b>4</b>		
<b>prm</b>	Charts for planning	5.750	0.99	-0.777	1.179
<b>4</b>			<b>1</b>		
<b>prm</b>	Check A and B charts	5.920	0.91	-0.549	-
<b>5</b>			<b>5</b>		<b>0.022</b>
<b>prm</b>	BASO model planning	5.280	0.90	-0.022	-
<b>6</b>			<b>5</b>		<b>0.502</b>

The first research question was descriptive results on all items showed that BMSPT supported by follow up as mediating factor proven significantly improved mosque leaders ability to complete the mosque strategic documentations, improve mosque performance, improved mosque leaders knowledge, and behaviour. Reaction item score for BASO Strategic Planning Training (BMSPT) intervention affirmed that its suited and well accepted by the mosque leaders. The mosque leaders as participant of BMSPT claimed that this training intervention proven changed their positive attitude towards mosque effectiveness as they gave attitude as the highest score amongst the items under the reaction.

The second research question was developed based on the seventeen significant relationships which led to the generation of seven hypotheses which were anchored on three mediators as follows: (i) technical consultancy, (ii) peer review meeting, and (iii) management support.

Table 3: Summary of Results for Mediating Variables

No	Links	Mediators	Sobel Test	Results
H2a:	rea → prm	Technical Consultancy [tco]	3.481	Supported
H2b:	Rea → tco	Behaviour [beh]	2.536	Supported
H2c:	rea → prm	Behaviour [beh]	3.692	Supported
H2d:	Rea → dsi	Technical Consultancy [tco]	1.680	Supported
H2e:	Beh → prm	Technical Consultancy [tco]	3.634	Supported
H2f:	Tco → dsi	Management Support [msu]	0.807	Rejected

Note: rea: Reaction, 2. prm: Peer Review Meeting, 3. tco: Technical Consultancy, 4. dsi: Documented Strategic Intention, and 6. beh: Behaviour.

In hypothesis H2a, the mediating effect of technical consultancy on the relationship between reaction and peer review meeting was found to be significant. This finding provides an empirical evidence that the relationship between reaction and peer review meeting is mediated by technical consultancy which implies that the role of the consultant is recognised by the trainees as being pivotal to the enhancement of the quality of the peer review meeting. It is justifiable to argue that the key player to the training programme was the consultant which was also the trainer. In other words, the consultant was responsible for nurturing the reaction of the trainees as a result of which reaction reciprocates the importance of peer review meeting. In a case of mediation, the relationship between reaction and peer review meeting is hypothesised to be an indirect effect that happens because of the impact of technical consultancy which is the mediator. Therefore, when technical consultancy is included in a regression analysis model with reaction, the effect of peer review meeting is reduced, and the effect of technical consultancy continues to be significant. This present study finding is similar as what has been suggested by Martin (2009;2010).

In hypothesis H2b, the mediating effect of behaviour on the relationship between reaction and technical consultancy of the mosque management team was found to be significant. In other words, reaction is contingent upon the extent to which technical consultancy is extended to the trainees. However, the behaviour of the trainees was found to have a moderation effect on the relationship between reaction and technical consultancy. This implies that the relationship between reaction and technical consultancy is hypothesised to be an indirect effect that happens because of the impact of behaviour as the mediator. Hence, when behaviour is included in a regression analysis model with technical consultancy, the effect of reaction is reduced, and the effect of behaviour is reduced whereas the effect of behaviour remains significant. Kirkpatrick (1961) mentioned training is not a magic. Further he mentioned behaviour need some times to take place. The previous researchers like Kirkpatrick (1961; 2006), Martin, (2009; 2010); McNamara, (2010), suggested that training intervention need the effective training follow up in order learning transfer and improve trainees

behaviour or skills. This present study used follow up sessions and its underlying dimensions as the medium to strengthen the learning transfer and behaviour or skills ability amongst the trainees. Therefore, this present study finding is similar and affirmed that follow up sessions is an important mediating factor for the achievement of mosque documented strategic intention and mosque performance.

In hypothesis H2c, the mediating effect of technical consultancy (tco) on the relationship between reaction (rea) and peer review meeting (prm) of the mosque management team was found to be significant. In a case of mediation, the relationship between reaction and peer review meeting is hypothesised to be an indirect effect that happens because of the impact of behaviour as the mediator. Therefore, when the behaviour is included in a regression analysis model with the reaction, the effect of peer review meeting is reduced, and the effect of the behaviour still remains significant. This present study finding is similar as what have been highlighted by Beckhard, (1969), Kirkpatrick, (2006) asserted that follow up sessions must be incorporated in the training programme. Scott et al. (2012) study affirmed that the important of managerial skills to predict effectiveness. Behaviour or skills ability of the trainees for this present study is the direct impact of inputs and coaching from the consultant as technical expert (Martin, 2009).

In hypothesis H2d, the mediating effect of technical consultancy (tco) on the relationship between reaction (rea) and peer review meeting (prm) of the mosque management team was found to be significant. Similarly, in a case of mediation, the relationship between reaction and documented strategic intention is hypothesised as an indirect effect that happens because of the impact of technical consultancy as a mediator. Hence, when the mediator is included in a regression analysis model with reaction, the effect of the technical consultancy continues to be significant. Without the inputs and coaching from the Technical Consultant it is impossible that the rural mosque leaders are able to completed the BASO model-based strategic intention. Therefore, the empirical data asserted that Technical Consultancy is consistent as the important mediating factor to ensure effective transfer of learning especially on the procedural or technical knowledge (Gerry et al., 2008). Technical consultancy help focusing what really matters and effective execution by using effective communication and make difficult things become easy and objectives accomplished faster (Jeary, 2009).

In hypothesis H2e, the mediating effect of technical consultancy on the relationship between behaviour and peer review meeting of the mosque management team was found to be significant. In a case of mediation, the relationship between the behaviour and the peer review meeting is hypothesised to be an indirect effect that happens because of the impact of technical consultancy as the mediator. Consequently, when the mediator is included in a regression analysis model with the behaviour, the effect of peer review meeting is reduced, and the effect of the mediator still remains significant. Further, technical support from the consultant provides the participant with guidance, slides, BASO tools kit, format and checklist, and taking corrective actions becomes the prerequisites to achieve the targeted results (Parry et al., 2002). This present study finding similar as research by Thomas and Pitman's (2011) examined problem-solving consultation training.

In hypothesis H2f, the mediating effect of management support (msu) on the relationship between technical consultancy and documented strategic intention of the mosque management team was not found to be significant. In a case of mediation, the relationship between the technical consultancy and the documented strategic intention is hypothesised to be an indirect effect that happens because of the impact of management support as the mediator. Therefore, when the mediator is included in a regression analysis model with the management support, the effect of the documented strategic intention is reduced, and the effect of the mediator should continue to be significant, which is not the case for management support. Therefore, management support does not mediate the relationship between technical consultancy and documented strategic intention. This present study finding contradict with previous research finding like Allen (1999; 2009), Wang et al.'s (2012) and Shaar et al.'s (2015) which they are mentioned that strongly significant mediating variable influences organisational change on organisational performance. Beside management support in providing resources and facilities, the policy makers, and top management in organisational developments context also need to consider the collaboration of their management team and staff mind-set is ready for commitment, participation, involvement, empowerment and teamwork towards the organisational development and effectiveness programme.

## CONCLUSION

This present study asserted that BASO Model-based strategic planning training intervention is highly significant antecedent to the rural mosque organisational effectiveness. BASO Model-based strategic planning training is well accepted by the mosque leaders as BASO training trainees group consist of older generation, professionals, women leaders, and youth leaders group. The professionalism of the training consultants, design of training module with the relevant training contents, effective training methodology, the training subject is easy to understand contributed to keep the training sessions alive and magnetised the trainees to follow the training sessions from the commencement until the end. BASO model-based training intervention found that as successfully achieved the training objectives. BASO model-based training empirically proven that change the mosque leaders attitude and paradigm shift. Mosque leaders motivation and attitude change materialised as they are highly committed to enhance their mosque's organisational effectiveness. BASO model-based also proven succeed in improving the mosque leders knowledge on the BASO Model-based strategic planning and behaviour related to the transformational skills, teamwork skills, group consensus decision making skills, communication skills and presentation skills. It is wisely to expand this BASO Model training intervention to other rural mosques in Malaysia or global context.

Training follow up sessions and its underlying dimensions are crucial and proven as significant mediating factors influence the greater impact on mosque leaders managerial ability, succeed the completion of documented strategic intentions and improved mosque performances attribute consist of mosque structure, systems, and organisational developments as an effective, condusive, and accredited as excellent mosque. Therefore, follow up sessions must be inclusive with the training package.

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## **Preferential Tax Rate and Tax Incentives: A tax expenditure analysis of SMEs in Malaysia**

**Mohd Arif bin Romli**

### **Abstract**

Promoting growth in small and medium enterprises (SMEs) via fiscal policy is one of the most important research topics studied in public finance literature. To promote growth, one of the most popular measures taken by many governments in the world including Malaysia is through tax policy. Tax policy in this study refers to providing tax incentives to SMEs. Many policy makers opine that SMEs are the key to strong domestic economy, employment, poverty alleviation and to support other government's social and economic objectives. In Malaysia, there is dearth of evidence on the amount of tax expenditure spent and how many tax payers have enjoyed the tax policy implemented. The reason being, tax expenditure spent by the government is not publicly available. For comparison, tax expenditure reporting and analysis have been regular practices among many countries in the world, especially in developed countries. This practice is to ensure efficient and effective allocation of government resources and enhance government's transparency. Unfortunately, despite having a compendium of tax incentives, the Malaysian government has yet to produce a tax expenditure report. As a result, tax expenditures are mistakenly analysed as aspects of the tax collection system rather

than as part of spending programs. Thus, this paper takes the opportunity to analyze and report tax expenditures spent to SMEs in Malaysia. The tax expenditure analysis is based on the corporate tax returns (form C) from Inland Revenue Board of Malaysia (IRBM). The data extracted are from SMEs that enjoyed preferential tax rate and tax incentives for the period of 2001-2015. The SME definition in this study follows the definition by Income Tax Act (ITA) 1967 that only refers to small and medium corporations. The finding from this study will be beneficial for the policy makers, academicians as well as future researchers that interested to further research the topic of tax policy for SMEs, tax expenditure, economic growth etc. especially in the Malaysian perspective. Besides, this study hopefully will shed some light and information on how much the government has spent and how many SMEs are affected. The implication of this study is that in any tax policy that giving some preferences to certain individuals or taxpayers, there are risks of unproductive tax expenditure, leakage of revenue and tax evasion. This study also discusses on possible policy recommendations to the Malaysian government on best practices of tax policy for SMEs based on the previous studies and practices from other countries. At the end of this paper, it will give suggestion on future research related to tax policy for SMEs and the importance of evaluation of tax expenditure.

**Keywords:** Small and Medium Enterprises (SMEs), tax expenditure, preferential tax rate, and tax incentives

## Key Antecedents Of Organizational Citizenship Behavior (OCB), and the Relationship of OCB With Employee Performance in The Context Of Outsourcing

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### **Abstract:**

Organizational Citizenship Behavior (OCB) is a unique feature of employee's attitude at work , which was mentioned for the first time in the beginning of the 1980s'. An employee exhibiting such behavior, works beyond what is required by his/her duties and responsibilities as defined by his/her job description by putting an extra effort in this regard. Several studies showed that Organizational Citizenship Behavior (OCB) improves efficiency, as well as employees' participation and helps creating a good working atmosphere. to help managers better understand the concept of Organizational Citizenship Behavior( OCB), and provide them with guidelines on how to encourage



and develop this important and rewarding behavior among their subordinates, we will identify in this study, the key antecedents of Organizational Behavior (OCB), and investigate the relationship of the latter, with Organizational Commitment, Psychological Empowerment, Work Unit Social Structural Characteristics, The Job Characteristics Model, Job Satisfaction, and Employee Performance. While several studies about the identification of the antecedents of Organizational Citizenship Behavior (OCB), have been conducted in several industries and countries; an exhaustive list of these key antecedents, and a general model linking these key antecedents, Organizational Citizenship Behavior (OCB), as well as Job Satisfaction, and Employee Performance were never presented.

Another important aspect of this study is to focus on the validity problem related to the question of micro generalizability, and not on the validity problem related to the construct of Organizational Citizenship Behavior (OCB), as it was often the case in the previous studies. For this purpose we will be investigating the concept of Organizational Citizenship Behavior (OCB) in the context of outsourcing. Our study is based on a case-study consisting of a sample of 39 employees from a company providing Business Process Outsourcing (BPO) services in Poland. As in general the previous studies focused on Organizational Citizenship Behavior (OCB) for full-time employees in large Western companies, the investigation of these issues for part-time workers, temporary workers, or contracted workers, who do not share the same characteristics as full-time members of an organization remained a question opened for further research. This poses the problem of micro generalizability, for these sub-populations of employees, which we would like to explore in this study.

Various Hypotheses about Relationships between Organizational Citizenship Behavior (OCB) and its antecedents will be tested using a system approach, correlation analysis, analysis of variance, and linear regressions. We will also conduct mediation test between Organizational Citizenship Behavior (OCB) and Job Satisfaction. Data will be analyzed using the Statistical Package for Social Science (SPSS) version 21. Finally a conceptual model for Organizational Citizenship Behavior, its antecedents and employee performance, as well as a predictive model for Organizational Citizenship Behavior (OCB) will be presented.

**Keywords:** Organizational Citizenship Behavior (OCB), Antecedents of OCB; Outsourcing; Agency Theory; Psychological Empowerment; Job Satisfaction; Organizational Commitment, Employee's performance.

**JEL Codes:** M10, M12, M16, M19

## The Setting-Up Of The Strategy On The Cluster Management Of The Environment-Friendly Alternative Energy

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### **Abstract**

The purpose of the study on the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy is then conducted with its aims to study 1) the policy on the cluster management of the environment-friendly alternative energy, 2) the relationship between knowledge and attitude of the higher education students towards the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy, and 3) the recommendations for the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy. This study was the sever research. The sample of this study are those 450 Ramkhamhaeng university student studying in the Faculty of Business Administration. A questionnaire on the attitude towards the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy was utilized in the data collection. It is revealed that the policy for the setting up of the strategic plans on the cluster management of the environment-friendly

alternative energy which responds to the Thailand 4.0 policies of the country and relates to the Thai industry 4.0 development strategy for 20 years (2017-2036) comprises the wealth-driving mechanism: (1) the driving mechanism through innovation, and (2) the driving mechanism through participation creation, and (3) the driving mechanism through sustainable environment-friendliness respectively.

**Keywords :** Strategy, Environment-Friendly Energy Cluster

### **Introduction**

According to the survey carried out by the Registrar Office of Department of the Interior as of 31 December, 2016, Thailand has its population of 65,931,550 and the number of the industrial factory is 145,883. (The National Statistics Office, 2014) Due to these numbers, Thailand's amount of the electricity power is increased not less than 1,200 Megawatt accordingly. At present, Thailand has the increasing number of the power plant but it is not enough for the consumption. Importing the fuels to generate the electricity power is still done such as the natural gas of which the value of the import is up to 911,888 million Thai baht. (The 2015 Annual Report of the Office of Policy and Energy Plan).

### **The purposes of this research titled**

The study on the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy is then conducted with its aims to study 1) the policy on the cluster management of the environment-friendly alternative energy, 2) the relationship between knowledge and attitude of the higher education students towards the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy, and 3) the recommendations for the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy.

### **Method**

The sample of this study are those 450 Ramkhamhaeng university student studying in the Faculty of Business Administration. A questionnaire on the attitude towards the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy was utilized in the data collection.

### **Tools used to collect data.**

Tools used in research By the way, there are three.

- 1) Research papers The study reviewed the strategic plans, policies, action plans, review, analysis, synthesis, comparative strategic management cluster energy is environmentally friendly, in compliance with Policy 4.0 of the Thailand.
- 2) Qualitative Research Researchers used structured interviews of an open-ended question. The population of respondents had submitted a question in an interview.
- 3) Quantitative Research The researchers used a questionnaire to collect quantitative data is divided into three parts: (1) on general information about the characteristics of respondents and comments on renewable energy, eco-friendly, 9 (2). questions to evaluate the relationship between knowledge and attitude of students towards the University's strategy to prepare for. Environmentally friendly energy cluster, which is divided into five parts: (1) knowledge of the energy that is environmentally friendly. (2) knowledge management strategy cluster energy is environmentally friendly (3) Knowledge of the process of strategic management of clustered energy that is environmentally friendly (4) knowledge of the opportunities and obstacles of strategic management cluster energy.eco-friendly (5) knowledge of the strengths and weaknesses of the strategic management of clustered energy that is friendly to me. The area is associated with the opinion of the respondents. This is a question for both closed and open-ended to allow respondents to express their opinions and suggestions, so that should a judgment open to the idea. The question would have closed a 5 star rating is an indication of the attitude of the respondents do not agree with a lot of scoring at level 1. Disagree with a rating of 2 Not sure 3 points With the score 4 And agreed with the Level 5.

### **The Findings**

It is revealed that the policy for the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy which responds to the Thailand 4.0 policies of the country and relates to the Thai industry 4.0 development strategy for 20 years (2017-2036) comprises the wealth-driving mechanism: (1) the driving mechanism through innovation, and (2) the driving mechanism through participation creation, and (3) the driving mechanism through sustainable environment-friendliness respectively.

For the study on the relationship between knowledge and attitude of the students towards the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy, two factors are found: (1) for the internal environment factor, most students are knowledgeable on the cluster management of the environment-friendly alternative energy at the medium level. The attitude towards the cluster management of the environment-friendly alternative energy is at the high or good level. Their knowledge positively relates to their attitude towards the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy and the followings are heavily focused on: vision and goal. The merging of the environment-friendly alternative energy cluster groups plays the critical roles for the industry sector and is beneficial for the country's industry sector. (2) for the external environment factor, it is found that the process factor of the cluster strategy is at the highest level such as the economic, social, and cultural factors which help drive the setting up of the strategic plans on the cluster management of the environment-friendly alternative energy with the opinion that the setting-up of the strategic plans, the implementation, and the evaluation are extremely significant for the cluster strategy of the environment-friendly energy.

### **Recommendation:**

For the recommendations, it is found that to set up of the strategic plans on the cluster management of the environment-friendly alternative energy, the dissemination of the knowledge on the cluster management of the environment-friendly alternative energy should be done in order that most people equally and thoroughly participate in and the network to connect the energy industry clusters throughout all sectors both within the country and abroad should be made through the promotion of the exchange of the body of knowledge and the new innovation in order to help develop the energy cluster strategy which is sustainably environment-friendly including the cooperation on law, tax measurement, alliance trade promotion, and research grants support for the higher education institutions in order that all sectors can participate in making the setting-up of the strategy much more efficient for the country development at international standard.

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## **Composition Of Sanitary Ware Wastes Into Raw Materials For Ceramic Reproduction In Edo State, Nigeria.**

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### **Abstract**

In Nigeria precisely Edo State, the source for ceramic raw materials for ceramic productions were basically through naturally sourced raw materials from different locations. Sanitary ware wastes which are non-biodegradable, disposed indiscriminately in our immediate environment thereby constituting environmental hazards are now recycled to form ceramic raw material for bodies for reproduction of new ceramic items. Materials, tools, equipment and method used in this study are sanitary ware wastes got from Auchi and Benin City in Edo State, Nigeria were cleaned, washed with clean water, dried under the sun and were broken into pieces manually with the aid of a hammer in the ceramics studio. Thereafter, the broken pieces were milled in the ball milling machine into powder form before use for composition of ceramic body with suitable additives. Findings revealed that finer particles size of ceramic wastes had all the needed constituents of ceramic bodies which they were initially composed from natural raw materials, such as clay, flint and feldspar. It is recommended that all tiers of government should establish ceramics recycling plants as this will help to reduce or further eliminate wastes menace caused in our immediate environment, thereby enhancing production from sanitary wares wastes and also will lead to the creation of job opportunities including bringing revenue to the government of Nigeria which is currently facing an economy recession.

### **Discussion**

Ceramics to the scientist, technologist and artist is referred to as the manipulation and change of clay and suitable additives into aesthetic and functional items by subjecting them to high

temperature in the kiln, thereby causing some reaction between oxides in the composite body. (Osariyekemwen (2015:2).

In the view of Igbinedion (1995:1) ceramics may be defined as products manufactured by heat treatment of a material (or mixture of materials) which is inorganic and non-metallic. Additionally, he said that in spite of the expansion of the field where the term ceramics may be applied, the volume of clay based ceramics manufactured is much greater than that of non clay ceramics, and clay may still be regarded as the basic and most important ceramic materials.

Summarily, ceramics raw material is simply defined according to Otimeyin (2015:1) as the application of heat on any earthly raw material and such earthy material could be clay, sand, limestone, feldspar, coal, granite, gypsum etc, but of all these clay is by far the most widely used and most salient.

It is pertinent to note here that, ceramics production is incomplete until it passes through heat treatment which transforms the clay and clay related materials from the natural state into a rock like, irreversible and impervious to water. . (Osariyekemwen (2015:2).

Most of the major ceramics raw materials in use in Nigeria today are sourced from their natural places of origin and processed to have ceramic products. Raw material development is nonetheless critical to the success of the ceramic sub-sector of the nation's economic and industrial growth. Ceramic raw materials are earthly raw materials which may be principally clay or mixture of suitable materials for body and glaze compositions. The possible body composition ingredients are kaolin, ball clay, grog, feldspar, flint, quartz and bentonite, while that of glaze composition includes basic oxides, acidic oxides and amphoteric oxides. However the following oxides and materials used in the three areas enumerated above are clay, flint, feldspar, whiting, zinc oxide, tin oxide, talc, borax, lead oxide, magnesium oxide, sodium oxide, potassium oxide, strontium oxide and barium oxide. However, the basic material needed in glaze and clay body compositions according to Emodah (2006:2) are silica, clay and feldspar. Positing further, He said that these materials are available everywhere in the world.

Several reasons have been known to the ceramist to arrive at different clay body and glaze compositions. One of the major reasons is to better the working conditions of clay body and glazes. These working conditions are maturing temperature, refractoriness, strength and durability, glaze and clay body fitness, texture, and colour.

Today, most of the sites of the raw materials like clay, feldspar and flint are gradually being consumed. As a way of making an urgent substitute to ceramics raw materials, there is the need to possibly recycle ceramic wastes for re-use as raw materials for ceramic production, just like what is obtainable in polymer, metallurgy, paper making, glass industries, et cetera, which have also derived their raw materials from recycling of the wastes in recent times. . (Osariyekemwen (2015:2).

Recycling has been one of the major sources of raw materials to the industries; it helps to reduce the importation of raw materials. Possibility of recycling of ceramic waste to raw materials should be encouraged as an alternative to material development to the success of ceramics sub-sector of the nation's economic and industrial growth. Ceramic raw materials, whether recycled from ceramic waste or sourced naturally, remain viable provided it possesses the chemical properties of the raw material needed for production. Ceramic raw materials have special chemical characteristics; their properties are dictated by the type of atoms present, and the type of bonding between the atoms in them. The ceramic material atoms are held together by chemical bond and the two most common bonds for ceramic materials are covalent and ionic while that of iron is metallic bond in covalent and ionic types. The bonding is much stronger than that of metallic which is responsible for the brittle nature of ceramics and the ductile nature of metals.

The ceramic materials character is in its having a wide range of properties that make them unique and possess a wide variety of potentials that make them suitable for a multitude of application in all areas of modern day technology and engineering (Irabor, Jimoh and Omowumi, 2010: 5).

Despite the fact that Nigeria is known as a nation worldwide to be blessed naturally with both human and mineral resources, the fast consumption and increase in industrial production have led to a drastic decrease of the available natural resources. Moreover, a high quantity of generated rejects in industries are recycled in iron and steel scrap, aluminum, cans, glass bottles, paper, wood and plastics.

The findings of Kalilu and Emeriewen (2011:11) as well as those of Ohimai *et al* (2011:11) confirmed that porcelain waste like broken china ware, discarded water closets and tiles were recycled through pulverization into three sizes proved suitable for polishing and buffing. Ohimai *et al* said that the quest for man's continuous improvement for a better life in the last three decades has resulted in



tremendous development in ceramic technology both in the manufacturing techniques and in the chemistry of materials used.

Bone ash and feldspar for Bone China or porcelain and feldspar for the porcelain bodies produce dense non-porous verified pot (Olatunji, 2011: 8). Similarly, grog is formulated from clay. It is a product of fired art work ground into powder and grog is to prevent warping and cracking of a piece of ceramic ware during drying and firing. When added to clay it provides openings through which moisture can escape easily without any harm to the ware. Most ceramics are made by sintering or viscous forming.

There is a saying that no man lives in isolation in the world but depends on others and be depended upon. An idle mind, they say is the devil's workshop, and a hungry man is an angry man. It follows that wastes not rightly utilized as recycled materials, will be wrongly utilized. This, instead of solving environmental waste through reuse, will create more problems in the society. This is the reason why everything should be done to economically empower the citizens especially the youths through recycling of ceramic waste. Much emphasis should be placed on the capacity building of these youths to make them bring out the potentials in them to make them useful to themselves and the society.

## METHODOLOGY

### Introduction

Knowing that ceramic wastes are not marketable for now, effort was made to known the various ceramic waste locations in Edo State. The ceramic waste dump visited in Edo State among others include ceramics major Sales points in Benin City (Cooke Road), ceramic refuse dumps Adesagbon and Ehiozevbaru villages along the Benin Auchu express road, and Igwe-Iye community along the Benin Lagos Bye Pass road, both in Edo State including ceramic sales point at Igbe Road, and Jattu Road, Auchu Edo State respectively. In Cooke road, it was observed that apart from broken tiles that are bagged for flooring, sanitary ware wastes were left because they have no economic value.

Plates 1 and 2 show how ceramic (sanitary ware) dealers littered the generated ceramic wastes in their shops in readiness for final waste disposal which they carry out in somebody else's plot of land possibly at night.



Plates 3, 4, 5, 6 and 7 show how ceramic wastes (sanitary ware wastes) are dumped indiscriminately along Benin-Auchi Road, Benin-Lagos Road and even some are thrown away in an unusual manner. Investigation shows that these ceramic wastes disposal might have been carried out in the night.



**Plate 6:** Thrown away ceramics waste in Lucky way road, Benin City

## Collection and Processing of Ceramic Wastes Generated from Sanitary Wares into Raw Materials

After identifying the various locations where ceramic wastes are generated in Benin and Auchi, attempt was made by the researcher to collect some significant quantity of ceramic wastes for processing into ceramic raw material.

Plates, 8, 9 and 10 present how the researcher collected some sizeable number of ceramic wastes for processing into raw material for reuse.



**Plate 8:** Collection of sanitary ware wastes from refuse dump by the researcher

a  
v

and processed into powder form as raw material. The materials and tools are: 1. Washing basin or bowl, 2. Water, 3. Sponge, 4. Detergent and 5. Brush.



**Plate 9:** Process of loading ceramic wastes into the car boot



**Plate 10:** The process of stacking of sanitary ware wastes into the vehicle boot

the wastes into the vehicle boot and a brush needed to clean and material followed

and a brush needed to clean and material followed



**Plate 11:**

The materials and tools such as a bowl containing water, soap solution, sponge and a brush required for washing of ceramic waste

Plates 12 to 14 exhibit how the washing of the ceramic waste was carried out. The reason for washing the wastes is to remove the dirt from the body before drying and processing it into raw materials, as any dirt can act as foreign body to wastes.



**Plate 12:** The process of pouring water into plastic



**Plate 13:** The process of adding of soap solution into the water for washing



**Plate 13:** The removal of dirt from the waste before





**Plate 15:** Washing of ceramic waste with sponge and water containing Soap



**Plate 16:** Rinsing of washed ceramic waste with clean water

Plate, 17 shows the process of drying the washed ceramic waste in an open air drying method within the room; in them in order to process them as dried raw materials. The water that was used to wash the articles has to be dried under the naturally controlled environmental conditions before milling. The effect of conditions of drying off water is the removal of surface and the trapped water by evaporation to the atmosphere. Relative humidity is needed for an open air drying of an article. This means that water vapour in the atmosphere will exert a vapour pressure, depending on the quantity present and this is the ratio of actual vapour pressure to the saturation vapour pressure at a given temperature. It is worthy to note that for efficient open air drying, an adequate open air flow is necessary to remove the trapped and surface water in the drying article.



**Plate 17:**

Drying of the washed ceramic waste in an open air drying method

### **The Processing of Ceramic Wastes into Powder Raw Material**

In a bid to know how ceramic waste which are rock like are processed into powder raw material in the quarry and pulverising factories, the researcher made an observational visit to some local quarry and pulverising factories in Okpella, about 20kilometers distance from Auchi town, Edo State.

Plate 18, 19 and 20 demonstrate how local quarry personnel carry out the crushing of rocks into pieces. The lesson learnt from the crushing of rocks helped the researchers to carry out the breaking of ceramic waste into pieces.



**Plate 18:**

Local quarry site at Okpella where manual crushing of the rock is done

Plate 19 and 20 show case the way to Royal quarry centre in Okpella where rocks are crushed into pieces mechanically.



**Plate 19:** Showing the way to the Royal quarry in Okpella, Edo North, Edo State



**Plate 20:** One of the pulverising factory in Okpella, Edo North, Edo State

These plates present the various stages of milling rocks into powder form before they are used as raw materials. In fact the observational visit experience gained, gave an impetus into the possibility of converting ceramic waste into finer powder raw material at the studio level. The major reason why the pulverizing factory did not pulverize the researcher's ceramic waste was that the factory accepts at least 10 Tipper full for a day's factory operation, hence the experience gotten there was used to process the ceramic waste into finer powder form as it is required for the purpose of this study.

Plate 21 above demonstrates the act of manual crushing and smashing of the ceramic waste into pieces with piece of cloth coverage on the ceramic waste in order to prevent the tiny pieces of ceramic waste from flying into someone's eyes.



**Plate 21:** Manual crushing of the ceramic waste into pieces

Plates 23 through 29 gave visual explanation of the various stages of how the ceramic waste was milled (pulverized) into powder form as raw materials. The milling process lasted for about six hours. After milling the ceramic waste to powder, the ball clay that acted as a plastic material in the body was equally milled to finer powder before the formulation of different body composition for samples test.

**Plates 22:** The containers filled with broken pieces ceramic waste awaiting ball milling into powder form



**Plate 23:** The Process of turning of broken pieces ceramic into ball milling machine so as to grind the waste into finer particles



**Plate 24:** The process of turning of porcelain pebbles of



**Plate 25:** The porcelain pebbles of various sizes as



**Plate 27:** The rotation of the ball milling process

**Plate 28:** The milled ceramic waste into powder

**Plate 26:** The process of covering of the ball mill before the milling commenced

**Plate 29:** The milled ceramic waste powder kept in a sack bag in the ceramic studio

One aspect of ceramic production that cannot be overlooked when it comes to processing raw materials as well as bringing about a high quality finished wares, is the process of milling. It requires that the raw materials which most often are earthly minerals consist of the right particle size. The grinding of these raw materials help to reduce the particle size which most often are obtained from the granular state but transformed to a more minute powdery substance using the mechanized equipment as the Ball Mill in a quick succession.

Milling is therefore one of the techniques of ceramic production process that grind or pulverize ceramic materials as clay, feldspar, limestone quartz et cetera. Minute grain size reduction is best achieved by ball milling. It is a device that reduces particles through the impact of round porcelain pebbles called the media against the mill wall as a result of the rotation of a large cylinder with an inner wall lined with either porcelain or quartz. The rotation of this cylinder is made possible by an electric motor which causes the fed materials to be ground due to the cascading action of both the materials and the media (pebble stones or porcelains) against the inner wall. As the media tumbles and falls on the fed it crushes the minerals at a set speed of rotational and continuous milling. Basically, a Ball Mill is a large spinning cylindrical tube powered by an electric motor.

### **Conclusion**

This study gives an opportunity to conduct a field survey for the search for sites where sanitary ware wastes could be found. It was discovered that some sanitary ware wastes were discarded indiscriminately as thrown away in different corners of the environment. Taking some samples of the ceramic wastes to the place of processing them to raw material was not a big challenge, because there were numerous ceramic waste dumps to carry sufficient month of ceramics wastes for use from one of the researcher was able to use his car to take the required and sizeable number of ceramic wastes for processing into raw materials for the formulation of the body compositions needed to produce ceramics items.

More so, the process of milling rocks into powder can be used to mill this ceramic waste into finer powder for use as raw materials. The field survey took the researcher to the places where quarry and pulverization are done. Visit to these places indicate that milling of ceramic wastes into powder form is possible there, but the little challenges was that the quantity of the wastes needed for this research were not as much as what will be needed to carry out full milling process in the factory, hence the factory could not accept to mill for the researcher, however, adequate effort was made to process the waste by using studio practice method of using the ball milling machine in the Ceramic Studio in Department of Ceramic, Auchu, Polytechnic, Auchu, to mill the ceramic wastes into finer powder raw materials. Arising from the outcome of this study, it shows that recycled sanitary wastes can be used as ceramic raw material to compose suitable bodies with adequate ball clay. These compositions were used successfully to reproduce ceramic items that vitrified well with glost fired glazes.

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## **Bk@ECO, the Specific Bakery Management Model for retail and wholesales to survive in online era.**

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### **Abstract**

Bk@ECO is an integrated model of Bakery management in retail and wholesale business in which its has been designed by the principle of reengineering for changed and cost saving according to the sustainability development concept friendly for ecosystem and environment. Moreover its can be retained the maximize of customer satisfaction. By the key of success, from the start till the end of business processes were covered functions both technical and people management. In field of production, operation , marketing, in-store promotion and display, customer service both in physical and online selling platforms. Including to set up the new system transformed into online agents, which can be competitive in all selling channels.

The research has been operated for the evaluation this Bk@ECO model, we found out the results that it has the significant level to show the efficiency of the model, which is might be the solution for bakery management for both retail and wholesale business to survive their business in online Era. The paper will share some of the findings from the study.

"



## **The loop of bakery business, unique dessert for tomorrow"**

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### **Abstract**

This is the bakery loop business which has run according to the UN sustainable development 2020 is development the ability of future generations to meet their own careers by the key concepts idea in teaching technology practice of bakery professional with for friendly environment, energy saving and reserving the resource to good ecological.

The loop of bakery production which has covered both technical and business terms. From the beginning of which using the organic and non-hazardous of raw materials and healthy ingredients from non-genetically engineered animals. Uses baking saving energy technique use special systems to prolong products without preservative with save for consumers. Uses the safe packaging for friendly ecological and decomposed in naturally. To deliver the unique dessert to customer with good quality and friendly for the environment by fair price by earning business achieved.

The research has been operated for evaluation the pilot implementation, the results has significant level. Therefore, the loop of bakery business, can be delivers the unique dessert that has supported the sustainable development 2020 conceptual in practical and would be the efficiency for professional business for tomorrow to the new generation career in the future.

## **Strategic Thinking And Performance Of Brewery Firms: An Empirical Evidence From Nigeria (1980-2017)**

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&

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### **Abstract**

One of the fundamental constraints confronting Brewery firms in Nigeria has been inadequate strategic and creative thinking capable of enhancing sustainable performance and growth of these breweries. Irrespective of the fact that strategic thinking vis a vis strategic planning in respect of application of resources lead to greater performance in the area of realistic profitability, these problems which also include capacity underutilization, declining consumer spending, high cost of living and security challenges endanger the survival of brewery firms in the country. This study therefore examines the implications of inadequate strategic thinking on the performance of Breweries in Nigeria. Three Brewery firms are being investigated. In the methodology, a three step approach is adopted and six models are specified in line with the objective of the study. Data are sourced from secondary sources derivable from the Breweries, Nigerian Stock Exchange Fact book (various issues) and allied publications. The ordinary Least Square Technique (OLS) is adopted in the estimation framework. The result reveals a strong linkage between strategic thinking through application of technology on profitability, investment, industrial production, inventory and the related variables (performance indicators) in the companies studied. The study therefore advocates that managers of brewery firms should embrace strategic thinking in their merit and distinction. A negation of this the paper argues, renders the sustainable performance of Brewery firms an illusion.

**Key words:** Strategic thinking, Performance, Profitability, Breweries, Organisations, Strategy.



## **“Human Resources Policies And Their Consequences For The Well-Being Of Workers”**

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### **Abstract**

This article is the result of a research conducted at two large companies located in Brazil. The aim of the research was to compare the organizations and to understand the best business policies related to quality of work life (QWL), which allow the physical and mental health of workers, as well as which policies should be avoided. Thus, we analyze a company that is recognized for its good practices of people management, and another company whose management of human resources is long overdue. We did a qualitative research through interviews, we analyzed the view of some employees on the human resources policies. We also studied the main consequences of these policies for the well-being of employees, for their physical and mental health.

**Key-Words:** Quality of Work Life, Well-Being, Workers.

# The New Role of World Major Central Banks in the 21<sup>st</sup> Century

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## Abstract

The role of the world central banks has changed dramatically since the 2007-2009 world recession. This article examines the world's most prominent central banks— European Central Bank (ECB), Federal Reserve System (FED) The Bank of England (BOE), and Japan Central Bank (JCB) and their recent expansionary monetary policy to solve the high unemployment rate and dismal growth rate. The money supply has increased from \$3 trillion to about \$16 trillion. This has been made possible by quantitative easing. The policies of the FED and BOE have been successful. Unemployment in the US has declined from 10.7% in 2008 to about 4.4% in March 2017 where more than 15 million jobs have been created. In England unemployment has also declined. On the other hand the ECB has no Mandate to solve unemployment. The average unemployment rate in the European Monetary union reached record high in 2014

The primary goal of the ECB as set forth by the Maastricht Treaty is to “maintain price stability”(Article 105.1). The treaty further instructs the Eurosystem to “support the general economic policies” (Article 105.1) in the euro area without prejudice to the goal of price stability. Thus, the treaty makes it clear that any other objectives are secondary to that of price stability.

The FED on the other hand has three policy goals: “maximum employment, stable prices and moderate long-term interest rates” Unlike the Eurosystem's mandate, price stability is not given a higher priority than the other goals. Clearly, the policymakers of the FED must assign at least an implicit ranking to these goals; in the long-run all three goals are compatible. On the other hand JCB is trying to stabilize Japanese economy with growth and combating deflation.

In the paper, I will argue that all four world most important central banks have embarked on a strategy unprecedented in history with some risks. The policies of the FED and BOE have been somewhat successful. Unemployment in the US and England have declined. On the other hand the ECB has no mandate to solve unemployment. In addition, JCB is trying hard to increase growth rate Japan.

## Identity-oriented urban profiling – enhancing future-oriented and sustainable city development

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### ABSTRACT

In Europe Cities are taking an active role and are leading the debate about our future. Over the coming years cities will substantially continue with strong growth and are subject to constant change and diverse development trends. Protecting the resources and strengthening the economy to provide a basis for social justice are the main challenges for cities in the 21st century. In fact, the location competition will get tougher for city marketing, site managers and organizations, duties will become more difficult and budget as resources remain static. Cities will compete in the future about „urban design“, about the built lifestyle and this trend will also change urban life. As a result of this changing aspects, the design of city systems will play an essential role in shaping a sustainable, innovative and livable future. This paper pursues multi-disciplinary research, draws on economic, sociological, behavioral and management theory to utilize the change of urban management in relation to the transferability of trends in marketing to urban city management, centered on the immediate and future needs and wants of cities and their inhabitants in the 21<sup>st</sup> century. Thereby it is out of question that cities need a strong value identity more than ever. Only an integrated approach that puts people first can hope to succeed on a global scale. This work illustrates how the boundaries created to manage and market future liveable city destinations are the root of the practical and academic problems that trouble city management these days. Therefore, in this work, the designed action-oriented “identity-oriented urban profiling model” for city destination management introduces an alternative perspective that allows transcending past boundaries and thus getting closer to the real complexities of managing city development in dynamic systems. The focus lies on the usability of these marketing concepts resp. the identity-oriented and adaptive urban profiling model, to enhance the sustainable development quality of urban spaces within city structures. It builds upon profile oriented marketing, while including elements of adaption management. Thus, city managers can increase their cities attractiveness by providing it with a clear profile that is recognized around the world on the one hand, while flexibly adapting to change if necessary. Therefore this study addresses relevant decision makers of city development planners, public managers and city marketing organizations and shall help them prioritize and tackle next innovative and future steps to establish and foster a clearly structured future vision and create a city profile to guarantee a high quality of living and sustainable urban development. The clear city profile shall increase the uniqueness and visibility of competitive sustainable urban structures and provide solutions to optimize the urban living environment. The results offer the opportunity to recognize the city and consequently allow to develop successful strategies and implementation measures. This study targets to contribute to this endeavor in order to produce new impulses and incitements in the city management field and is mainly aimed at those responsible for city- or location- management and marketing as well as figures in administration and politics. This umbrella view serves as the foundation of a new paradigm in urban management and marketing.

Keywords: adaption management, city & urban development, city & urban marketing, profile-oriented marketing, sustainability

**JEL code: O180, R110, R580**

### 1. INTRODUCTION

According to the UN, more than three-quarters of the world's population will live in metropolises in 2050, compared to today's fifty percent (3.3. billion people). Therefore, the future of mankind lies in the cities and this will change also urban life (Singles, Seniors, etc.). (vgl. Egger, 2016; UN/DESA 2014, p. 2)

This Increasing urbanization is a key trend and the design of city systems will play an essential role in shaping a sustainable, innovative and livable future in cities and must be utilized more professionally and strategically focused as a comprehensive process, hereby should be determined what needs to be

done to secure effective and lasting regeneration. (Roberts, 2016 p. 3ff) This development increases the demands in for city and destination management and show that the constant growth of cities creates an environment in which cities are challenged to compete with each other for citizens and organizations (Egger 2016). In addition, they also compete as living, leisure, work, economic space and as a tourist destination. To adapt to this changing reality, Cities and Regions can no longer rely on business as usual. (Barroso, 2013, p. 3) Thus, cities are facing similar challenges, as companies on a free market.

The constant growth of cities results in the surrounding regions either merging into the expanding metropolitan figure, or suffering from a massive decline in population levels and an increasing number of elderly people (Kern, 2015).

Therefore in fact, the location competition will get tougher for city marketing managers and organisations, duties will become more difficult and budget as resources remain static. Since planning in this context is not only limited to local circumstances, but must increasingly focused on processes at regional and supra- regional levels, a hierarchical classical approach to planning is no longer suitable to be able to react to the requirements of a complex, socially and spatially networked world. Therefore, a timely planning approach must be able to consider the different nodes and relationships in dynamic and flexible networks. **Current market conditions are characterized by extraordinary level of uncertainty and dynamics. The company of the future is a connected company rather than a traditional hierarchical company (Gray & van der Wal, 2012).** Marketing managers operate in an international and multicultural context that is creating increasing competition. **In order to achieve and sustain competitive advantage, managers are forced to explore and use sophisticated management and marketing models (Porter, 2013).** Based on these similarities, from cities and companies, it was possible to apply current trends in marketing to city/destination development management. These trends include profile oriented marketing on the one hand and adaption management on the other hand. Both cities and companies do now exist in an international environment requiring global thinking and increasing interconnectedness to other cities, locations and companies. Between the conflicting priorities of globalization and regionalization, the existing areas of design and action in the cities and regions as their economic, social and cultural prosperity must be the result of targeted, organized and professional activities. Also, the environment of cities, destinations and organizations is constantly changing at an increasingly faster rate. In order to survive, both cities and companies have to increase their adaptive capacity. In business administration, originating in the 1990s, marketing became an increasingly important part of location and economic policy for cities and municipalities in Austria.

## **2. FUTURE- IDENTITY-ORIENTED CITY/LOCATION BRAND POSITIONING**

To navigate the big challenges of the next decades, city systems must be sustainable, innovative, livable, people-oriented, smarter and flexible. The cities of tomorrow will differ essentially from today's city principles. Cities need to know which goal represents their individual ideal situation. This vision has to be clear, simple and highly ambitious representing the ideal stadium of a sustainable city. Thereby it is out of question that cities need a strong value identity more than ever (Mahrer, 2012, p. 9) Therefore, the central task of cities is to work out a clear positioning (a profile or also called unique selling proposition -> USP) and to market this unique feature accordingly. A differentiation, through a positive image and a high degree of recognition become increasingly important. In current location competition, clear positioning and the associated demarcation between other cities and locations is an essential success factor in order to achieve an attractive living and economic environment.

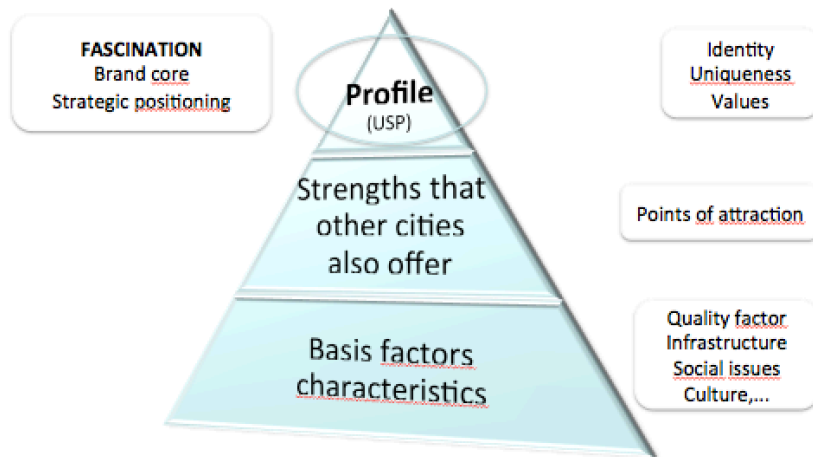


Figure 1: future-identity-oriented city brand positioning pyramid, own illustration based on brand identity model by Source: Reiter 2013 cited in Abegg, 2017 p. 15

It is of the utmost importance to regard this process as an integrated and comprehensive approach. Especially in our developed and industrialized municipalities, with a high proportion of areas of economic activity, it is not about economics at any price but about social and economic development, while at the same time ensuring adequate development and securing the quality of life at one city or location. In this context is city and urban marketing for city management and development an exciting present theme that affects an ever greater part of mankind and must be understood as an integrative process and as a tool for local and regional development. Therefore, a much more connected thinking is necessary in the municipal area than before. **In this context there is also a re-thinking about the terminus urban and city marketing (Heeley, 2015, p.12), which is currently generally regarded only as an accessory to the urban development and reduced as only outward communicative action.**

This above consideration shows that there is an urgent need for future and identity-oriented sustainable and comprehensive city and location development. Experts have long been in agreement on this. However, there has been a lack of sufficient scholarly discussion of the issues and there is currently no adequate scientific discussion with the subject field. Thereby, firstly in this work a qualitative and quantitative investigation on the change of urban management in relation to the transferability of trends in marketing to site integrated city or location management in the 21st century. The aim is to examine the success factors of the applicability of theoretical knowledge, the use of new trends in marketing and management (profile-oriented marketing in conjunction with adaptation management) in city marketing practice. The designed, identity-oriented urban profiling model is a procedural development methodology, which integrates the relevant decision makers of a city or economic region/destination into the process of re-orientation, and consecutively leads efficiently to sustainable results on the basis of the generated profile. These results offer the opportunity to recognize the city (or region) and consequently allow to engineer successful strategies and implementation measures. In this sense, it is assumed in this work that cities and destinations are to be managed like products in the business management theory.

In this context, Dr. Mathis from the Institute for destination and regional development in Austria mentions that it is very important that public managers and city marketing managers understand cities and destinations as products and assume a business perspective in order to position cities strategically in a sustainable and future-oriented manner. A business point of view has to be obtained in order to be a successful player within the competition with other cities. (Mathis, 2017) Therefore, it is assumed here that cities are treated as products as in the business management theory. The city or location as a product is always the basis for the methodology. **In this context, products are always endowed with certain characteristics, values and an image and offer the interested parties something specific and can identify with it. The same principle applies to cities and locations, so it comes in the first step to work out the status quo, then create a unique distinctive profile to determine the strengths and potential of the city which can offer in the future.**

Before these issues are not clarified, is referencing each, but also the construction of an identity, a brand or an image are not effective. The first and most important step is therefore the exploration of the product city and in this context the increasingly dynamic environment demands rethinking brand identity in general. (Silveira, 2013) Specifically, this means that the development of the relevant product characteristics, location factors and the existing USP unique selling points – “the Profile” must be discussed.

## 2. TRANSVERABILITY OF THE SUSTAINABILITY CONCEPT AND MARKETING MIX FOR A FUTURE-ORIENTED CITY BRAND POSITIONING

Therefore, the concept of sustainability acquiring a major significance and became a priority of the business environment. Today sustainability or sustainable development, is a well rooted concept to minimize costs, looking into the future and taking into account of the economic, social and environmental effects of the actions performed. (Mehedintu, 2016, p. 20) In this context we are nowadays, challenged to actively master urbanization worldwide by using the right solutions for a future-oriented and sustainable development. A sustainable development can only be achieved when the three aspects economic, social and ecologic equally taken into consideration. Sustainability goals therefore are necessary for the cities of the future, but have to be complemented by additional dimensions like values, identity-orientation and the ability to innovate.

The most accepted and commonly used term is given by the world commission on Environment and Development in 1987: “ Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. (Boiral, 2017) In times to come the concept has acquired three dimensions. According to the “triple bottom line” (figure 1 the interrelation of the three pillars & figure 4) a sustainable development can only be achieved when the three aspects economic, social and ecologic equally taken into consideration. (Crane, 2004, p. 24-29) At the 2005 World Summit on Social Development (United Nations General Assembly, 2005; Figure 2), three intertwined sustainable development goals were identified: (i) economic development, (ii) social development, (iii) environmental protection.

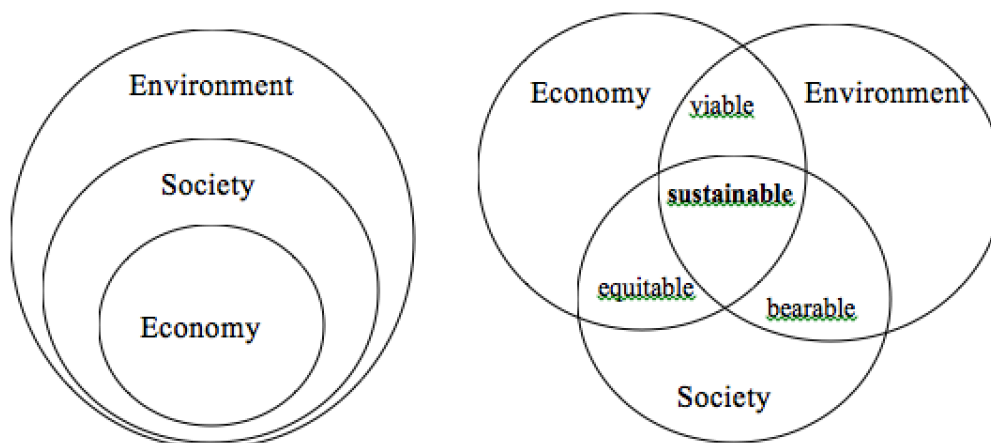


Figure 2: The three pillars of sustainable development and their interrelation  
Source: Adams, 2006

These aims have to be implemented at the local level, i.e. they have to be integrated into city and destination development plans. Each city is unique and to find the right balance between an agile city management and the continuous pursuit of their profile/vision and long-term goals is the challenge each city has to take on. This is the point of focus of the current work.

Thus, city development planners are challenged to direct their cities development in accordance with the goals of sustainable development, i.e. while protecting the environment. The difficulty thereby is to identify as soon as possible the wishes and needs of the parties the company or city interacts with, to adapt to new reality, to be innovative and open to progress. (Mehedintu, 2016,



p. 20) On the other hand, city development planners are challenged by the goal that said development of their city should be sustainable in itself, i.e. their cities processes should be able to endure in the context of rapid international change. A major challenge at the social level is civic participation. Civic participation refers to the participation of citizens in political decisions and planning processes (Nowak, 2006). Historically, civic participation aims at achieving more direct forms of democracy. Thus, city development has to balance the global goals of responding to demographic change and globalization, which also effect on city identity and ensuring the sustainability of the environment and itself, while locally taking into account the needs and wishes of each individual citizen. In this context the current and future trends on European level set by the European Union targets and flagship initiatives in its “Europe strategy 2020” to enhance the competitive edge in the world at providing an intelligent economic growth by innovations, education, improving the environment by reducing the carbon dioxide emissions and at social inclusion. In order to develop the three axes, they proposed five major objectives. 1) Attaining the employment rate of 75% for the active population between 20-64 years, 2) Allocating 3% of GDP and invest for research and development, 3) climate/energy change: increasing the weight of the renewable energy sources, increasing energy efficiency, reduction of the greenhouse gas emissions up to 20%, 4) Enhancing the educational level, 5) Fighting against social exclusion. (Barosso, 2013, p. 3) In each of these areas, each EU country has adopted its own national targets.

This above consideration shows, that a city is a network of numerous stakeholders and their mutual networking requires good and professional coordination, because their attitude and activities have a lasting effect on the city brand profile. Only specific location positioning makes it possible to clearly communicate the unique features, in terms of the competitive advantages. The resulting strategic brand positioning concept is one of the most effective ways to achieve this attention. The location positioning in the form of a trademark makes it possible to clearly communicate the profile in terms of the competitive advantages. Communication is therefore a key strategic success factor in the context of the city location marketing mix (4Ps), for prevailing saturated markets. (Abegg, 2017, Stopfer, 2017) This transferability of commercial marketing, the marketing mix for cities and locations is shown in figure 3.

Product marketing (4Ps)	How cities, locations and regions have adapted the idea
<b>PRODUCT</b> Product policy: needs to be developed and analyze product characteristics	<ul style="list-style-type: none"> <li>location analysis and Identify competitive advantages -&gt; Profile, USP</li> <li>define target group and determine positioning</li> <li>location management: reduce weaknesses, strengthening strengths and potential</li> </ul>
<b>PRICE</b> Price policy: price needs to be determined	<ul style="list-style-type: none"> <li>land rates, taxes, fees and services, capital, wages,...</li> </ul>
<b>PLACE</b> Sales policy: the way to the final consumer	<ul style="list-style-type: none"> <li>internal cooperation: offices, companies, associations, tourism agencies, cultural organizations</li> <li>external cooperation: City partnerships, companies, embassies</li> </ul>
<b>PROMOTION</b> Communication policy: design of information, content and communication strategy	<ul style="list-style-type: none"> <li>Trademark policy: identity, logo, claim, image world – create pictures</li> <li>Inbound marketing: Web, Social Media, Content marketing</li> <li>Outbound marketing: TV/Radio/Print, posters, magazines, flyers</li> <li>Publication from rankings, positive surveys</li> <li>Events, Architecture, Flagship-projects</li> </ul>
<b>PEOPLE</b>	<ul style="list-style-type: none"> <li>Participation, legitimation</li> <li>Regional identity, regional awareness formation</li> </ul>

Figure 3. Transferability of commercial Marketing - Marketing Mix for cities & locations

Source: Abegg, ETH Zürich, 2017, p. 9

The first and essential step is therefore to examine the city as product. In practical terms, this means to elaborate the relevant product features, location factors and existing USP – “the profile”. In a society and culture in which everything is becoming more and more the same, given characteristics are becoming more and more difficult, also in urban and location



management. Therefore, a distinct location profiling is required. In this regard, many cities have learned that with the traditional methods and tools of marketing and location marketing, it is difficult to achieve a future-oriented, as well as sustainable, positioning or differentiation. The city product development is therefore only one aspect. But it is also not enough to simply know the strengths and development potential of a city. In this regard, it is much more important to have a clear strategy which can be achieved with the strengths and potential in particular for overriding-, social-, and economic- goals with the involvement of the relevant competition environment. In our developed and industrial communities with high proportions of service industries, it's not about economic growth at any cost, but rather about social and economic development with sufficient development and guarantee of quality of life in the city. This socio-economic focus is vital in particular for the development of professional future and identity-oriented or sustainable city management. Only when the product and the overriding regional economic and social goals have been determined is it possible to start tackling professionally the deeper area of urban and location marketing. This process step, can be called the "city, location communication" which involves all measures that contribute to sustainable image and identity creation, promoting the city with its range of services, settlement and attractiveness for the local population, visitors and companies.

### 3. DETERMINATION OF A CITY BRAND IDENTITY

The understanding of brands today is that they are conceptual images in the psyche of consumers. People form positive associations with certain companies or products and are happy to exchange ideas. However, a city brand or location brand is a more complex entity than a product or company brand. This is due to the variety of locations offered. The profile of a city brand is the result of the very diverse experiences of the different target groups with the features of the different locations. One Instrument to determine the brand core is the brand steering wheel by Esch, shown in figure 4.

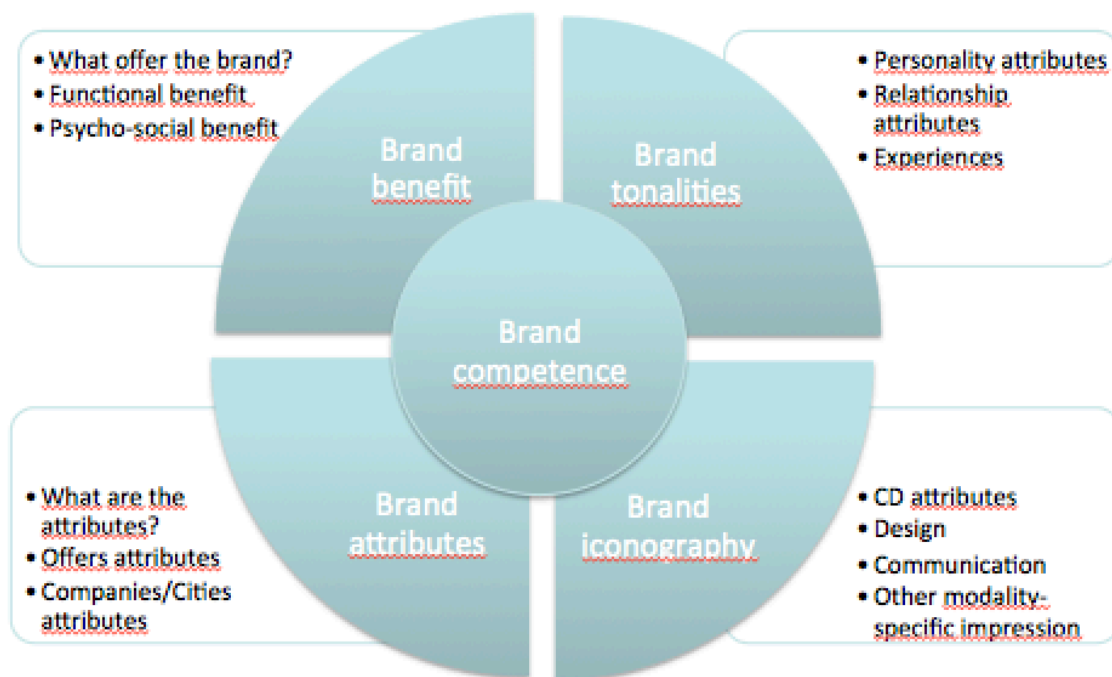


Figure 4: own illustration according to brand steering wheel by Esch  
Source: Esch, 2013

The appreciation of the city / location must begin in the minds of the people; value is only created when they see what is appreciated collectively by others. Identity-finding and location-positioning of the city should therefore be carried out through a coordinated process. City brands brands act both internally in the direction of the citizens and economic drivers, as well as outwards towards the customers and guests. In order for a city brand or location brand to be authentic, it must develop its identity from within. Living identity is also the basic prerequisite for economic success. Engl mention in this context, building a city or destination brand means

giving geography a meaning and thus the achievement of a brand is meant, this makes a city or destination for consumers, tourists and locals relevant for decisions with clearly identifiable and attractive exceptional performances. (Engl, 2017) Only if cities and destinations are able to build their brand successfully and manage them in the long term, they get an advantage in the global competition and achieve sustained extraordinary achievements. City and destination marketing generate an emotional expectation and can therefore also be understood as identity-oriented and perceptual marketing and management. In short, this means that the currency of the future is relevance and products are as interchangeable as cities are interchangeable. It must be strongly respected in the marketing and the creation of the strategies on which image will be shown of the city and to think at the same time the city's image of the city is to be considered. (Engl, 2017)

### 3.1 Linkage from brand identity and brand image to city & location brand identity and -brand Image

Successful brands have a clearly defined identity that creates positive associations and thus establishes a lasting relationship with the respective target group. The brand identity is the foundation of the brand, the brand core, and determines the characteristics and values that the brand represents externally and internally. The brand image is the subjectively shaped perception of a city or location. The brand image (branding) is therefore formed on the basis of associations with the brand, which are created through their identity. This process is illustrated in figure 5.

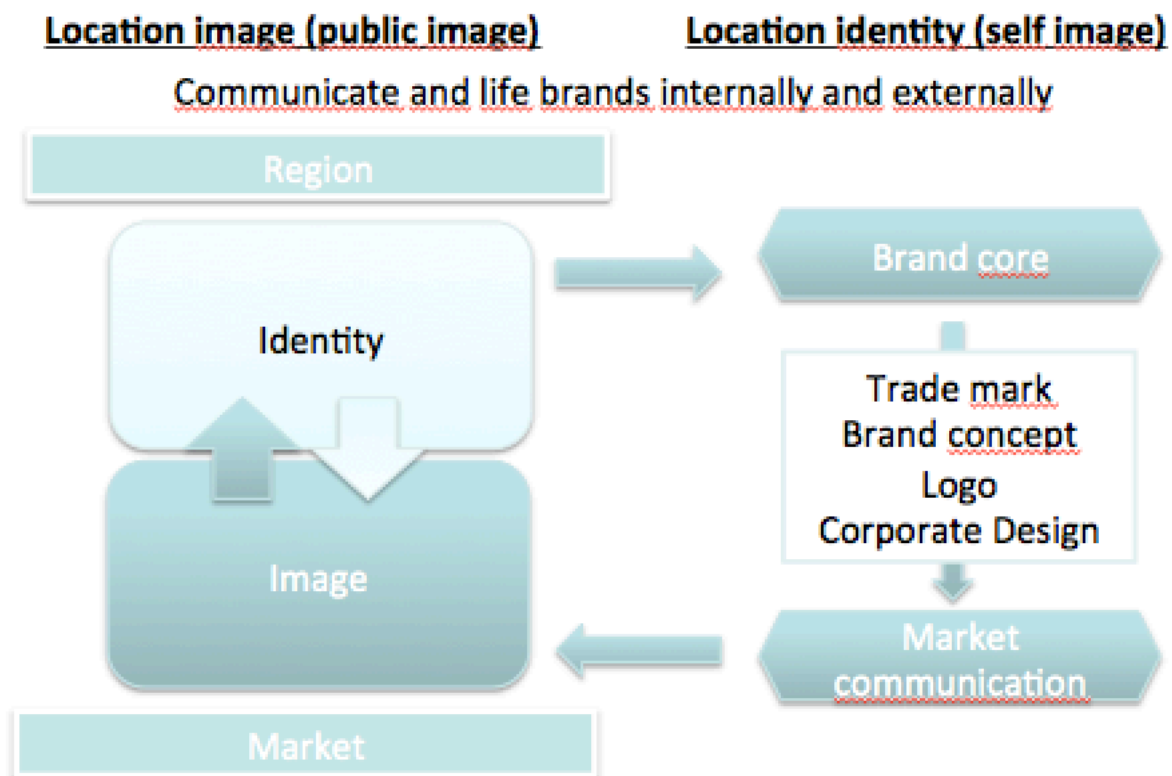


Figure 5: own illustration based on Location identity & location image Hassemer

Source: Hassemer, 2010

Strong city brands and location brands do not emerge overnight. . A strong city brand thus makes it possible to clearly communicate their unique location positioning with regard to competitive advantages. However, brand identity as the foundation of the brand must be accepted and supported by the population.

Cooperation with the citizens in the development of the brand not only creates an acceptance of the city's identity but also promotes the acceptance of its measures.

Therefore an integrated location brand process, including a clearly defined profile, must set the course for consistent and sustainable brand management. This requires the willingness and commitment to deal with the city brand and location brand in the medium and long term from all parties involved.

**Recently, the identity-oriented adaptive urban profiling model was presented as a roadmap to such a structured and consistent development strategy/plan, an comprehensive process and as a tool of communal development. (Reschreiter, 2016). The identity-oriented adaptive urban profiling model was developed from an analysis of the similarities between city development management and marketing shown from a socio-economic business perspective. Therefore the methodology of this paper is based on the tools of city location management and marketing principles.**

Nevertheless, although city/urban marketing differentiate a city from competitor cities and increase the attractiveness of the city as economic, living, shopping or touristic destination Bornemeyer (2002), current marketing models and city development have up to now been studied independently of each other and rarely been investigated in conjunction.

**One of these models is profile-oriented marketing, which bases the success of an organization on its value identity.** This work is dedicated towards developing such a profiling system for city development planners as an adaption of marketing strategies from organizational theory to define a new "*city of the future*" – paradigm.

Meanwhile, in ecology, it is not the strongest of species that survives, it is the one most adaptable to change (Darwin, 2008). Thus, competitive cities need to be able to flexibly adapt to their constantly changing environment. In order to respond to these challenges the concept of adaption management has been developed for organizations.

The adaptive urban profiling system shall be recognized as a planned, flexible, innovative, methodology for directing, initiating and controlling urban development processes. It is supposed to design case-specific future-oriented development concepts and integrate them into a systematic realization process. The procedure can be applied to any city or regions in order to recognize and correct its specific problematic (Hilpert, 2002, p. 61). Therewith, the procedure will continuously improve with each application (Hilpert, 2002, p. 78). In accordance with the integrated St. Galler management theory, the profiling system shall provide a mental roadmap, but not a patent solution or recipe. The adaptive urban profiling system shall enable city development planners, public managers and communal polititans to identify specific and interdisciplinary success factors for managing the transition towards vital and sustainable cities. (Bleicher, 2004, p. 16; Rüegg-Sturm, 2003).

#### **4. SIMILARITIES BETWEEN CITY DEVELOPMENT AND MANAGEMENT THEORY**

For cities and companies, counter-movements emerged to change from a simple reactivity to **proactive** planning. These movements came in the form of (new) urbanism for cities and strategic marketing for companies. **New Urbanism** was founded as a movement in city development planning to counteract the simple reactive spatial development of cities (Nicolaidis & Wiese, 2006). Instead of simply following social and economic change, such a plan should integrate social and economic change. City development is nowadays, more and more not just a reactive movement to social developments, but guided by **city development strategies** (Stevenson, 2013). A city development strategy integrates a long-term perspective into the city development plan. The emergence of city development strategies goes hand in hand with the development of **city marketing**.

The role of humans is changing for both, cities and companies. While in cities, urban public space was previously viewed as the vessel of social and economic processes, it is now viewed as socially determined, reconstructed by humans in their daily actions. Furthermore, the increasing demands on civic participation upgrade the role of citizens in city development. The paradigm shift in the understanding of urban living space mirrors current paradigm shifts in marketing. Where the brand itself was in the center of marketing strategies until recently, new marketing models focus their efforts on people. Likewise, in organizations, employees were previously viewed as elements of the company each playing their part to achieve a common goal, but being integrated into a larger hierarchy and

stable structures, this view is changing. The business is now viewed as constructed by its employees and their social interactions within the company, but also outside the company. Companies are not only competing for customers, but also for employees and it is becoming increasingly important for companies to bind their employees by creating an emotional value for them and increase identification with the organization (**employer branding**, Kriegler, 2012). Similarly, cities are not only competing for tourists, but also for citizens and need to create an emotional value to enhance identification of citizens with the city (**city branding**, Lucarelli & Berg, 2011).

## 5. PROFILE ORIENTED MARKETING AND ADAPTION MANAGEMENT MERGE INTO A FUTURE-ORIENTED AND SUSTAINABLE URBAN DEVELOPMENT

Profile oriented marketing adds a new dimension to the concept of marketing: the philosophy and specifically tends to further development and hence is particularly suitable to increase the attractiveness of a city via sustainable city development. Profile Oriented Marketing is strategic marketing with a profile. If a profile gives an organization a clear future perspective and direction of development, sustainable urban development should profit in the same way from profile oriented marketing. Some of these cognition on industries may from the perspective of organizational theory be applicable to cities. The important developments appear to be the creation of niches and a decrease in competition. A well characterized, clearly defined culture emotionally distinguishes an organization from competing organizations and occupies its own, right defined emotional space/niche. Thereby, not only costumers, but importantly also employees have to identify with the organization in order for profile-oriented marketing to be effective and successful.

In a related way, city marketing can only be successful if tourists, organizations and citizens identify with the city and attribute an emotional value to the city. Therefore city marketing has to be consistent at all levels. This consistency can be achieved by profile oriented marketing. The more the people and organizations located in a region identify with its culture, the more distinguished is its emotional fingerprint. In the sense of occupying economic niches, organizations can be compared to species in ecological systems, which are more likely to survive when occupying niches. An ecological system is more likely to survive when it comprises a high diversity of different species allowing for the occupation of different niches. The adaptive capacity of cities is influenced by economic development and technology, but also by social factors (Klein and Smith, 2003; Brooks and Adger 2005; Tompkins, 2005). Catch phrases related with the adaptive capacity of social and ecological systems are **creativity, flexibility and diversity**.

Subject to adaption management are these issues, which is seldom integrated into city development plans and is only partly recognized in marketing strategies. The profile is in itself a result of constant analysis and prognosis of the own organization (city), the environment, the competitors and a prognosis of future market development. Once the profile is established clear goals can be defined and strategies and measures to achieve these goals can be developed, which can then be realized by a strict organization and control mechanisms at each implementation step. In that respect, profile-oriented marketing integrats measures of adaption management.

It is a challenge to bridge the gap between providing a clear perspective and keeping values constant and recognizable, as intended by the profile, on the one hand, and constantly updating and flexibly changing marketing strategies on the other hand. Therefore, adaptations of profile-oriented marketing will be suggested to be utilized as a profiling system in city development. While the profile provides the city with the stability to encounter radical environmental changes, adaption management processes can be integrated into the profiling model in order to increase the resilience and sustainability of the achieved city development plan. In this context, cities are complex formations by nature and from the relationships and interactions within the city society emerges a city culture that together with the spatial structures determine the characteristic profile of a city that is perceptible beyond its borders. That's why an image of the city arises from collective views and subjective experiences. Thus despite its complexity, each city already has a profile that has grown since it's foundation and has since developed dynamically. The task is to identify and sharpen this profile and make it visible to citizens, tourists and companies. Nowadays it is essential, to create the own city profile proactively in order to secure the future of a city.

The profiling model from Kellner (2007) makes two assumptions that do not necessarily apply to modern cities. First, not all information may be available in the initial analysis of the problem, such

that the analysis and prognosis may have to be based on uncertain information. Second, information may change over time and strategies may fail, such that it is important to go back to the beginning or to an earlier stage of the problem and start again. These elements of adaption management shall here be integrated with Kellners profiling model. The underlying two-dimensional Profiling Model from Kellner is therefore to constant and not flexible enough for an individual sustainable development process. Transformation and urban processes gain more and more complexity and a dynamic combination of solutions at the urban level can increase overall sustainability of the city. Therefore, the model has to be more dynamic, flexible and complex. (Reschreiter, 2017)

## **6. THE IDENTITY-ORIENTED ADAPTIVE URBAN PROFILING MODEL**

The identity-oriented adaptive urban profiling model is a procedural development methodology, which integrates the relevant decision makers of a city or economic region/destination into the process of re-orientation, and consecutively leads efficiently to sustainable results on the basis of the generated profile. This model is designed as an action oriented, three-dimensional profiling model, and is understood as a holistic approach, as a comprehensive process for a sustainable urban development. These results offer the opportunity to recognize the city (or regional) and consequently allow to engineer successful strategies and implementation measures and represents the basis for defining the trajectories of transition for today's cities. In this sense, cities and destinations are to be managed like products. This study targets to contribute to this endeavor in order to produce new impulses and incitements. In Short, the identity-oriented adaptive urban profiling model merges profile-oriented marketing with adaption management.

According to adaption management, this model can repeat the process represented in Kellner's model an infinite number of times by continuously monitoring the success of the initially derived measures and re-evaluating the initial analysis. The transition from implementation of measures to starting a new analysis and prognosis process is fluent, but each repetition is centered around the profile as an anchoring point. The profile although provides the city with the stability to encounter radical environmental changes, adaption management processes increase the resilience and sustainability of the achieved city development plan. Therefore, the adaptive urban profiling model has been fitted in spiral form with a multi-layered system. Kellner's goal of the analysis is to crystallize the profile by understanding the strength and weaknesses of a city. But nowadays, it is not enough to simply know the strengths and development potential of a city. In this regard, it is much more important to have a clear strategy which can be achieved with the strengths and potential and towards which the city can develop and to have overriding goals in particular to economic prosperity and social- as cultural wealth. This must involve also the relevant competition environment.

Therefore, identity-oriented adaptive urban profiling has to bridge the complicated tasks of preserving the cities identity while maintaining a high degree of behavioral flexibility. One way to do that is to integrate flexibility into the guiding principles. Another way is to keep the guiding principles as basic as possible. The overall concept is specifically requested to only include a selection of characteristics. Thus, it is the task of the analysis step to identify the strengths and potential of the city to be included into this concept and it is the task of the prognosis step to identify the weaknesses to be improved that are to be included in the vision statement. In accordance with the idea of adaption management, it should always be possible to go back if several attempts to improve a certain weakness fails and select another weakness to improve.

Therefore, the identity- oriented urban profiling, ie. the implementation process can also be interpreted as a marketing and location management concept and is therefore part of comprehensive, integrative urban development. This socio-economic focus is vital in particular for the development of professional future and identity- oriented and sustainable city management. This study intends, for the first time, to present a comprehensive inquiry and an independent profile with a holistic, sustainable, value-oriented approach to determine positioning, attractiveness and the brand strength of a city.

It is also a prospective challenge to bridge the gap between providing a clear perspective and keeping values constant and recognizable, as intended by the profile, on the one hand, and constantly updating and flexibly changing marketing strategies on the other hand. Cities are complex formations by nature and already include an option to manage this task in their structure. Therefore, we are nowadays, challenged to actively master urbanization worldwide by using the right solutions for a future-oriented and sustainable development. A sustainable development can only be achieved when the three aspects economic, social and ecologic equally taken into consideration. Sustainability goals therefore are necessary for the cities of the future, but have to be complemented by additional dimensions like values, Identity-orientation and the ability to innovate. Therefore, the identity-oriented profiling model



mention that each city is individual and the approach has been developed to assess a city as an individual complex system and add this perspective with the component of identity. This approach assesses 45 urban indicators and 8 activity fields based on the ISO 37120, the Fraunhofer Morgenstadt indicators, the economic growth indices and the Mercer quality of living indicator categories as well as the smart city strategy. The indicators provide a holistic view of the future viability of a city and form the basis for the identity-oriented city profile. They distinguish between:

- State indicators: the current state of a range of sectors in a city
- Pressure indicators: pressures that impact on a city
- Impact indicators: the current impact that the city has on economy, society and environment

Roughly, it can be said that the state indicators analyze the city itself, the pressure indicators its environment and the impact indicators the market. Thereby, the profile automatically gets a triple-bottom line, i.e. it includes three domains (social, economic, ecological), which correspond to the three pillars of sustainable development identified at the 2005 World Summit on Social Development.

Thus, a city's profile becomes more specific and needs a distinguishing characteristic in each of these domains in order to achieve long-term sustainability. Thus, the mission should incorporate a selection of social, economic and ecological strength and weaknesses and the vision formulate an aspired state for each of these domains. Also guiding principles of behavior should not be unilateral to one of these dimensions, but should formulate social, economic and ecological rules. Each city is unique and to find the right balance between an agile city management and the continuous pursuit of their profile/vision and long-term goals is the challenge each city has to take on.

The integration of a triple bottom line into the profile provides it with the necessary support to maintain identity while adaptively changing in the light of new findings. If some aspects of the profile have to be reformulated in one of the domains (social, economic, ecological), consistency can be achieved via the other domains. This idea of pursuing several ideas in different areas simultaneously is strongly supported by adaption management. Their mutual networking requires good coordination, because their attitude and activities have a lasting effect on the city brand profile.

Afterwards, it is the central task of cities to identify a clear and unique profile and to transfer into a more concrete concept that determines the municipal actions. When a goal is clearly defined, it is easier to identify the strategies to achieve the goals for a differentiation and communicate the unique features, in terms of the competitive advantages to achieve an attractive living and economic environment.

In accordance with adaption management the identity-oriented adaptive urban profiling model separates the evaluation step from realization. Evaluation has to take place continuously throughout the whole profiling process. Thus, the traditional top down organization structure has to become more flexible. Moreover, the adaptive urban profiling model proposes that each city is individual and therefore the approach has been developed to assess a city as an individual and complex system.



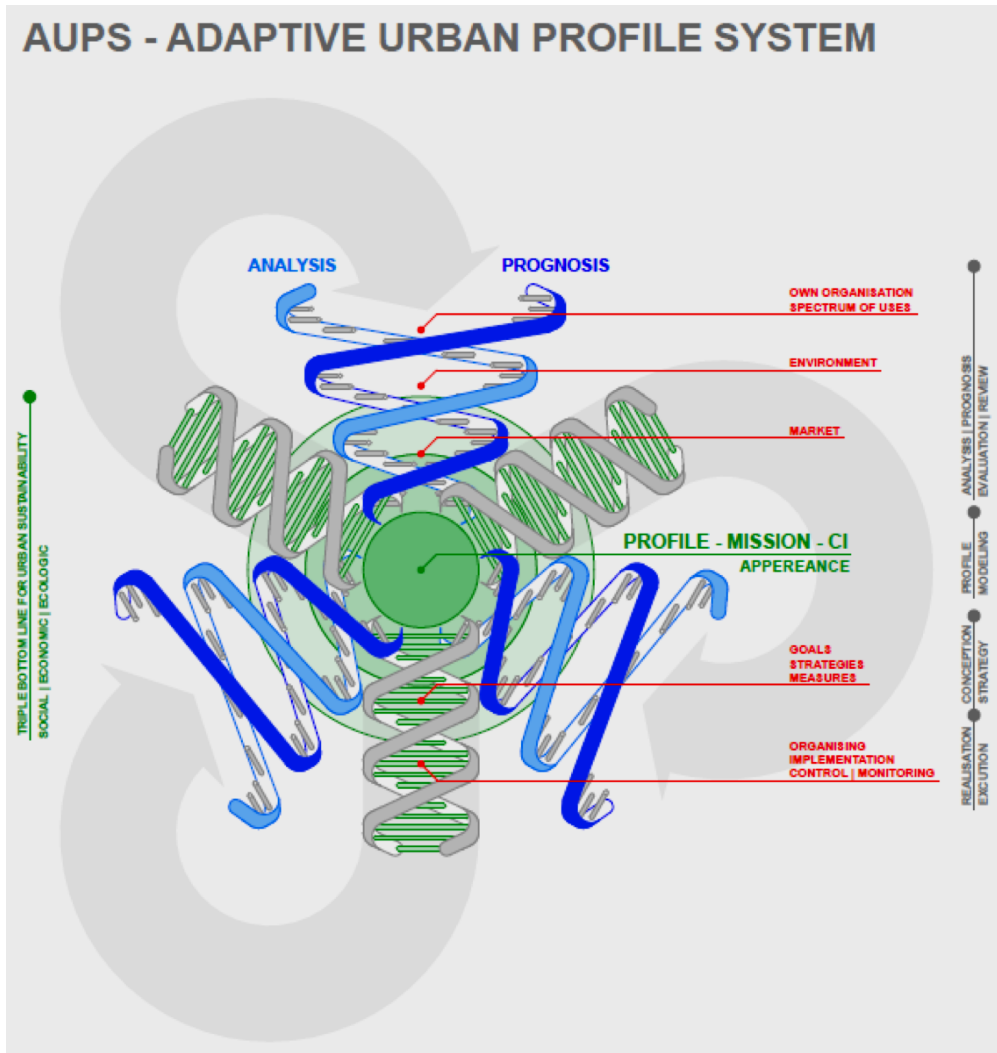


Figure 6: identity-oriented adaptive urban profiling model,  
Source: own representation by author

## 7. CONCLUSION

A key success factor for an unique city is a clear future- and identity-oriented profile in the location competition.

Cities that have a clear profile represent strong brands and are aware of their strengths and stage them accordingly. They know the challenges of the times and react with the appropriate measures for identity-oriented location positioning. They thereby embody the sensation of being alive and express emotions, spreading a radiant power both from the inside and outside. Their communication is authentic and unmistakable. They have residents who are proud of their location. They attract customers, guests and businesses because they inspire and arouse interest. City brand positioning management must therefore be interpreted as an ongoing and holistic process and as a tool for city and municipal development.

Wherever cities plan and operate holistically, sustainably and purposefully, local and regional prosperity is better understood than at locations that only follow the prompt policy. In this context, it is necessary to have models and tools adapted to the needs of the practice as well as a new understanding of management, positioning and of cities.

In this work it was outlined that successful marketing and management tools developed for companies should also be applied for cities or location management. The identity-oriented urban profiling model represents the basis for developing strategies or roadmaps for defining the trajectories of transition for today's cities. Identity-oriented urban profiling has already been presented as a useful tool for municipals to enhance sustainable city development. They can increase their cities attractiveness by

providing it with a clear profile, which also leads to identification, that is recognized around the world on the one hand, while flexibility adapting to change if necessary.

### Biography

Rebecca Reschreiter is currently a doctoral candidate of Management Science at the University of Latvia, at the Faculty of Economics and Management. Her research is concerned with adaption management and profile-oriented marketing and in conjunction with sustainable city development. She taught courses in the field of Marketing and Business Management at University of applied science in Salzburg. In parallel to her academic research, she works in a Head of Marketing & Projectmanagement position at a communication and media agency in Austria.

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# Yield Management As A Pricing Technique

Richard Bunje Mbunwe

## Abstract

Price is the amount of value associated to any item being sold. Therefore, price being a value was consider as a parametric quantifier whose impact affects the revenue of a company and is most often consider as an adjustment tool for profit. The reason for such considerations lies within its ease and snappiness in competitive augmentation. According to Dolgui et al., (2010) and based on history, in production management, production cost reduction and the increase of market shares were the main objectives. Setting the prices is called pricing strategy or technique.

This project focuses on pricing techniques while bringing out its origin in various economic sectors and how it evolved through so many research analysis and data verifications. The first section of the work deals with a literature review on Price and the second chapter comes in presenting pricing as an involvement of techniques (strategies) which include high and low pricing techniques, and adjustable techniques (Dolgui et al., (2010)) while Aziz et al., (2011) studied the dynamism of a model of room pricing for hotel revenue as a manage system. The project further continues by analyzing yield management as a tool (strategy) of pricing. Yield management (YM) is the process of allocating the right capacity or inventory unit to the right customer at the right price so as to maximize revenue or yield according to Yeoman et al., (1999). The project ends by presenting the conditions necessary for such a technique (YM) to be implemented which includes segmentation of the market and capacity management.

## Chapter One

### Introduction:

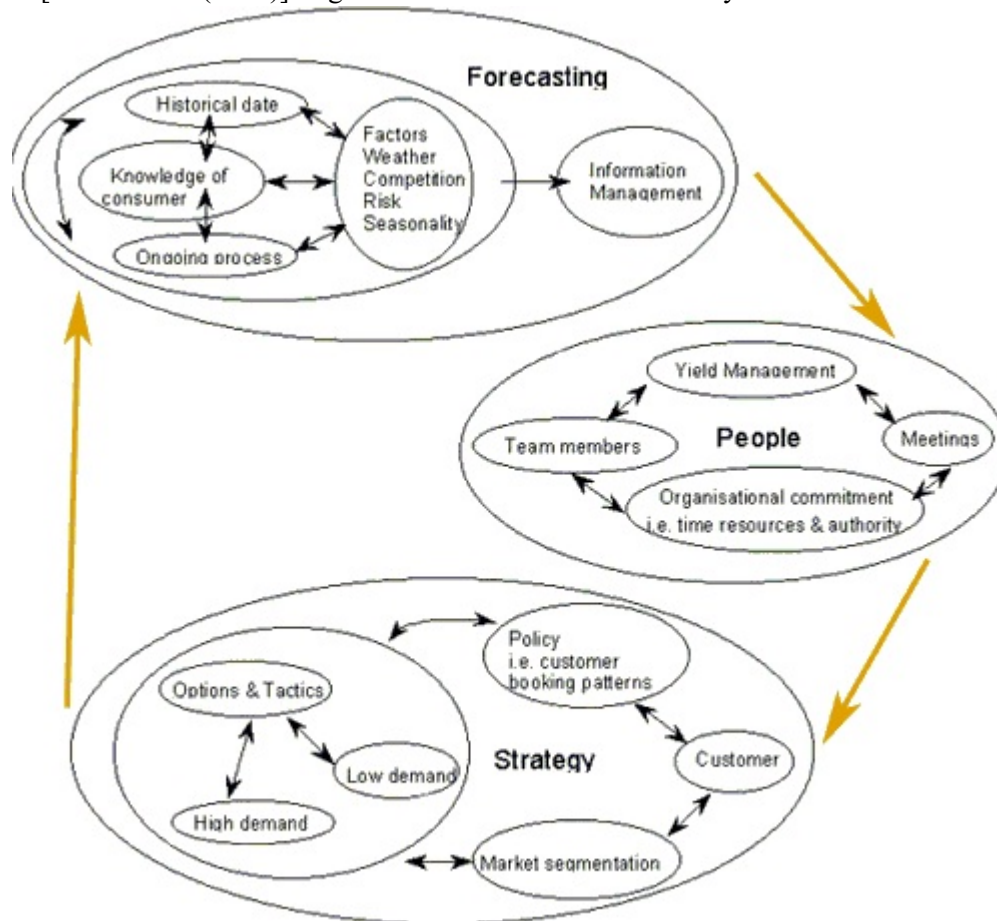
Price is a significant parametric quantity that impacts on the revenue of a company and can also be referred to as an adjustment tool for profit because it is the most easygoing and quickest manner to augment competitiveness. Historically in production management, production cost reduction and the increase of market shares were the main objectives. Setting the prices is called pricing strategy or technique. The primary step of selling process is adjusting a price but as compared with pricing technique, the later (pricing technique) plays with seasonality of demand by analyzing time. Pricing is profitable to a service industry when, customers demand and desire different items or products at specific times, and are pull to different increases offered by the same product, variability in purchasing power and the degree of not predicting is high, this assures an increasing revenue pricing strategic engineers, variability of demand leads to firmness of production which is encouraged by the principle of price fluctuations. Common pricing techniques include;

A). High and low pricing strategies which are frozen techniques which tried to attract customers by making the best of the corporate image and adjustable strategy. This is further understood as price discrimination technique that fights to identify those items that captures customers increase discount strategy. Customers increase discount strategy consists of selling a quantity of items at a given price, through which price is being skimmed at an elevated fixed price which reduces with time. Pricing penetration admits a price lower than the market price, and presence revenue management as a preferable tool for perishable items [Dolgui et al., (2010)]. Pricing also plays an important role from an operational point of view not only its financial standpoint. Most of the search on dynamic pricing (since it deals with time), have centres more on the difficulty of a single product pricing forgetting to assess multiproduct pricing obstacles. Models such as optimization models are new because it analyses the current negative feedbacks in pricing. This new model automatically sets prices for rooms each night without considering a collection of delimited prices over time for such analyses may lead to suboptimal pricing and furthermore, revenue reduction. A stimulator which is highly sophisticated was used to determine arrivals instead of using the old delimited distribution based on probability. The main feature of such a novel model is to capture price elasticity of demand and finally such a novel model applies a non-linear formulation programming which aids solving size realistic problems as regards the old used of formulation of dynamic programming [Aziz et al., (2011)]. A classical approach to increase prices on commodities or services is to ameliorate its quality. As regards the industry of hospitality management, it



should be noted that augmented quality would give rise to higher room rates and assume that the curve drawn is an inelastic demand; it will lead to revenue increase [Henley et al., (2004)]. One of the major problems frequently faced by service providers includes pricing which results from the eagerness to overcome perishability and capacity restraints. To overcome this, most service providers fill their capacities profitably by applying complex pricing systems which are administered by computers. Such pricing system is referred to as yield management system (YMS), which applies techniques such as purchase discount of early buyers, reduction of early gross revenue at discount prices and the capability of overbooking. Though a controversy arises with YMS in that some services find it profitable while others not, sophisticated mathematical programs have been successfully made by marketers in solving price dynamic problems. However, a question mark still lies on how this traditional YMS can be better integrated with marketing theory in order to obtain better profits. In spite of their complex nature, YMS relies on the basic concept of multi-period pricing and segmentation of the market. YMS is further viewed by most service personnel as an instrument to optimize the implementation of a pricing scheme which is multi-periodical through which prices predefined a forecasted excess capacity. A price-insensitive (PI) segment is a market segment which has a higher evaluation of the tendency to pay more for the servicing while a price-sensitive (PS) segment is a market segment with a lower evaluation of the tendency to pay more for the services offered [Desiraju et al., (1999)]. The explosion of hotel industry has created a very competitive market in this sector making market strategy formulation and enhance customer loyalty, and effective allocation of resource as essential surviving tools. There is no pricing technique without an advantage or short coming, so in search for a perfect technique to the right problem, yield management became a pricing technique. The greatest application of YM was seen in the hotel service department where by so many studies had been carried out to better allocate prices and obtain profit. Some of such studies include; attempts made in constructing models of pricing to make the most of hotel profit, accounting for the demand of empty rooms, sensitive consumer pricing and applicable cost of room pricing and the construction of a quadratic pricing model for rooms to optimize profit, renders a model to report for allocation of hotel rooms with discount prices earlier, overbooking, and cancellations. Finally, to create a multi-stage synthetic model for pricing of hotel rooms, which must reckon to variable and fixed costs, goals of profit, market competitiveness identification, components to serve as a measuring tool for differentiating price premium and standard limits of prices. With such analysis of pricing in a hotel services, this sector still faces determinants of pricing such as towns, distance to beach, hotel sizes, and available parking space [Hung et al., (2010)]. A widely accepted definition for YM is an allocation process through which correct capability or stock list unit is attributed to the appropriate customer in the perfect place in order to maximize yield or revenue. Revenue Management is another appellation of YM. RM focuses at profit maximization by alternating insurance premium prices at higher demands and letting down prices to boost demand at lower demands. Customers' later behaviour and satisfaction relies so much on the equity pricing perception. As regards inequity of services through pricing, customers always show negative reactions especially when an alternative of services is not provided by the company. Fairness of pricing strategies also depends on the region or country, for example Americans consider fluctuation in prices as being fair while their opposite counterparts, Koreans perceived it as being unfair to fluctuate prices [Yeoman et al., (1999)]. Yield Management (YM) in certain occasions referred to as revenue management or perishable asset revenue management (PARM) is a profitable managing capacity technique. In the hotel sector according to Farrel (1998), YM is delimited as a technique of maximization of revenue that focuses at an increased final yield through the allocation of predicted usable bedroom capacity to preset market segmentation at optimal prices'. In organisations where YM is usually applied, common conditions that exist in service organisation include; a relatively fixed capacity, a clear segmentation of demand, perishability of inventory, advance sales of inventory, substantial fluctuation of demand, high marginal production cost and low marginal sales costs [Farrell & Whelan Lyon., (1998)]. Based on three interactive systems, we can classify YM as a human activity system (HAS), that is people, forecasting and strategy. Studies of human activities in the hospitality industry is not a call for alarm anymore and conclusions regarding human activities arises such as conflicts and pressures in organizations arises from nature and communication process

qualities and the expert doing the communicating problems. The impact caused by the people system is far stronger as compared to that caused by the systems of forecast and strategy. With such disparity, failures of systems come into play and a novel question arises to why systems fail? As a solution to avoid failures, reasons or causes of failures such as errors and violations come into play. Error results when deviation from normal exists due to a wrong application of the individual whereas violations are actions intentionally done to obstruct procedures of operation. Failure is not a result of random choice; the principal cause is usually humans. These factors; culture organization, decision quality, overconfidence and decision makers flexibility leads to failure of human systems. Such failures can be prevented and improved upon by focus and boundary of individual team at the level of YM organization through cultural recipe, policies making, time management, allocation of information system, etc[Yeoman Ian (1997)]. Figure 1 below shows us the three system models involved in YM.



**Figure 1:** Yield Management: a systems model

**Adopted From:** Yeoman Ian 1997

From the figure above, a clear conclusion can be drawn that, there is an interlinked between forecast model, people model, and strategy model and also since humans play the crucial role in the three models, their actions greatly affects the success of the system.

YM can further be assert as a strategy of profit maximization which concerns the sensitivity of the market by allocating prices to the capacity of a fixed room proportional to particular market characteristics. Also YM analyzes previous data before making adjustments or taking decisions. Due to the emergence of YM, economic principles of differential pricing have got a limitation [Donaghy et al., (1995)]. The evolution of computerized world placed a challenge on the traditional concept of pricing and to overcome this, application of YM became an authentic revolution whose function is to trade the correctcommodity to the appropriate client at a correcttime andprice. There exist equivalent problem to be solved between RM and the null-stock distribution capacity, specifically due to the perishable nature of its stocks [Guadix et al., (2011)].



## Chapter Two

### Review of pricing techniques

Price is a significant parametric quantity that impacts on the revenue of a company and can also be referred to as an accommodation tool for profits because it serves as the most easygoing quickest manner of increasing an aggressive willingness to compete. According to Dolgui (2010), decrease cost of production, market share increase; and/or price adjustment to market state are three non-exclusive ways through which competitiveness increases. Aspects such as non-uniqueness of customers, high uncertainty and variability in demand and rigidity of production are the principal aspects when pricing is concerned. It should be noted that pricing had been extensively studied and has been applied in various fields such as airline industry, retailers, hotel industries, and most recently by energy companies. Pricing involves techniques (strategies) which include high and low pricing techniques, and adjustable techniques. The drawback of these strategies such as inability to adapt to environmental disturbance must be minimized as possible. Adjustable pricing technique groups a great number such as discount strategy, price skimming, penetration pricing and YM. Dynamic technique of pricing is YM. Further analysis the link between margin, price and selling level and concluded that price affects margin and may also affect cost as a result of scale effect. Price is directly proportional to margin per item and inversely proportional to the sales and directly related to cost through increase cost. Furthermore, when there is decrease in price, total number of items sold increases which may lead to a decrease in production cost which results from the scaling effect.

Introduction of variables and assumptions, gives a better mathematical explanation of such principle applied.

- The cost per item varies and this cost is known as variable cost, denoted as  $c(s)$ .
- The total amount of sales of a particular product within a précised time frame is denoted as  $S$ .  $C(s)$  is inversely proportional to  $S$ .
- There usually exist a cost allocated to a product that remains constant nor matter the time frame and we call this as the fixed cost denoted  $f(s)$ .  $F(s)$  maybe influenced by  $S$  at certain conditions.  $F(s)$  is not a proportionality component of  $S$ .
- $R$  for a considerable time is the amount beyond the minimum necessary and it is usually known as its Margin.
- The value attribute to a particular commodity by the seller is known as its price denoted as  $p$ .

**First Assumption:** there is a 100% sales made from total production. This also signifies the presence of a market and customers remain attracted to the price. The relation is straightforward:

$$R = sp - sc(s) - f(s) \quad (2)$$

Most often, having knowledge of  $P$ ,  $C(s)$  and  $F(s)$ , it is obvious to calculate the amount of commodities sold for given  $R$  to be obtained.

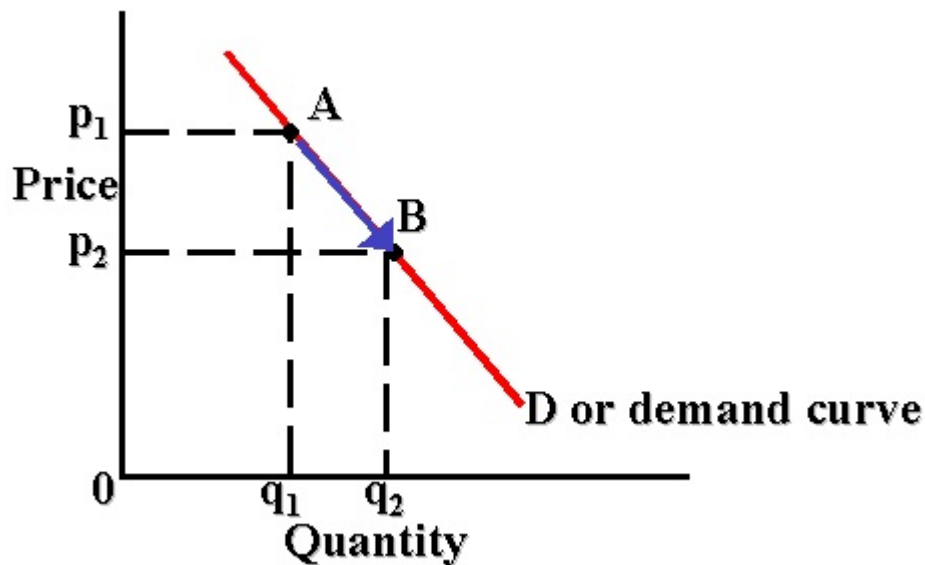
In case, equation (2) becomes:

$$R = sp - sc - f$$

This leads to Relation (3):

$$S = \left( \frac{R + f}{p - c} \right)$$

- (a) Is consider as the littlest integer which is  $\geq a$ . With respect to a fixed  $R$ , it is obvious to see that  $S$  is a negative proportionality with respect to  $P$  but a positive one with respect to  $C(s)$ . Representing the relation between price and commodity demanded at a given time graphically, customers' preference still moves with price. This is curve is called a demand curve otherwise known as selling curve. It should also be noted that, as the price fluctuates so does the quantity demanded at a particular time. This can be represented graphically as follows:



**Figure 2:** Selling Curve

From fig. 2, it can be noticed that, as the price moves from  $P_1$  (initial price) to  $P_2$  (final price), that is a decrease in price, the quantity of commodity that a customer is willing to pay at that time increases from  $Q_1$  (initial quantity) to  $Q_2$  (final quantity) and vice versa. Selling moves from initial selling (A) to a new selling of the items (B). This article further explains how customers do not purchase items but the benefits or they buy the promises of what such an item will bring forth because customers always equates the price of an item assess they associate to the item. In a more logical manner, a customer is faced with challenges and evaluations when so many items catch the customers' interest at the same time. The customer will pay for the item he/she thinks has the largest difference with the price based on their value evaluation of that item. Various methods exist on how to attribute price onto an item:

- testing of prices
- surveying
- analysis of the market
- experts' estimation
- Cost-plus method.

As regards the testing of prices approach, price modification of an item under considerations and check-listing the sold items or the market share. This is practically applied through e-marketing most where customers are classified based on their gender, ages, income level and/or buying habits, etc. This doesn't merely lead to definition of a price but it also leads to the selection of market niches with high profitability. Price testing approach of pricing is very important or easier to employ especially if the internet is the major medium for selling since there will exist a simpler and straightforward method for changing of prices. The only negative feedback here is that the marketing doesn't take advantage of characteristics of the customers.

In the late sixties, surveying of customers' deals mostly with questioning of the value (price) attributed to an item. Questions usually asked during that era included:

- What would be the best price to be allocated to an item?
- Would your purchase still remain should an increment of  $x$  be made on the monetary unit of the item?
- What is the limit of your payment for this item?

This parameter is not usable today since it focuses on single parameters of clients' interest for no longer can prices be looked at in a closing off.

Analyses of the market are grounded on the item being considered. This means that a historical item is old in the mart and also implies that the mart condition has not changed from the time the data was gathered. Assuming the above conditions apply and its chronicle furnishes different prices of quantities sold. We may further assume that  $p_i$ , where  $i$  have a limit of 1 to  $n$ ,  $n$  being the price and  $s_i$ , where  $i$  has limit from 1 to  $n$ ,  $n$  serves as the quantities sold. Our aim is a delimited relation of  $s = ap +$

b which suits “at its fullest” in relation to the information. We further minimizes (a) and (b) through the following mathematical calculation:

$$Q(a, b) = \sum_{i=1}^n (a p_i + b - s_i)^2$$

This above function can be further simply as follows

$$a = \frac{n \sum_{i=1}^n (s_i p_i) - \sum_{i=1}^n (s_i) \sum_{i=1}^n (p_i)}{n \sum_{i=1}^n (p_i) - (\sum_{i=1}^n p_i)^2}$$

$$b = \frac{\sum_{i=1}^n (s_i) \sum_{i=1}^n p_i^2 - \sum_{i=1}^n s_i p_i \sum_{i=1}^n p_i}{n \sum_{i=1}^n p_i^2 - (\sum_{i=1}^n p_i)^2}$$

Experts' estimation comes in to play when there is a market competition shifts drastically or from a fundamental advancement in technology which leads to a modification of the previous item, estimates deduced by specialists remain the only useable procedure for this novel category of commodity acquainted into the market.

Cost-plus methods exist numerous with the most simplified method being:

1. Compute the cost for each item
2. Profitably augment an extra amount.

Profit is defined as a fixed quantity (cost percentage). A standardized method of accounting relying absolutely on expensive classes for over-headed allocation obtaining from linkages of the project to the selling price, or through additive cost consideration, could be used to calculate the selling price of each item. Purchasing of allocated price for a supply is assumed by retailers as its selling price. Polar vantages of cost-plus methodology include:

- Ease in calculating the P function, which denotes a magnified importance for huge number of prices are launched on daily basis. Volume retailing is a very good example.
- The ease in price management.
- Stabilization of the market by this method.

Though this method has the above advantages, it still has its own negative feedback which includes:

- ✚ There is a greater degree of ignoring competitors and customers.
- ✚ Ignoring opportunity cost.

This method of cost-plus should not be applicable due to the fact that, they ignore customer's behaviour as well as the parametric quantities used by customers to carry out their own evaluations. In the definition of a price, it is of outmost importance to include the market analyses and customers' behaviour with respect to price. The main aim or focus is the establishment of a relationship between the price and the amount of items sold. Should this be presented graphically, we will obtain a selling curve.

It is also necessary to exploit how pricing is done in an oligopoly market. Oligopoly market can be define as a market in which the combination of shares of top three firms is above 73.9% of the total market and where the combination of shares of the second and third firms exceeds that of the market leader or simply, it is a situation whereby the market is controlled by few firms. In this market, each firm is mindful of the transactions of the other competitors and the transaction of one firm greatly affects the others in the market. Firms transact in a market where none of the criteria listed below holds. This type of a market is called an imperfect market. These conditions are listed as follows:

- Numerous providers (firms).
- Information is perfect that is to say all firms are aware of the prices set by their counterparts in the market.
- Freedom exists in entry and exits that is to say a provider or firm can enter and go out at any time in question freely.
- Unique output that is to say no differentiation of product exists making each product to serve as a perfect substitute for the other.
- All firms have the same admittance to resources and technologies.

Aziz et al., (2011) studied the dynamism of a model of room pricing for hotel revenue as a manage system. They further illustrated that hotel revenue management is comprehended as a managerial tool for trying to sell each with a maximum price so as to get maximum revenue. He further argued out that to obtain such a sustainable managerial skills certain decisions such structural,

price and quality decisions must be carefully addressed as basic classes of demand-management decisions. He outlined some drawbacks of dynamic pricing in that, it focuses only on a single product and not a multiple products, others set a price list since they taught attributing each night to a particular room price will make it complex will require a complicated bulk-scale programming solver and some incorporated price elasticity implicitly in their modes by using a pre-defined probability distribution to correspond arrival of guests, Aziz et al., (2011). According to Henley et al., (2004) price determines quality while factors such advertising impacts, needs of customers, anterior stay, inflation and competition influences pricing in a hotel. This article further examines pricing in a hotel based on its pricing behaviour previous and later to acquiring or casting off Mobil "star". Such comparability was carried out during four periods of the hotel's growth in service;

- a). A year earlier to gaining a Mobil 'star'.
- b). A year after a hotel gains a Mobil 'star'.
- c). A year earlier to losing a Mobil 'star'.
- d). A year after a hotel loses a Mobil 'star'.

1. Analyzing pricing model in a Hotel a yr earlier to acquiring Mobil 'star', Null Hypotheses one via 6 may be applied. This hypothesis is analyzed below:

H<sub>1</sub> = low-priced single

H<sub>2</sub> = high-pricing single

H<sub>3</sub> = low-pricing double

H<sub>4</sub> = high-priced double

H<sub>5</sub> = low-pricing suite

H<sub>6</sub> = high-pricing suite

From the analysis of the test of hypotheses 1 to 6 through P-value calculation, we can conclude that a year earlier to acquiring a 'star', accommodating establishments obtaining a 'star' augmented their rating on all classes of rooms more eminent to business firms not obtaining a 'star'. There exists a significant price difference between firms gaining a 'star' and those not acquiring a 'star' with low-pricing suite as an exception.

2. Analyzing pricing in a Hotel a later year after a hotel gains a Mobil 'star'. The testing of the hypotheses is as follows:

H<sub>7</sub> = low-pricing single

H<sub>8</sub> = high-pricing single

H<sub>9</sub> = low-pricing double

H<sub>10</sub> = high-pricing double

H<sub>11</sub> = low-pricing suite

H<sub>12</sub> = high-pricing suite

Test analysis brought forth a mix result that is five (H<sub>7</sub>, H<sub>8</sub>, H<sub>10</sub>, H<sub>11</sub>, H<sub>12</sub>) out of the six hypotheses showed no significant difference in changed of pricing as compared to hotels which never gained Mobil 'star'. Nevertheless, H<sub>9</sub> that is low-priced double showed a significant difference. Actually hotels gaining a Mobil 'star' always have higher prices as to those with a stable status of the 'star' in a high-pricing suite and high-pricing single rooms, even though there never existed any statistical significance in these differences.

3. Examining a Hotel Pricing a year earlier to losing a Mobil 'star'. The analytical test for these hypotheses from 13 through 18's result is presented below:

H<sub>13</sub> = low-priced single

H<sub>14</sub> = high-pricing single

H<sub>15</sub> = low-pricing double

H<sub>16</sub> = high-priced double

H<sub>17</sub> = low-pricing suite

H<sub>18</sub> = high-pricing suite

The above results indicates that hotels casting off their star had prices increased on all rooms specifications lower to that of those maintaining their 'star' with an exception for the high-pricing suites. From the specifications, the deuce-ace low-pricing roomsclasses (singles, doubles and suites) show lower increases had substantial difference as to hotel whose 'star' was maintained. As concerns the high-priced room categories, there was an increase in prices as for hotels losing their 'star' as compared to those that maintained their 'star' though this increase in price never showed any significant difference.

4. Analyzing pricing in a Hotel a year later to losing its star through hypotheses 19 to 24. A year after the Mobil 'star' conclusion, percentage change in prices of room classes (low-pricing singles (H<sub>19</sub>), high-pricing singles (H<sub>20</sub>), low-pricing doubles (H<sub>21</sub>), high-pricing doubles (H<sub>22</sub>), low-pricing suites (H<sub>23</sub>), and high-pricing suites (H<sub>24</sub>) for hotels losing their 'star' and those maintaining their 'star' showed no difference. The analysis is being explained below which represents the results of the analysis of the test hypotheses from 19 through 24.

H<sub>19</sub> = low-pricing singles

H<sub>20</sub> = high-pricing singles

H<sub>21</sub> = low-pricing doubles

H<sub>22</sub> = high-pricing doubles

H<sub>23</sub> = low-pricing suites

H<sub>24</sub> = high-pricing suites

While hotels with a constant 'star' status increased or maintained their price for all room classes, those of hotel losing their star had less increase in price with respect to all room categories. However, only in H<sub>20</sub> (high-pricing singles) plus H<sub>22</sub> (high-pricing doubles) room categories experienced a significant difference in price increase.

This finally proves that, there exist fluctuations in pricing of rooms due to the present award or activity of the hotel in question. Should a hotel gets a higher 'star' pedigree, the pricing of its rooms is at a rise and same thing occurs when the hotel obtains a lower 'star' pedigree, the pricing of its room and services experiences a drop.

Desiraju et al., (1999) further carried out a research on pricing model in the service sector by analysing strategic service pricing and yield management. Here a great look is placed at the major problem faced by service providers which is that of perishability. This problem is also faced by the transport sector for example when trains, planes, or ships take off, unused seats are lost forever and an identical problem is experienced in a hotel and restaurant sectors when there exist empty hotel rooms, restaurant with unused tables, tickets for concert not sold, and a large number of fixed-capacity services. Capacity constraint problem is highly adhered to the perishability problem. Services come in a challenge with binding capacity restraints which inhibits services to surplus customers when demand moves to its peak. All service providers are faced by some kind of capacity restraints in one form or the other, for example, a rent a car service has a limited number of cars, repair shops with limited mechanics, hotels with limited number of rooms, schools with limited number of class rooms, etc. Business orientation or focus is greatly encouraged by the combination of capacity and perishability restraints since providers of services focuses most on satiating capacity. To achieve a profitable satiation of capacity, most service providers apply complex pricing models or systems that are dealt with by computers. To fully utilize such complexity, researchers further analyzed the hotel pricing system by applying regression analysis. This assertion was further expanded by Hung et al., (2010) through analyses of pricing determinants in the hotel industry by using the quantile regression analysis. Further emphasis is laid on hotel room pricing since it is one of the major influences on accommodation selection decisions and room pricing is also the most essential aspect of hotel marketing strategy (HMS). Hotel pricing is greatly influenced by two factors which may be categorized as internal and external factors. Further analysis was carried out on techniques of hotel pricing which includes cost based pricing, competition driven pricing and customer driven pricing. Hotel pricing is greatly affected by dependable and predictable variables and because of this, it led to the usage of Quantile regression as an analytical tool intended to search the link between predictable and dependent variables. This search failed to enclose a greater portion for analysis and also to include other variables such as psychological, historical and cultural which might have a great impact on pricing, Hung et al., (2010). To overcome these uncertainties or the pricing of certain hotel rooms in the same locality with variable prices, pricing mechanisms were developed with the most utilized being yields management (YM). It should be noted that in a hotel concept, YM is interested in mart price sensitivity of immobile room capability relative to particular mart factors Donaghy et al., (1995). According to Martinez et al., (2011), YM is a very innovative pricing mechanism which is greatly employed today and that is application came as a reliable revolution for the traditional concept of pricing, but shows that it is a good strategy when applied correctly. Due to the birth of computerized world, demand-based pricing is often used on the internet as a pricing strategy and in an elaborative perspective; demand-based pricing is referred to as YM. Further outlines three ways of improving on price fixing which also highlights the advantages of online marketing over offline marketing. These ways include; precised levels and communicating prices, power of accommodation to any alteration that takes place in the mart, and cleavage of price. Other upheavals of fixing prices lies within the minds of the customers in that they don't understand price fixing mechanisms and this can be further explained based on three reasons, namely; they do not realize changes in prices without a warranted explanation, they cannot estimate a company's expenses and they are usually incompetent to estimate the real value of a product. There exist important factors that need not to be ignored when fixing prices. These include; fixed cost-based pricing mechanism which involves border cost plus, border price and targeting profit, pricing based on demand mechanism which consist of price discrimination, experimentation, and intuition by which prices are allocated by assuming the consequence that prices are going to have on demand, and competition-based pricing mechanism which allocates prices based on competition by attributing higher prices, equal or similar prices, and lower prices with respect to its competitors' price list. With respect to demand-based pricing mechanism on internet, three pricing models can be looked into. Firstly, it involves negotiation between buyers and sellers. Buyers make a



choice whether to accept or reject the price fixed before them as they see it agreeable. The number of buyers greatly influences the purchasing power and price leading to a conclusion that, the more the buying group, the cheaper the price. Secondly, it reflects on discrimination which rely individual customer's characteristics. Based on discrimination, prices relied on three different levels. According to the first level, prices are determined based on last purchase while on the second level prices are determined based on the amount of items bought and at the third level, prices are fixed with respect to price sensitivity or geographical location. Thirdly, it is done through group formation such as yield management (YM) which comprises of decreasing or increasing prices depending on the state of the market. It is farther analyzed by Heo et al., (2011) that fairness of price and its perception plays a major role in customers' satisfaction and later behaviour of customers. Fairness perception analyses whether customers agreed or disagreed to certain changes or transaction processes to be acceptable or reasonable and just which further relies on YM as the best pricing mechanism that gives a follow-up analysis of customers' behavior.

### Chapter Three

#### Yield Management

##### 3.1 Yield Management Definition

Yield management (YM) is the process of allocating the right capacity or inventory unit to the right customer at the right price so as to maximize revenue or yield according to Yeoman et al., (1999). Yeoman further summarizes YM as a revenue optimization. This definition is farther affirmed by Farrell et al., (1998) by saying YM is a managing techniques used chiefly by servicing firms to augment grosses. Previously defines YM based on human activity system (HAS) which relies on three interactive subsystems made up of people, forecasting and strategy. Donaghy et al., (1995) throws more meaning to Yeoman's definition by stating that 'YM is a revenue maximization technique which aims to increase net yield through the predicted allocation of available bedroom capacity to pre-determined market segments at optimum price'. Donaghy further elaborates on the 'goal' of YM which is the conceptualization and profitable alliance of price, buyer and product. YM can be extended at a broader base as a tool with capacity to yield a net result of enhanced receipts and capabilities of customer services via information-system melding, technology, statistics, organisational theory, probability, and knowledge and business experience. YM doesn't seek to maximize yield but revenue. Certain conditions determine a total application of YM which include:

- In a situation with relatively fixed capacity.
- In situation where distinct market segments exist as a result of demand.
- Perishability of inventory.
- When there is an excellent sale of product to consumption.
- Where there is substantial fluctuation of demand.
- In situations where marginal production cost are higher as to that of marginal sale costs.

The present value of YM systems is the potentiality to heighten revenue via intelligence systemization of customers' base and analysis, capacity of hotel and characteristic of the market. To better achieve this, a closed analysis is carryout on how the hotel functions through functional parameters such as internal and external.

**Measurement and efficiency:** it should be noted that, most often criteria selection for the assessment of performance introduces difficulties, alters decisions and brings about results which counterbalance the goal of revenue maximization. Hotel services exist in a volatile market and because of this its aim is to produce profits with its available resources. Room revenue is greatly determined by room occupancy and room rate. Philosophy behind YM is at the same time to optimize both variables in the yield statistic as a measure of yield efficiency:

$$\text{Yield Efficiency} = \frac{\text{Revenue Realised}}{\text{Revenue Potential}}$$

$$\text{Revenue Realised} = \text{Rooms Sold} \times \text{Average Rate}$$

$$\text{Revenue Potential} = \text{Rooms Rate} \times \text{Available Rooms}$$

From the above formulae Realised revenue is defined as existent sales gross and possible receipts as income insured should a hundred percent of rooms' availability are dealt with at full rack rate.

This definition takes a diverse reasoning yet through the same angle lens with Martinez et al., (2011) by stating that 'YM is a method that helps to sell the correct product to the appropriate consumer, at



the suitable moment and price'. This finally leaves us with the final conclusion that certain basic words are included in the definition of YM though the best definition is the one which best suit the situation or market at hand.

### 3.2 History of Yield Management

Yield management (YM) according to Yeoman et al., (1999) had its origin from US airline industry although it is hard to nail an exact time of its origin. During this era, famous airlines such as American, Delta, PanAM, United and Central became pressurized through capacity management from a newly established PeopleExpress airline. PeopleExpress employed 'no-frills' operational services out of the unstylish Newark Airport at invincible lower prices to a number of high volume destinations. This competition was immediately accounted for by American through a discriminative price approach. American dished out some seats at very low prices as compared to that of PeopleExpress and in this way they captured all the low-spend passengers of PeopleExpress and also maintain its high sales for expensive tickets to those passengers who were willing and able to pay. They (American) also maintain late booking, high-spend business and first class passengers who gave a highly yield or revenue. Techniques and tools of YM are widely employed in increasing number of service industries to maximize the utility of available capacity throughout time and to corroborate financial viability, Yeoman et al., (1999). YM is at times referred to as revenue management (RM) or perishable asset revenue management (PARM) which further widens the history and definition of YM, according to Farrell et al., (1998). Donaghy et al., (1995) affirms the story line of Yeoman which view YM as being successfully adopted by airline industry with respect to deregulation in the late 1970's. Martinez et al., (2011) also affirms and elaborates on the historical presentations of Donaghy and Yeoman by saying that, YM has gain popularity in several industries due to its success in airlines and presently firms such as hotels, rental cars, cruises, etc are trying to adapt to it. He further explains that yield management and revenue management are used as synonyms in service industries. To better understand this elaborates on the conditions to apply YM and is further outline in the table below:

**Table 1:** Ideal situations to apply yield management.

Demand characteristics	Reservations	Cost characteristics	Capacity limit
<ul style="list-style-type: none"> <li>- Significant variation in demand by time of day, season, day of week</li> <li>- Demand that can be segmented</li> <li>- Significant differences in price elasticity by market segment</li> </ul>	<ul style="list-style-type: none"> <li>- Predictable demand</li> <li>- Service is booked by consumers in different time periods</li> <li>- Uncertainty of actual usage despite bookings creates possibility of unsold seats</li> </ul>	<ul style="list-style-type: none"> <li>- Low costs of marginal sales in comparison to marginal income</li> <li>- High overheads</li> </ul>	<ul style="list-style-type: none"> <li>- Capacity is really fixed. A fixed number of units of output must be allocated to customers</li> <li>- Service providers have excess capacity at certain times and excess demand at other times</li> <li>- Capacity is perishable. It cannot be stored</li> </ul>

Before a company implements the above strategy, it must consider certain conditions must be attain, the most crucial being: the presence of a capacity limitation, this makes it possible to justify price variations, the ability to be able and capable to segment the market in other to be able to assign different prices to different customers even when the products are the same and the presence of demand uncertainty, should there be a fixed demand, any price variations on the basis of demand would obviously always be constant.

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# **The Influence of Corporate Governance Characteristics on Customer Trust in State Owned Enterprises (SOEs) of Thailand: A Comparative Study of Energy Sector and Financial Institution Sector.**

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## **Abstract**

This research aims to study the corporate governance characteristics of State Owned Enterprises (SOEs) in Thailand, to study the influence of corporate governance characteristics on trust of the SOEs's customers in Thailand, and to compare the level of influenced of corporate governance on trust of the SOE's customers between energy sector and financial institution sector in Thailand. Mixed methodology research was employed. For qualitative research, in-depth interviews were used to collect the data from 7 SOE's employees who are responsible for monitoring corporate governance process. For quantitative research, questionnaires were used as a research instrument. The samples of this study consisted of 836 SOE's customers of energy sector and financial institution sector in Thailand. The data were analyzed by SPSS for descriptive statistics and by AMOS program for Structural Equation Modeling (SEM).

The results revealed that the corporate governance characteristics consisted of 7 characteristics, namely Accountability, Responsibility, Equitable Treatment, Transparency, Efficiency & Effectiveness, Ethics, and Participation. The results of hypothesis testing found that the model of corporate governance characteristics, trust of the SOEs's customers in Thailand fitted to the empirical data, in which corporate governance characteristics had positive influence on trust at 0.05 level of significance. In addition, the results indicated that there were no significant different between the model of corporate governance characteristics, trust of SOE's customers of energy sector and financial institution sector. It is also found that Ethics, Participation, Transparency, Efficiency & Effectiveness had the highest influence on trust of SOE's customers in Thailand, respectively.

## **Non-Interest/Islamic Banking, the Springboard of SMEs' Investment and Poverty Reduction: A Micro-Statistics Analysis from Nigeria.**

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### **Abstract**

This piece of research work empirically examined Islamic / non-interest rate banking as a springboard of SMEs' investment and poverty reduction in Nigeria. The study's main objective was to explore how the non interest-rate participating financing model could promote small-scale entrepreneurs' investments and poverty reduction in Nigeria by developing a sound theoretical model and framework. The research work used a quantitative approach of empirical analysis by obtaining data from CBN statistical bulletin (2014). The research work clearly revealed that commercial banks have failed woefully in the exercise of providing credit needs to this subsector of the economy. This study concludes that with the establishment of Islamic financing and banking, the era of small-scale enterprise operators subjecting themselves to the economic agony in the hand of the reigning microfinance institutions popularly referred to as "Gbe omu le lantern" would be winded-up if they could exploit this alternative financing means. The study recommends among others that adequate insurance mechanism and workable guideline should be put in place for this financing option by the CBN considering the fact that this mode is prone to high default rate. Finally, this alternative financing model should not be condemned or discriminated against on the reason of religious bigotry because the advanced and more developed banking system most especially in the western nations have exploited this mode of financing to improve their economies.

**Keywords:** Islamic banking, non interest rate banking, small scale entrepreneurs, investment, poverty reduction.

## A Quality Management Model Of Basic Education Provision Towards International Standards

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### ABSTRACT

The purposes of the research entitled “A Quality Management Model of Basic Education Provision towards International Standards” were to: 1) analyze and synthesize concepts or theories and state of quality management of basic education provision towards international standards; 2) develop a model of quality management of basic education provision towards international standards; 3) evaluate appropriateness and feasibility of the model of quality management of basic education provision towards international standards. Meantime, this was a mixed method research. The methodology was divided into three phases as follows: 1) synthesize components and state of quality management of basic education provision towards international standards. The sample group comprised of executives from 379 basic education institutions in 2016 academic year. The sample size was specified in accordance with Krejcie;& Morgan table (1970: 608-609) and then adopted the multi-stage sampling. The schools categorized by provinces and regions as follows: 1) northern region, 44 schools; 2) central region, 108 schools; 3) northeastern region, 98 schools; 4) southern region, 69 schools; 5) eastern region, 35 schools; and 6) western region, 25 schools. The questionnaire was used as a research tool. The statistics applied in data analysis included percentage, mean and standard deviation. The content analysis was conducted for qualitative analysis. In addition, the interview was conducted in this phase. The informants comprising eight executives in the Office of Basic Education Committee were derived from purposive sampling; 2) develop a model of quality management of basic education provision towards international standards by conducting a focus group with 21 experts; and 3) evaluate appropriateness and feasibility of the model of quality management of basic education provision towards international standards by compiling data from 21 experts. They were derived from purposive sampling. And, the research tool was questionnaire and percentage, mean and standard deviation were implemented for data analysis.

The findings indicated that:

1. The state of quality management of basic education provision towards international standards was at high level.
2. The results of model development proved that the quality management of basic education provision towards international standards composed of seven main elements as follows: 1) create an environment suitable for learning organization; 2) determine strategies and action plans relevant to guidelines for quality development of international standard schools; 3) develop learners to become quality citizens; 4) integrate media, technology and knowledge assets efficiently; 5) enhance capacities of instructors and education officers; 6) design and create innovations in learning management process of schools; and 7) develop capacities and skills of instructors and education officers until they are able to work efficiently and effectively.
3. The evaluation of the model of quality management of basic education provision towards international standards found that it was appropriate and feasible at the highest level.

**Keywords:** Model, Quality Management, Education Provision towards International Standards, Basic Education

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## Introduction

The school is an educational or social organization that plays vital role in the production of young and well-educated people there's need to accelerate the development of education standards, educational administration in schools to keep up with the changes in the new world. The Office of the Basic Education Commission (2010:a, p.13) has developed a number of educational development strategies, including the International Schools Project, which are schools in the program shall equipped with international standard curriculum. It is intended that students have the potential to be world-class. The objectives of the project since 2010 are ; 1) to develop students with world-class potential, bilingualism, advanced thinking, creativity, social responsibility, and 2) The instructional management is in line with international standards, with additional international courses including theories of knowledge, advanced writing, project for public benefits and the world studies, and 3) Enhance the management with quality systems. However, the development and upgrading of international standard schools will focus on five areas: 1) Develop curriculums that are comparable to international standards, with emphasis on programs such as English language programs. Bilingual courses, Intensive English courses or specialized curricula are adapted to international standards. 2) Develop science-mathematics subjects in English. 3) Develop teachers in second foreign language subjects, and teachers of mathematics and science to use English as medium of instruction. 4) Development of school administrators together with the Office of Teachers and Basic Educational Personnel Development, and 5) Development of school administration about school strategic plan of international standard quality management systems. Office of the Basic Education Commission (2010 a : p.4-5) The concept of Total Quality Management (TQM) is a philosophy, concept, and technique in organizational management for excellence that is based on customer satisfaction, needs and a centralized operation that focuses on continuous quality improvement, Lezotte. (2001). Everybody must be involved in improving the process and working environment and involvement of the team. Quality must be improved, human resources development, modern technology include the tool to support the competition of the free world, which is increasingly intensified which all organizations struggling to find a way to develop excellence, Robert and David (2004).

Overall quality management is a concept that involves leadership and the continued involvement of senior management in all activities in the process. Such organization that brings total quality management to the finish. It is evident from the fact that the personnel are trained and encouraging a sense of quality, a creative working environment, mutual trust and initiative and everyone is dedicated to seeking better quality to achieve the ultimate goal, Yukl.(2002). It's also provides a competitive advantage and a quality system that is linked to financial considerations. Applying in the form of a clear process, focusing on the quality of the implementation of concepts and principles of quality management (TQM) to determine the management activities to achieve a practical system called quality system which quality policies, activities and techniques are defined. The quality system is built and the system is built to ensure confidence in the management. It shall be clearly defines which should be top down or bottom up of management activities. This concept, if used properly, is a quality system in the organization, it is very useful to develop quality systems in the organization that keep up with the changes in technology and society in the world, Lueprasitkul, V. (2011).

At present, the school uses decentralized administration as a juristic person under the National Education Act, BE 2542 (1999) and Amendment No. 2 BE 2545 (2002). The quality management of the whole system to meet the standards set and consistent with the national education standards in the development of management processes and management. In accordance with the requirements of legal regulations, conditions, requirements and resources available to the school in order to achieve the quality management standards set by the institution. There are no agencies or educators as well as any qualified persons offers the essence as well as the overall quality management model that should look like. What is the scope it will be appropriate and valuable to implements.

International standard schools are one goal to raise the quality of learners which is to develop students into global potential. It is intended that the school develop its student characteristics based on core curriculum. The development of the learner aims to have a good mental basis, a public mind, the capacity, the skills and the basic knowledge needed to live. Youth development of the nation into the 21st century by promoting Thai students have the moral of Thai. Provide creative thinking skills, technology skills, work with others, and be able to live in peace with others in the world. This will affect the development of a sustainable country. School development to international standards will focus on school-based management. The key personnel in the driving force are the school



administrators, teachers, school board, parents, community leaders, therefore, knowledge, ability and recognition of cooperation in school development to international standards, which is the basis to lead to success. It is therefore necessary to develop teachers and educational personnel as well as those involved. Emphasizing the development of the teachers quality in international standard schools provide leadership and expertise in the management of foreign languages, the use of the media, have the ability to study self-development. Can exchange learning in teaching and learning with international. And use media research, innovative to continuously develop learners, Office of the Basic Education Commission. (2010 a : p.13).

From the above mentioned, the researcher will study to get a model for using as guideline to plan the quality management of basic education in order to develop into international standards. It also shall be an important information for the development of schools for concerns organizations, personnel involved in achieving quality and international standards to benefit society and the nation as whole.

### **Research Objectives**

The objectives of the research are as follows:

1. To study the state of quality management of basic education in order to develop into international standards.
2. To develop a quality management model of basic education management to develop into international standards.
3. To evaluate the suitability and feasibility of the quality management model of basic education to develop into international standards.

### **Research scope**

Phase 1: Population. The Population of this study were 33,041 basic school administrators in academic year 2017. The samples used were 379 primary school administrators randomly using the Krejcie and Morgan's sampling table. Multi-stage sampling is used, the 8 (eight) key informants were selected by purposive sampling in the Office of the Basic Education Commission.

The variable scope is the quality management of education management to develop into the international standard on the components of the quality management system comprises of 7 categories are: 1) Leadership 2) Strategic Planning 3) Learners and Stakeholders Focus 4) Measurement, Analysis and Knowledge Management 5) Faculty and Staff Focus 6) Process Management and 7) Performance Results

Stage 2: Population Scope. Purposive sampling was adapted in the experts group include 18 experts who are knowledgeable, competent, and knowledgeable in the management of the quality of basic education in order to develop into international standards whose graduated doctoral degree and having at least two years of experience in quality management of basic education.

The variable scope is the quality management model of basic education management to develop into international standards.

Phase 3: Population Scope: Purposive sampling was used to utilize of 3 groups of 21 experts. The first group are 7 (seven) experts who qualified for quality management of basic education who are required to complete a doctoral degree in educational administration or any other field related to education with not less than 20 years of experience. Second group are 7 (seven) educational administration who requires a doctoral degree in educational administration or other fields related to educational management and have at least 10 years of experience in the field of basic education administration. Third group are 7 (seven) school administrators who qualify for a doctoral degree in educational administration or other fields related to educational management and have at least 10 years of experience in the school administration.

Variable scope is the appropriateness and feasibility of the quality management model of basic education to develop into international standards.

## Research Framework

### Independent variable

The state of quality management of basic education in order to develop into international standards

The quality management of basic education management under the concept of the Office of Basic Education Commission (2010 : p.17-72)

- 1) Leadership
- 2) Strategic Planning
- 3) Learners and Stakeholders Focus
- 4) Measurement, Analysis and Knowledge Management

### Dependent variable

A model for quality management of basic education in order to develop into international standards

Evaluate the suitability and feasibility of the quality management model of basic education to develop into

**Illustration 1** Conceptual framework of the research

## Methodology

This research comprises 3 (three) steps as follows:

**Phase 1:** Study on quality management of education management to develop to international standards.

1. Population and sample

The population used in this study were 33,041 primary school administrators, academic year of 2017.

The samples used in the study were the administrators of basic education institutions in the academic year 2017. The sample size 379 respondents were utilize the tables of Krejcie and Morgan (1970: 608-609) using multi-stage sampling.

The purposive sampling technique was utilizes in selection for 8 (eight) key informants of high-level administrators in the Office of the Basic Education Commission.

2. Tools used in research

**Semi Structured Interview** : comprises of ;

1. Introduction to interviewers and interviews.
2. Opinions on quality management of basic education management to develop into international standards.
3. Quality of the tool was examined by the research committee.
4. The revised version of the Semi Structured Interview brought to the complete printing copy.

### Questionnaire

1. Study papers, concepts, theories, and research related to quality management of basic education of the Office of Basic Education Commission (2010 b: 17-72) on components of quality management system which comprises of 7 (seven) categories; are 1) Leadership 2) Strategic Planning 3) Student and Stakeholder Focus 4) Measurement, Analysis and Analysis Knowledge Measurement, Analysis and Knowledge Management 5) Faculty and Staff Focus 6) Process Management and 7) Performance Results. These are defined as a framework that covers the content, purpose of the study, defined as a conceptual framework and constructed as a questionnaire respectively.

2. Consult with the thesis supervisor to get useful advice.

3. Create a rating scale based on the Likert Scale, Srisa-art, B. (2010: 82-83) and follow the advice of the thesis supervisor.

The questionnaire component is as follows:

Part 1 : Questions about the general information of the respondents.

Part 2: Questions about the quality management status of basic education to develop into international standards. It is a 5-scale rating of Likert Scale with 0.93 Cronbach Alpha Coefficient, Srisa-art, B. (2010: 82-83).

### 3. Data collection

Data collection for the interview were as follows:

1. An interview form attached with permission letter for interviews has sent to top management in the Office of Basic Education Commission.
2. The researcher conducted an interviews using the prepared interview form.
3. Researchers collect information by taking notes and taking pictures.
4. Summarized data from the interviews on elements of quality management of basic education management to develop into international standards.

Distribution of questionnaires. The researcher collected the following data:

1. Request letter from Graduate School, North Bangkok University has sent to the Office of the Basic Education Commission to ask for help in distributing the questionnaire.
2. After has been allowed, the questionnaire will be collected by mail to the designated sample of basic school administrators.
3. Ask for help from the respondents to send back a completed questionnaire by postal service.

### 4. Data Analysis

The frequency distribution and percentage method has been assigned to the multiple choice questionnaire, while the Likert Scale has been calculated for standard deviation (S.D.) and arithmetic average, Sisa-art, B. (2010: 82-83).

The basic statistics used in data analysis are:

1. Percentage
2. Mean
3. Standard Deviation

**Phase 2** : develops a quality management model for the management of basic education to develop into international standards.

1. Focus Group Discussion with experts. Consists of 18 (eighteen) experts who are knowledgeable, capable, expert in quality management of basic education to develop into international standards, doctoral degree and at least two years of experience in quality management of basic education.

### 2. Data Collection

1. The researcher requested permission letter for the focus group discussion from the Graduate School, North Bangkok University.
2. Telephone contact with the specialist.
3. Submit an invitation letter to summarize the thesis proposal and group discussion questions to 18 experts.

### 4. Conduct Focus Group Discussion.

### 3. Data Analysis

1. After the Focus Group Discussion was completed, the researcher gathered information from the Focus Group Discussion to arrange the recording system, publish information and analyze duplicate or similar textual information, collect data the same meaning in the same place, then process and summarize key points.

2. Then, categorize the information and the concept of each group and separate meaningful information pertaining to each element and sub-element out of meaningless and irrelevant information.

3. The categorized information is then summed up as a revision point and make a complete modification.

**Stage 3:** Assess the suitability and feasibility of the quality management model of basic education management to develop into international standards.

1. Appraisers: Purposive sampling consists of three groups of 21 experts, consisting of ; Group 1, 7 (seven experts who are qualified in quality management for basic education, who are required to hold a doctoral degree in educational management or other related field with educational management and experience of not less than 20 years. Group 2, 7 (seven) educational administrators, successful completion of doctoral education in the field of educational administration or other fields related to education management and experience for not less than 10 years are qualified in the management of basic education. Group 3, 7 (seven) administrators of educational institutions which

qualify for doctoral studies in educational administration or other fields related to educational management and hold the position of the school administrators for not less than 10 years are qualified in the school management of the international standard.

2. The tools used in this step are the questionnaire, assessing the feasibility and feasibility of the quality management model of basic education management to develop into international standards. It is a 5 Likert Scale, Srisa-art, B. (2010: 82-83). The 0.90 confidence value of Cronbach Alpha Coefficient has been applied.

### 3. Data collection

The researcher contacted the experts and sent a letter of cooperation include a questionnaire to assess the suitability and feasibility of the model and get the query back manually.

### 4. Data Analysis

The Likert Scale type has been calculated for standard deviation (S.D.) and arithmetic average, Sisa-art, B. (2010: 82-83).

The basic statistics used in data analysis are mean and standard deviation.

## Research Findings

1. The basic school administrators had opinions on the state of quality management of basic education in order to develop into international standards in a very high level.

2. Developmental results show that the quality management model of basic education to develop into international standards consists of seven elements as follows. Element 1 : Creating an atmosphere conducive to development is a learning organization. Element 2: Formulation of strategies and action plans in line with international school quality development guidelines. Element 3: Developing learners to quality citizens. Element 4: Effective integration of technology, media, and knowledge assets. Element 5: Developing teacher capabilities and educational personnel. Element 6: Design and innovation in school learning process. Element 7: Teachers and staff have been empowered and skillful to be work effectively and efficiently.

3. Examining the quality management model of basic education management to develop into international standards found that has been appropriate and the possibilities are at the highest level.

**Conclusions.** The researcher proposed a quality management model of basic education management to develop into international standards as follows:

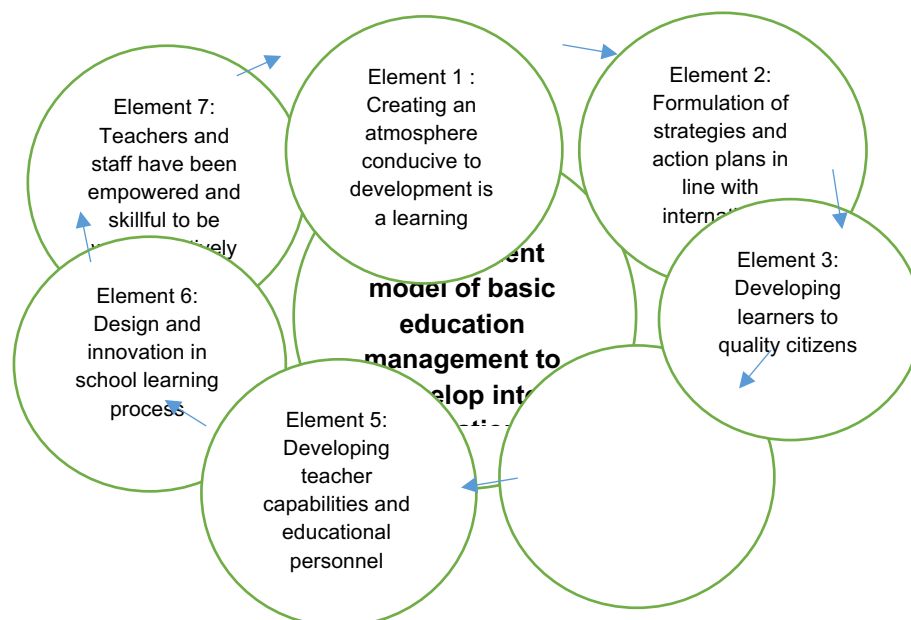


Illustration 2: Quality management model of basic education management to develop into international standards.

## Discussions

1. Quality management status of basic education management to develop to international standards found at a high level.

This may be because most school administrators have a track record of developing organizational management capabilities. In order for the results to be at an international level and acceptable. Executives have academic leadership, having a vision of management can improve the quality of education to compete internationally including strategies for development. The design of the system covers all aspects of the mission, such as academic, personal, budget and general administration focus on students and stakeholders to achieve international vision. There is a focus on academic achievement and employee focus. There are systems and mechanisms for managing human resources that best suit the needs and differences of human resources to develop and maintain the quality and efficiency of personnel. It also create a working atmosphere by improving sanitary workplace with systematic security that results in quality management of basic education to develop to international standards at such a high level. In line with the concept of Yukl (2002), indicated that the overall quality management concept is related to leadership and the continued involvement of senior management in all activities in the process. The organization brings the overall quality management to the finish it is evident from the fact that the personnel are trained. Encouraging a sense of quality, a creative working environment, mutual trust and initiative and everyone is dedicated to seeking better quality to achieve the ultimate goal Is a satisfactory product and service. This corresponds to the concept of Charoenwongsak, K. (2016), who discussed the nature of educational management in the next decade, said that education management is more universal. Globalization is linked in all areas around the world. This resulted in the transfer of knowledge, rules and procedures. Promote Thai educational institutions to develop internationally recognized education. In line with the concept of the Office of the Basic Education Commission (2010 a : 13), which states that international standards schools are one of the aims of improving the quality of learners which is to develop students into global potential. The development of the learner aims to have a good mental basis, a public mind, the capacity, the skills and the basic knowledge needed to live. Youth development in the 21st century will affect sustainable development. School development to international standards will focus on school-based management. The administrators, the teachers, the school board, parents, community leaders are the driving force. Therefore, it is necessary to develop teachers and educational personnel as well as those involved. By character development Quality teachers to lead and specialize in foreign language learning management. Use of media and research innovative to continuously develop learners. Have the ability to study self-development, be able in international sharing in teaching and learning management. Which in line with the findings of Rintha, S. (2011: 107-110) in her study of school management under International Standard School Project : A Case Study of Muangkong School, the Office of Educational Service Area 31, the study found that: 1. Leadership. There were school administration management to guide the vision, mission, school goals and strategies with use of good governance in management. School administrators have a way to communicate with diverse school personnel. Administrators have leadership in school operations and have developed leadership with decentralized personnel. Executives also act as role models and create an atmosphere that promotes ethical behavior. 2. Strategic planning. The results of the research showed that: The school manages the strategic planning of the school and sufficient resources are allocated to accomplish the action plan corresponds to the school's goals. There is a clear process of transferring the strategy into practice. 3. The student and stakeholder focus. The school manages student-centered learning, let all sectors have a chance to participate and contribute to the improvement of education. Accordance with the ultimate goal of the school and the satisfaction of the society, communities and stakeholders which in line with the SWOT analysis. The SWOT concept is an analysis of school conditions for trend education. Development of education to meet the needs of local communities by the development trend. The study of feasibility in conditional development. Limitations and elements that influence learning management are the educational management policies of the agency, management style and other relevant factors. Community needs study explores the needs of community, organizations, the needs of parents, students, and the needs of the people, operational guidelines to meet the needs of the community. 4. Measurement, analysis and knowledge management. The school manages the selection, collection, analysis, management and updating of information. Information and Management Information Technology including performance review and the results of the review of the improvement of the results used to encourage the improvement of learners' learning outcomes. 5. Faculty and staff focus: The school manages the commitment and harmony of the staff to achieve the full potential of their work. The development and management of personnel to fully utilize the potential of personnel to create and develop schools in the same direction. 6. Process management. The school has a systematic school management structure and cover all parties. Along with the



guidelines to develop in accordance with the goals of the school. Also, there is a clear procedure for innovation in schools. 7. Performance results. The school has clearly and systematically managed the school's performance evaluation. Data retrieval is current compliance with the process for quality assurance education.

2. Developmental results show that the quality management model of basic education to develop into international standards. It consists of seven main components. The results are as follows.

Element 1 : Creating an atmosphere conducive to development is a learning organization. This is one of the school's upgrade to international standards. This is because the school must create an atmosphere of learning within the organization. To create a strong learning organization is making people in the organization know how to learn. Corporate Learning is a process of improving work performance through knowledge and understanding, where the organization learns from past experience or past work experience as a behavioral tool, is a searching process and select the wrong thing and learn from past mistakes. The sharing of knowledge, understanding and worldview together. The learning organization is a systematic organization of knowledge at the individual, group and organizational levels. By creating recruiting, transferring, and storing knowledge that can be useful in achieving the goal and reduce operational errors that relevant to the concept of Hodgetts (1999). Stated that in order to meet the needs of the service recipient, learning is a very important process to create the potential of organizations be able to work professionally. The result is a change in quality achieve organizational goals. Consistent with the concept of Litwin and Stringer (1968: 21) have studied motivation and organizational climate. It is emphasized that the overall atmosphere affects the situation of motivation, achievement, power and commitment. It is found that having a good physical and organizational environment in the organization. This is in line with the concept of the Office of Basic Education Commission (2010 b: 17-72), which mentions the systematic work that facilitates the development of a school into a learning organization. By supporting resources appropriately enough, such as budget, personnel, infrastructure and the creation of an atmosphere conducive to creativity and wisdom to encourage the courage bold action by everyone to learn together and relied on that each other to provide excellence to every organization and participant.

Element 2: Formulation of strategies and action plans in line with international school quality development guidelines. This is because the strategy is an important tool in developing quality to international standards. It is very challenging. Strategies and action plans must be clear in defining both goals, strategies and plans to achieve organization goal. It is seen that quality management requires that the school demonstrate the process of strategic planning and implementation of the plan. Therefore, strategic planning is important and is the first activity a school must do because the strategic plan is the main plan showing the workload. The trend of educational success is in line with the ideas of Robbins and Coulter (1996: 43). It discusses the importance of strategic planning, such as the direction of school development, reduce the impact of environmental changes, to effectively achieve school objectives and to identify the expected results clearly and to explore and eliminate the inefficiencies of the organization. It is in line with the concept of Chan-opas, E. (2009), which discusses strategic planning as a planning model that helps schools to develop themselves in a timely manner. Because strategic planning is a key issue of school focuses on contextual and situational context analysis, and strategic planning is a kind of management tool that helps schools work better and to make the effort to ensure that school personnel are working toward the same goal and it evaluates and adjusts the school's direction to meet the changing environment. It is consistent with the concept of Ketvong, A. (2000: 8-10), that planning and planning are key guidelines. Planner can learn the work steps and procedures from the plan before action could be execute. Therefore, it makes the operation of the school very possible. Both are believed to be effective and the effectiveness of the operation. The plan is so important and essential for the practitioners and the school.

Element 3: Developing Learners to Quality Citizens. This is a guideline that the school must implement to elevate the school to international standards. The learner has been developed into a quality citizen and good citizenship must be developed. General characteristics of good citizenship, such as self-knowledge, diligence, patience, honesty, saving, responsibility, compassionate, leading and good followers, prioritize the collective good before their own benefit. Specific qualities are the specific qualities that the society demands of individuals to practice, such as the need for a moral person to bring knowledge, request a Thai people to turn their attention to research career development. The practice of being a good citizen of the nation and of the world will have to accept cultural differences or cultural identity. Respect for the law and comply with the rules, social regulations. All world citizens should abide by the rules, social regulations and the provisions of the



law, such as not violate the rights of others or do not commit the offense according to the law. This will keep the society calm and orderly which corresponds to the concept of McDonough (1984: 111), which indicated that the curriculum needs to create a new generation of children to be able to communicate internationally. Equipped with English fluency as a second language, ready to learn, understand and accept in religion, different cultures and languages, responsible and committed to developing a broader global society by their own sake. But still maintain the identity of the country and its own. Furthermore the curriculum must help children develop their full potential. Recognize, analyze and solve problems. Think creatively, knowledge enhancement through technology, having both academic, professional and life skills, know themselves and honor others and to be a good leader and followers, teamwork and morality. This is in line with the concept of Ministry of Education (2010: 3-17), stated that the standards of international school refer to a curriculum that aims to educate students on global citizenship. World situation can learn and deal with ambiguous complexity, knowledge, understanding and awareness of cultural diversity both Thai and international traditions. Students are aware of the world situation, can learn and deal with ambiguous complexity, have knowledge, understanding and awareness of the multicultural and Thai and international traditions.

Component 4: Effective integration of technology, media, and knowledge assets. Schools need to use information and communication technology to manage their knowledge. It can be seen that knowledge management is a process or method that will enable the creation, aggregation, dissemination, transfer, and exchange of knowledge available to the organization for further use for individuals and organizations. By using information systems as a tool to make knowledge management easier and more convenient, which will result in the performance of people in the organization more quality and efficiency. Moreover, schools need to use knowledge and innovation to achieve the curriculum implementation, the process of teaching and learning process and services to students as well as other related parties to develop the school to international standards. In addition, knowledge management has been used in all organizations to be able to develop and compete, which nowadays introduces information and communication technology into the management of knowledge in the organization to be more effective. This will result in rapid sharing and transfer of knowledge easy access. The knowledge that exists in the organization will spread and circulate throughout the organization in a balanced way to increase productivity and organizational productivity. Consistent with the concept of Panich, W. (2005) has mentions in knowledge management that the organization should create an atmosphere of intense exchange of knowledge among the personnel. Therefore, knowledge management in the organization should create a learning environment that is open to learning, especially in the group of personnel. And when the staff exchanges lessons learned about how to do excellent work in a variety of areas, this will result in a more effective school performance. It is in line with the concept of the Office of the Basic Education Commission (2010 b: 17-72) that deals with knowledge management and information, including: 1) information management in school administration; 2) availability and accessibility; Information system 3) Reliability, security, ease of use of information equipment, and 4) Revision of information systems and equipment to keep up with demand. It also coincides with the Panich, W. (2005). The importance of information technology to knowledge management is as follows: 1) It helps in gathering existing knowledge in the organization. Developed as a system for people or documents. 2) To make it easier for everyone in the organization to access knowledge and develop themselves to be knowledgeable. 3) Make the exchange of knowledge easier. If the advancement of information technology and communication especially internet and intranet. 4) Helps existing knowledge spread and circulate throughout the organization in a balanced way to increase productivity and organization/community/ agency capacity. 5) Improve organizational structure to keep the communication going smoothly, reduce systematic discrimination this will hinder the exchange of information and knowledge, and 6) A tool to achieve at least three goals simultaneously: achieving the goal of the task, achieve human development goals and achieve organizational development goals into a learning organization respectively.

Element 5: Developing teacher capabilities and educational personnel. Staff development is a way to raise the school to international standards. In developing the knowledge, skills, abilities and characteristics of teachers, it is necessary to work in the profession of teachers effectively. The development of human resources has the following development approaches: 1) Raise awareness, readiness, and knowledge, skills, attitudes, and self-image 2) Encourage teachers to communicate knowledge to learners. 3) Encourage teachers to follow the instruction manual. 4) Provide consistency training, seminars / study tours both domestically and internationally to gain new knowledge and experience. 5) Organize a discussion forum for teachers to create a learning exchange network. 6)

Encourage the teachers to further study. 7) Teach teachers to do classroom research to improve their learning and teaching and 8) Providing aesthetics for teacher development. It corresponds to the concept of Puwittayapan, A. (2005), who said that the current development of personnel by setting the capacity it must be aligned with the mission statement, agency goal to be consistent with the duties and responsibilities of the person and the Office of Teachers and Educational Personnel (2006: 1), which states that performance is a standard and an important tool for effective management. Performance is an indicator that if we want to manage teaching, management or supervision of education to achieve success and achieve goals will require a person with knowledge and what skills and features do requires to perform their duties effectively. In particular, the ability to manage the learning of administrators and teachers in the school. It is of great importance because it directly relates to the efficient management of school learning processes. This will directly affect the quality of the learner which in line with the concept of the Office of the Basic Education Commission (2010 b: 17-72), which deals with human resources development and capacity and capacity as follows; 1) The school assesses the potential needs and potential needs of personnel. 2) The school manages, recruits, hires, and maintains personnel in schools that value the diversity, ideas, and culture of the learner and stakeholders; 3) assign suitable workloads to both teaching and other tasks; 4)The school shall manages and staffing by focusing on performance, responsive to strategic challenges, action plans and agility; 5) The school shall prepare it personnel to be readiness for change in capacity and capability of personnel; 6) To unite the entire staff of the school and to prevent and reduce the impact of reducing the number of personnel.

Element 6: Design and innovation in school learning process. In order to improve the quality of education management towards international standards, schools will need to develop teachers with design and innovation capabilities such as the application of learning theories to suit design, innovation, and education and there are processes to improve performance. Educational innovation including the use of educational innovations in effective and effective teaching and learning activities. It is in line with the ideas of Gagné, Wager, Golas, & Keller. (2005: 1) stated on introduction of learning principles that to design events that include clearly defined activities, or so-called effective teaching, to enable learners to learn as they expect. It also accordance with the ideas of Gagné, Wager, Golas and Keller. (2005: 2-3); Smith and Ragan (1999: 18) stated that instructional design should take into account student learning outcomes, which are key goals. Teaching design is intended to promote the learning process. More than the teaching process designers of instruction must consider explicit learning outcomes to be used as a guideline for choosing the teaching process. Select teaching activities that help learners achieve effective learning outcomes. The use of various methods and media, designers of teaching and learning should use media that enables them to learn effectively. Consistent with the purpose of learning and the differences in learners' learning, which will help learners to be more interested and enthusiastic in learning. The design of teaching must be constantly evolving. Quality teaching should be continuously developed, starting with planning, trial implementation and bring the results of the experiment and suggestions from the students to improve the quality of teaching and learning.

Element 7: Teachers and educational personnel have been empowered and skillful can work effectively and efficiently. This is a guideline for improving the quality of education to international standards. The schools should continue to improve their work processes to produce good results. The teachers and students need to be developed to be able to use foreign languages for communication and to share the learning experience of teaching and learning with the international. Teachers also need to manage information systems by linking to global learning resources via the Internet, can manage all kinds of documents, such as MS-Word, Excel, Multimedia files etc., this is a combination of communication technology and computer technology to accomplish teaching effectiveness. Teachers can teach and using a variety of teaching materials, can link teaching materials from the electronic classroom (e-Classroom) can search, reuse, update and keep up information to be a source of knowledge for students. Social media, such as YouTube, Wiki, Face book could be adopted in teaching which is consistent with the concept of Ministry of Education (2010: 3-17) has stated in "World-Class Standard". It is a process to develop and upgrade educational quality to international standards. In particular, the quality of teachers consisted of: 1) Teachers had the expertise and academic expertise through national assessments. 2) Teachers had professional knowledge and professional skills through national assessments. 3 Teachers can use foreign languages to communicate. 4) Teachers use textbooks and foreign language media for teaching and learning. 5) Teachers use electronic media. 6) Teachers can share their learning experiences in teaching and

learning with their peers. International and 7) Teachers use innovative media research to continuously develop learners.

3. Examining the quality management model of basic education management to develop into international standards. The study reveal that the model is suitable and the possibilities are at the highest level. This is because the quality management model of education management at the basic level of education to develop into international standards which has been made by the process has been properly evaluated by the qualified experts to be completed within comprehensive guidelines for the quality management of schools to develop schools to international standards. In addition, the information format gained and the steps are clear enough to the school administrators as well as related people can apply to suit the context of each school as well. This corresponds to the concept of McMillan and Schumacher.(2001: 530-531); Owen. (1993: 41-45) proposed a robust model assessment of four components: 1) Utility Standards 2) Feasibility Standard 3) Propriety Standard 4) Accuracy Standard and in accordance with the concept of Eisner. (1976: 192-193) proposed the concept of validation by the use of some qualified experts, delicate and it was proposed by a panel of experts that the model used by individuals was a qualified person to evaluate. By believing that the experts are fair and with good discretion. The standards and criteria had arises from the experience and expertise of the experts.

### **Suggestions**

Based on research on the quality management model of basic education management to develop into international standards. Researchers have suggestions as follows.

1. General Suggestion. The basic school administrators should focus on developing schools to international standards by developing the learner to be a global citizen. Enhancing the teaching and learning management standards and enhance the quality management system, such as encouraging all teachers and relevant personnel to participate in the vision of the school in accordance with international standards. The needs of students, parents, and communities are also explored to determine the direction of school education. Positioning according to teachers ability, effectively, including measuring and evaluating every operation. To review and review the performance of the school every year. This will affect the development of student learning achievement to achieve quality standards.

#### **2. Suggestions for Model Adoption**

2.1 The host agency should promote the quality management of basic education in order to develop into international standards. To use as a tool to control, monitor and evaluate the management of basic education institutions.

2.2. The basic education institution should apply the quality management model of education management in the basic education level in order to develop it to the international standard with subordinate level and project level / activity which leading to effective management.

2.3. Basic education institutions should study the manual on the implementation of the quality management model of education management in the basic education level to develop into international standards to understand. Especially the steps and procedures before applying the model to use.

2.4 Basic education institutions should adopt the quality management model of basic education management to develop into international standards. To improve the quality of education to be effective.

#### **3. Suggestions for further study**

3.1 The development of a quality management model for basic education should be developed to develop into international standards. Action research, which may be more deeply explored in each component and Knowledge and understanding of the quality management model of basic education management to improve the educational management to international standards is more accurate.

3.2. Study the factors related to the implementation of the quality management model of education management in basic education level to develop into international standards such as the ability of administrators and teachers. Different organizational cultures.

3.3 The development of the quality management model of basic education management should be studied to develop to international standards appropriate to the different contexts of the school.

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## Predicting default risk of SMEs in developing economies: Evidence from Morocco

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### **Abstract:**

SMEs are a significant component of the global economy. However, the problem of access to financing called for the study of criteria that may influence the granting of bank loans, on which these businesses depend heavily. Despite their vital role in the economy, this population still struggles to obtain bank financing.

The issue of the prediction of business default has been the subject of numerous works in the accounting and financial research field, which discussed in particular the difficulties facing SMEs. Despite the lack of research on SMEs, the prediction of the phenomenon of default sparked more interest among banks, after the new Basel agreements, which require them to develop internal rating systems to rate their counterparties” Internal Ratings Based Approach”.

Nowadays, the banking landscape is experiencing a deep evolution of regulatory systems, that will certainly impact the relations between companies and banks. In this context, this paper aims to propose an econometric model of default risk prediction, which will consist of quantitative and qualitative ratios for Moroccan companies, namely SMEs, for pricing purposes.

### **Keywords:**

Small and Medium Enterprise (SME), default prediction, scoring model, logistic regression, pricing policy's loans.

### **INTRODUCTION:**

For around forty years, default prediction has been the subject of numerous theoretical and empirical works. A series of research papers exists in literature, particularly Anglo-Saxon, with the principal conclusion that the process of default differs from one company to another. However, few works are really focused on struggling SMEs, even if literature shows that the default risk of this type of company is very high.

During the last few years, we have witnessed important structural changes in credit risk management for companies<sup>1</sup>. Following these evolutions, the quality of the signature has become an unavoidable criterion in the management of the relationship between banks and companies. Thus, the changes resulting from the Basel II reform had important consequences for the companies, SMEs in particular. Nowadays, the banking environment is evolving towards a style of credit risk management which is more rigorous and differentiated. With the new Basel prudential model, the banks will have to be more and more prompted to examine in a detailed way the future capacity of each borrower, by applying for this reason internal rating systems.

Within the credit distribution process, the internal rating systems represent nowadays a structuring and complete way of piloting the bank. According to this reform, banks and investment companies can resort, in order to evaluate the quality of credit of their counterparts, either to the “standard” method, which is based on the evaluations emitted by “external credit assessment institutions”, or “ECAI<sup>2</sup>”, or to the internal ratings-based approach, or “IRB<sup>3</sup>”.

Concretely, under the effect of the implementation of Basel II in Europe, the lawful use of ratings extended to an institutionalization of the rating agencies<sup>4</sup>. Thus, recourse to internal ratings by the banks has become impossible to circumvent, particularly regarding the assessment of the loss risk



inherent to the default of a counterpart.

As part of the “Internal Ratings-Based (IRB)” approach under Basel II, the rating system allows at the same time to determine the unexpected losses and the average anticipated losses, on the basis of the quantitative as well as qualitative aspects describing the quality of the counterpart.

Moreover, the internal ratings system constitutes for the bank a rich source of information, not only for the decision-making process, but also for pricing purposes (interest rate) and credit follow-up.

On the other hand, the companies consider it is a sanction, which is sometimes unjustified<sup>5</sup>.

<sup>1</sup> These structural changes can be explained by the growing competition, and the quick rise in doubtful debt due to economic downturn in certain regions.

<sup>2</sup> The external credit assessment institutions are composed of the four international rating agencies, Standard and Poor's, Moody's, Fitch Ratings and DBRS “Dominion Bond Rating Service”.

<sup>3</sup> The internal ratings-based approaches (IRB) allow to evaluate credit risk on the basis of banks’ internal ratings. These approaches are reserved for banking institutions which have acquired an expertise on risk management tools which is recognized by their regulatory bodies.

<sup>4</sup> Altman, E. I., & Rijken, H. A. (2004). How rating agencies achieve rating stability. *Journal of Banking & Finance*, 28, 2679–2714.

<sup>5</sup> Patrick Sénicourt. (mai 2013), "Notation des PME : du glaive du score bancaire à la balance de l'auto-notation", *Revue Française de Comptabilité*.

For SMEs, banks resorting more and more to these rating systems is likely to induce two main consequences. Initially, the banks will be more vigilant regarding the rating of credit applications<sup>6</sup>. Then, their resorting to these systems is likely to cause a great differentiation in the cost of credit. Therefore, if the use of banking scoring will have relatively few consequences on large companies, since they are used to be rated, many SMEs will be more constrained, in the short run for cash credit, as well as on the long term for investment loans<sup>7</sup>.

Given these deficiencies, we will figure out an econometric predictive model of default probability, as a precondition to the construction of a rating matrix for companies, similar to what is used by banks for pricing. Within our model of internal rating, the determination of the risk premium will be calculated based on a risk indicator called the “score”. This indicator is computed on the basis of accounting and financial data, collected as part of our sample from large local banks.

<sup>6</sup> Moody’s Investors Service. (2014). Rating methodology: Global manufacturing companies (Technical report). New York, NY: Author.

<sup>7</sup> Patrick Sénicourt. (décembre 2012), "Notation des PME : vertus et limites", *la Revue Banque*.

### **Choosing quantitative methods to predict companies default**

Credit scoring: A model initiated by the Basel II directives

*“Credit scoring” uses quantitative measures of the performance and characteristics of past loans to predict the future performance of loans with similar characteristics (Caire & Kossmann, 2003)*

The Basel Committee strived to reform and harmonize the framework of banking supervision and the provisions of the prudential control of the international banking system<sup>8</sup>. For its part, the prudential regulation has evolved since the first recommendations of the Basel Committee, which were adopted in 1988, detailing existing weightings in order to take into account the external ratings of the banks by the various rating agencies. The ambition of the Basel II directive is to encourage the credit institutions to adopt the best practices regarding internal management of economic risks in general, and credit exposure in particular. After the subprime financial crisis (2007), management of credit risks became a key issue amongst the orientations of the Basel Committee.

According to the Basel provisions, a bank which adopts an internal ratings-based approach (IRB) must deploy a system of notation specific to each segment (State, private individuals, banks, companies), relying on discriminative criteria, including the main quantitative and qualitative factors (accounting data, qualitative data, macroeconomics...), which enables it to evaluate the counterpart risk for each borrower.

### 1.1 Credit scoring: The ambition of a predictive tool for credit default

Formerly, the analysis of the lending and borrowing phenomenon was for a very long time related to human behavior (Thomas and Al 2002)<sup>9</sup>. Indeed, credit history goes back to around 2000 BC, a phenomenon as old as trading. Furthermore, credit scoring history appeared only six decades ago. Recently, credit scoring techniques were broadened to integrate more applications for various spheres of activity. Beside these techniques' ability to reduce the probability of customer risk default, they make it possible for credit agencies to support and maximize the profits expected on their exposures<sup>10</sup>.

The method of credit scoring is a rather young discipline, which only appeared during the sixties in the United States. It is a technique which was born from the works of Durand in 1941, a pioneer of the techniques of scoring to distinguish the good borrowers from the bad.

These techniques have really begun to evolve from the 20th century onwards, mainly after John Moody's release of the first rating grid of his trade bonds. With the evolution of the lawful

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<sup>8</sup> See the article "Bâle II : genèse et enjeux", *Revue d'économie financière*, n°73, 3-2003. On the origin of banking capital stock regulation, D. Lacoue-Labarthe, "L'évolution de la supervision bancaire et de la réglementation prudentielle (1945-1996)" *ibid.* ; on the developments which led to the 2004 agreement, Armand Pujal, "De Cooke à Bâle II", *ibid.* A synthetic presentation of the agreements is available on the European Central Bank's website, <http://www.banque-france.fr/fr/eurosys/europe/bce/2.htm>, "Nouvel accord de Bâle sur les fonds propres: principales caractéristiques et implications", *Bulletin mensuel*, janvier 2005

<sup>9</sup> Thomas, L. C., Edelman, D. B., Crook, L. N. (2002). «Credit Scoring and Its Applications». Philadelphia: Society for Industrial and Applied Mathematics.

<sup>10</sup> Altman, E. I. (2011). Default recovery rates and LGD credit risk modelling and practice. In A. Lipton & A. Rennie (Eds.), *The Oxford handbook of credit derivatives*. Oxford: Oxford University Press.

requirements and banking supervision, the rating techniques were constantly evolving during the nineties, particularly from Altman's main studies (1968), which allowed a better comprehension of these techniques, and Eisenbeis', which applied these methods to business portfolio.

To define credit scoring, Anderson (2007)<sup>11</sup> suggests dividing the expression into two components, credit and scoring. The first one is derived from the Latin word "credo", which means "I believe" or "I have confidence". The second one refers to the use of a numerical tool to classify things in the correct order, according to a perceived or real quality, and to differentiate them so as to make objective and coherent decisions.

In their near entirety, financial institutions and banks use scoring models because of the undeniable advantages that they offer. In this respect, the usefulness of the methods of credit scoring can be

justified by the following points:

- Standardization and stabilization of the rating processes for loan applications;
- Improvement of the coherence and the traceability of the decision-making process for loans;
- Reduction of the necessary cost and time for the evaluation of loan applications;
- Reduction of human judgement related skews.

### 1.2. Principles and basis of credit scoring:

In many studies, the debate between human judgement and credit scoring has been evoked since the implementation of these methods. In both cases, the decision logic is the same, it is a question of comparing the characteristics between new credit applications, those having already been refunded, and those having defaulted. For Bailey (2004)<sup>12</sup>, human judgement is based on the expertise and the competences of credit analysts (see Al Amari, 2002<sup>13</sup>). Nevertheless, this method suffers from clear limits in subjectivity and result inconsistency.

In the method of credit scoring, the analysts use their lived experience for the evaluation of the already treated files. The goal of this analysis being to derive from quantitative models, in order to discriminate the good customers from the bad, on the basis of a set of variables with strong predictive capacity. In spite of the limits inherent to this approach, the method of credit scoring offers enormous advantages, in particular regarding to automation and consistency of results, which justifies the exponential use of these models in the banking and financial fields (Bailey<sup>14</sup>, 2004).

As part of the process of credit granting, data collection is a crucial phase in the construction of the model to predict default. In general, it is through the credit application form that the bank collects

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<sup>11</sup> Anderson, R. (2007). "The Credit Scoring Toolkit: Theory and Practice for Retail Credit Risk Management and Decision Automation". New York: Oxford University Press.

<sup>12</sup> Bailey, M. (2004). "Consumer credit quality: underwriting, scoring" fraud prevention and collections. Kingswood, Bristol: White Box Publishing.

<sup>13</sup> Al Amari, A.(2002). "The credit evaluation process and the role of credit scoring: A case study of Qatar." Ph.D. Thesis, University College Dublin.

<sup>14</sup> Bailey, M. (2004). "Consumer credit quality: underwriting, scoring", fraud prevention and collections. Kingswood, Bristol: White Box Publishing.

information related to the bank account of the customer, the industry sector, the history of granted credit lines. On the basis of this data, the bank can build a robust model of default prediction. For developed countries, the systems of credit scoring are well developed, and the recourse to these techniques is widespread, because of the abundance and the availability of information, contrary to developing countries, where access to information remains low and difficult.

In spite of the advantages these credit scoring techniques offer, this approach is somewhat limited<sup>15</sup>. Firstly, from a technical point of view, the method requires complex statistical techniques, which dehumanizes the process of credit management. Secondly, the implementation of credit scoring can only be carried out by major financial institutions having a clear process, formalized management tools and exhaustive and relevant databases (of customers, incidents and losses). Moreover, credit scoring is based on the past to predict the future, which constitutes a limit in itself. As soon as there is a change in the market trends, this method does not satisfy the conditions which were fixed before. Also, the fact that the determinants of a borrower and the related risk are not quantifiable limits the implementation of this method.

Ultimately, despite the advantages which the various methods of credit scoring offer, the scoring system asserted itself as the privileged method of international financial institutions. Moreover, the new Basel agreements, as well as the evolution of the IT systems, have anchored their preference for this method even more.

## Credit scoring applications & determining factors:

### 2.1 Main applications of credit scoring

Credit scoring application has made considerable strides in the banking and financial fields for the last two decades. Mainly in the fields of default prediction (Tsai & Wu<sup>16</sup>, 2008; Etemadi et al<sup>17</sup>, 2009; Min & Lee, 2008; Nanni & Lumini<sup>18</sup>, 2009), classification of credit (Min & Jeong, 2009); loan application management (Min & Jeong<sup>19</sup>, 2009); and other financial decisions and output analyzes (Yu et al<sup>20</sup>, 2009).

The expansion of these applications can also be explained by the multiplication of banking products and the increase of demand by private individuals (consumer credit and real estate loans), SMEs and large companies (Sustersic et al., 2009). Moreover, the emergence of derived products, in the form of investment vehicles or risk management tools supported the recourse to scoring techniques.

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<sup>15</sup> Bauer, J., & Agarwal, V. (2014). Are hazard models superior to traditional bankruptcy prediction approaches? A comprehensive test. *Journal of Banking & Finance*, 40, 432–442.

<sup>16</sup> Tsai, C., Wu, J. (2008). “Using neural networks ensembles for bankruptcy prediction and credit scoring”. *Expert Systems with Applications* 34 (4): 2639-2649.

<sup>17</sup> Etemadi, H., Rostamy, A., Dehkordi, H. (2009). “A genetic programming model for bankruptcy prediction: Empirical evidence from Iran”, *Expert Systems with Applications* 36 (2/2): 3199-3207.

<sup>18</sup> Nanni, L., Lumini, A. (2009). “An experimental comparison of ensemble of classifiers for bankruptcy prediction and credit scoring. *Expert Systems with Applications* 36 (2/2): 3028-3033.

<sup>19</sup> Min, J. H., Jeong, C. (2009). « A binary classification method for bankruptcy prediction”. *Expert Systems with Applications* 36(3): 5256-5263.

<sup>20</sup> Yu, L., Wang S., Lai, K. (2009). « An intelligent-agent-based fuzzy group decision-making model for financial multicriteria decision support: the case of credit scoring”. *European Journal of Operational Research*, Volume 195, Issue 3, 16 June 2009, Pages 942–959.

For SMEs and large corporations, scoring is used as a decision-making help tool for credit granting and risk pricing needs. Scoring is also used in hindsight for the classification of portfolio risk for granted loans and equity budgeting. For this segment of companies, scoring is supplemented by other decision-making help tools (financial analysis, judgement of experts, neuronal network)<sup>21</sup>.

More precisely, the aim of any scoring system is to assign a kind of label to credit files (Lee et al, 2002)<sup>22</sup> through the categorization of good or bad credit on the basis of a set of explanatory variables<sup>23</sup>. Nevertheless, there is no universal scientific consensus on either the number of variables or on their restrictive list. Following our readings, we can conclude that these variables, which are often used for the construction of the scoring model for consumer credit, include age, status, loan amount, lending period, monthly income, lending purpose, possession of a house or a car, recruitment date (quoted by: Sustersic et al., 2009).

For loans granted to large companies and small businesses, research referring to the retained variables for the construction of the scoring model emphasize the recurrence of the age of the company and some financial ratios like solvency, profitability, and leverage ratios... (quoted by Min and Lee, 2008; Min and Jeong, 2009).

## 2.2 Pertinence of the application of a credit scoring model:

From a statistical point of view, the pertinence of the categorization rests on the modelling technique used. Even then, there is no consensus on either the best statistical technique or scoring formula to adopt. Practically, one finds a wide spread of techniques, from conventional methods such as multiple linear regression, probit analysis, logistic regression, discriminative analysis, to more advanced techniques like algorithmic, neuronal network, or expert systems. In Finance, certain authors, having worked on the scoring models, retained only three variables (Pendharkar, 2005), whereas others used about twenty variables for the construction of a scoring/notation model (Jo et al, 1997).

The majority of authors agree on the importance of the methodology selected and the predictive capacity of a credit scoring model. There too, there is not joint position between the authors regarding the grading scale and the optimal release threshold retained for a scoring model. For a predetermined score, a new customer can be classified as either accepted or rejected by the system. In

addition, the measurement of the score as well as the release threshold must be founded on the basis of technical factors. Several scientific techniques were used for the evaluation of consumer credit, such as discriminative analysis, logistic regression, neuronal networks, as well as other statistical models (Al Amari, 2002)<sup>24</sup>.

In the end, there is no scientific consensus on a grading scale and an optimal release threshold. The latter varies from a bank to another within the same country, and depends in fact mainly on the risk

<sup>21</sup> Agarwal, V., & Taffler, R. (2008). Comparing the performance of market-based and accounting-based bankruptcy prediction models. *Journal of Banking & Finance*, 32, 1541–1551.

<sup>22</sup> Lee, T., Chiu, C. Lu, C., Chen, I. (2002). “Credit Scoring Using the Hybrid Neural Discriminant Technique. *Expert Systems with Applications*” 23 (3): 245-254.

<sup>23</sup> Lim, M. K., Sohn, S. Y. (2007). “Cluster-Based Dynamic Scoring Model. *Expert Systems with Applications*” 32 (2): 427-431. <sup>24</sup> Al Amari, A. (2002). “The credit evaluation process and the role of credit scoring: A case study of Qatar”. Ph.D. Thesis, University College Dublin. profile and the loan policy adopted by the bank. If the bank has a high tolerance to risk, it will be satisfied with a release threshold lower than a more risk-adverse one.

Moreover, the optimal sample size for the construction of a scoring model is a much-discussed topic among researchers. It is considered that the more representative the sample is, the more relevant is the predictive model. This determinant depends largely on the availability of data, the nature of the market and the predictive capacity of the population. In finance, certain authors were satisfied with a few dozen observations (Dutta et al., 1994; Fletcher & Goss, 1993), while others chose several thousands of them (Bellotti & Crook, 2009). In addition, whatever the sample size, it is appropriate to mitigate the skew of the population used as a basis (for example: collecting observations only among the credit applications having been accepted).

Lastly, the categorization of the sample or validation technique was largely discussed by researchers on techniques of credit scoring. Certain researchers like Landajo et al., 2007, chose a simple technique of validation, by dividing the sample into two subsamples of identical size (test and validation). Others chose different proportions, by limiting the initial sample to 30% of the core sample (Lee et al., 2002).

### Consumption of the model: empirical validation on a sample of Moroccan companies

Study data: technical notice

#### 1.1 Definition of the representative sample of SMEs

In this empirical part, we will propose an econometric scoring model of default for SMEs and large companies, composed of several quantitative and qualitative ratios. The constitution of a predictive model of default risk requires a rather significant database as a preliminary. We worked on a sample of 2032 customers of a large Moroccan bank, composed of SMEs and large companies.

Thus, our initial sample appears as follows in the table below:

**Table 01: Initial Sample**

Category	Total sample	Default %	Healthy %
GE	368	23%	77%
PME	1664	18%	82%
Total	2032	19%	81%

Source: Author

After cleaning our database, we have a final sample of 1163 observations over two years.

#### 1.2 Presentation of the model's explanatory variables

The choice of the financial ratios expected to predict companies' default, rested on a great number of ratios which cover seven categories related to the risk of default: liquidity, debt, activity, solvency, size, coverage and funding. We retained a list of 24 financial ratios as

explanatory variables for the prediction of default for our sample. The choice of these ratios is explained by their broad use by researchers and the financial community (financial investors, analysts, rating agencies or online brokers). Thus, the explanatory variables retained for our study are showcased in the following table:

**Table 02: Financial ratios used as part of the study**

Size ratios:

Variables	Financial ratios	Formula
R1	Age	Year of Rating – Year of establishment
R2	Capital Asset	Log (Total fixed assets)
R3	Total balance sheet	Log (current assets, fixed assets, cash on hand)
R4	Turnover (sales)	Log (turnover)

Liquidity ratios:

Variables	Financial ratios	Formula
R1	Inventory turnover	(Inventory/ turnover)*365
R2	Turnover of accounts receivable	(Accounts receivables/ turnover)*365
R3	Working capital turnover	Working capital / Turnover
R4	Current Ratio	Current assets / current liabilities
R5	Quick Ratio	(Accounts receivable+ cash)/ current liabilities
R6	Cash Ratio	Cash / current liabilities

Operating ratios:

Variables	Financial ratios	Formula
R1	Assets turnover	Turnover/ assets
R2	Capital turnover	Turnover/Equity + Debt

Profitability ratios :

Variables	Financial ratios	Formula
R1	Asset profitability	Net result /(fixed assets+ current assets)

Solvency ratios:

Variables	Financial ratios	Formula
R1	Gearing	Long term Debt/Equity
R2	Interest Coverage Ratio	EBITDA/Interest
R3	Total leverage	Total Assets/Equity
R4	% Equity in Structure	Equity/ Debt + Equity

1.2 Selection of the explanatory variables

Source : Author

Initially, we carried out the calculation of a set of financial ratios, depending on the available data, in order to identify the most significant variables for the prediction of the risk of default for our sample. Then, we selected explanatory variables on the basis of financial literature and the correlations between these variables, in order to eliminate redundancies.



Then, we tested the variables, so as to keep those having a significant effect on the prediction of default of the bank's portfolio. For this purpose, the selection of the financial variables is a decisive stage in the modeling of the risk of default. After several iterations on SPSS, the prediction of default is influenced by several ratios. At last, we are retaining the following explanatory variables:

**Presentation of the model's variables:**

- The explained variable: the prediction of SMEs' risk of default;
- The explanatory variables:
  - Age of the company
  - Inventory turnover
  - Turnover of accounts receivable
  - Asset turnover
  - Total balance sheet
  - Total leverage

Taking into account the correlated ratios, we tested several scenarios under SPSS, eliminating the redundancies. We retained for our model of prediction the variables having the best explanatory capacity. The table below details each of the explanatory variables:

**Table 03: Explanatory variables**

Explanatory variables	Categories	Explanations / Standards
Age of the company	Size	Measures the age of the company in its sector of activity, the higher the age the less the company is exposed to default risks. (Bonfim <sup>25</sup> , 2009, Found a strong negative correlation between the age of firms and their probability of default)
Inventory turnover	Liquidity	Measures the company's ability to meet its short-term commitments, using a dynamic business policy coupled with effective inventory management. There is no universal standard. The shorter the inventory turnover time, the lower the associated costs.
Turnover of accounts receivable	Liquidity	The average payment delay granted by the company to its customers is fixed in advance according to the internal policy of the company. For good working capital management, the standard is that the turnover of trade payables should be higher than that of trade receivables.
Asset Turnover	Activity	Measures the "productivity" of assets in terms of how many currency units of turnover are generated by one currency unit of fixed assets and current assets
Total Balance Sheet	Size	Measured by the logarithm of the balance sheet total, controls the effect of size on risk and the level of capital and profitability
Total leverage	Solvability	An important level of leverage reflects a situation of financial fragility. The larger the asset in relation to the owner's equity, the greater the level of indebtedness. Although debt can increase returns on equity, it may increase the risk of bankruptcy (magnifying effect). The objective of monitoring this ratio is to prevent the systemic risk according to Basel Committee, by improving the level of individual and global capital.

Source: Author

<sup>25</sup> Bonfim, D., (2009), «Credit Risk Drivers: Evaluating the Contribution of Firm Level Information and Macroeconomic Dynamics», Journal of Banking and Finance, Vol. 33, No. 2.

## Modeling of the risk of default of Moroccan SMEs: Implementation of the method of Logistic Regression under SPSS

### 2.1 Selection of the explanatory variables

The aim of this work is to determine the most significant ratios that examine the health of each customer of the bank. In other words, we will try to analyze the most discriminative ratios in the prediction of the risk of default of our sample, which is composed of small, medium-sized, and large companies.

For the construction of our model of company rating, we endeavored to respect the following stages:

- In the construction of our model, we carried out a simple random sampling without rebates, drawn 420 observations from the total sample, and divided it into two parts: a sample for modeling and a sample for validation.
- Our modeling sample is sufficiently important to be representative of the overall population. The remainder is set aside for the validation tests of the model.
- The adopted method for the construction of our model of prediction is the binary logistic regression one. It makes it possible to test a model of regression with a dichotomic variable (0,1) in our “probability of default” model (predicted variable) and the independent variables (predictors), either continuous or qualitative.
- We used a progressive method, in particular the top-down step by step method. In the top-down method, SPSS introduces into the initial model all the variables step by step, and gradually withdraws the least significant variables, until selecting only those which contribute to the improvement of the prediction model. Contrary to the bottom-up method, which introduces the variable with the highest score through a step by step selection, so as not to keep any variable with a significant score (under 0,05), in addition to the tests of entry which are based on the significance of the score<sup>26</sup>.
- After several iterations with the method of logistic regression under SPSS, the default prediction model retained 6 financial ratios in addition to one constant. The method used in the econometric construction of the model is the top-down step by step method with the test of Wald.

### 2.2 Evaluation of the adjustment of the estimated coefficients:

This step aims to evaluate the statistical significance of the coefficients of the independent variables selected, in order to make sure that each estimated variable contributes to better predicting P(y) compared to a model which does not integrate them. The analysis of the statistics of Wald illustrates the difference in the model before and after the integration of the last variable. According to the table below, the direction of the coefficients mirrors the direction of the relation.

<sup>26</sup>[ftp://public.dhe.ibm.com/software/analytics/spss/documentation/statistics/22.0/fr/client/Manuals/IBM\\_SPSS\\_Regression.pdf](ftp://public.dhe.ibm.com/software/analytics/spss/documentation/statistics/22.0/fr/client/Manuals/IBM_SPSS_Regression.pdf)

We notice that the relation is positive for the inventory, accounts receivables and total leverage variables, meaning that the increase in these variables increases the probability of default. On the other hand, the relation is negative for the age of the company, asset turnover and total balance sheet variables. This means that the better are the experience of the contractor, the level of debt and the asset turnover, the less defaulting occurs.

We can notice that at the final step, all the coefficients are significant. Thus, we can conclude that each of these independent variables contributes to the improvement of the model.

**Table 04: Variables with high predicting power**

A	E.S.	Wald ddl	Sig.	Exp(B)
---	------	----------	------	--------

<b>Etape 4a</b>	Age of the company	-,031	,017	3,377	1	,066*	,970
	Inventory turnover	,005	,002	9,731	1	,002	1,005
	Turnover of accounts receivable	,007	,002	12,447	1	,000	1,007
	Asset Turnover	-,857	,274	9,743	1	,002	,425
	Total Balance Sheet	-5,125	,682	56,507	1	,000	,006
	Total leverage	,158	,060	6,867	1	,009	1,171
	Constant	35,343	4,867	52,738	1	,000	2234642772566680,000
<b>a. Variable(s) introduced during step 1 : Age of the company, Inventory turnover, Turnover of accounts receivable, Quick ratio, Asset Turnover, Interest coverage ratio, Cash ratio, Total Balance Sheet, Total leverage.</b>							

\*This variable is significant at the 90% threshold.

Source : Author

The table of variables which aren't in the equation, shows that for each stage, SPSS introduces the variable having the highest score. Therefore, we note, as for the initial model, that the global statistics line is significant for the three steps.

**Table 05: excluded variables**

				Score	ddl	Sig.
Etape 2 <sup>a</sup>	Variable	Cashratio		,718	1	,397
	Statistiques globales			,718	1	,397
Etape 3 <sup>b</sup>	Variable	Interestcoverageratio		1,093	1	,296
		Cashratio		,874	1	,350
	Statistiques globales			1,794	2	,408
Etape 4 <sup>c</sup>	Variable	Quickratio		1,258	1	,262
		Interestcoverageratio		,895	1	,344
		Cashratio		1,300	1	,254
	Statistiques globales			2,796	3	,424

Source : Auteur

- a. Variable(s) deleted at step 2 : Cashratio.
- b. Variable(s) supprimée(s) à l'étape 3 : Interestcoverageratio.
- c. Variable(s) supprimée(s) à l'étape 4 : Quickratio.

We retained the following model:

Z-Score = -0.031\***age of the compagny** +0.005\* **Inventory turnover** +0.007\* **Turnover of accounts receivable** -0.857\* **AssetTurnover** -5.125\* **Total Balance Sheet** +0.158\* **Total leverage** +35.343

### 2.3 Assessment of the accuracy of the adjustment of the final model

From the final equation, we can evaluate if the model manages to correctly classify the companies in the group they belong to. As a reminder, chance made it possible to classify 75.4% of the companies correctly. Thus, we note the correct percentage of classification.

**Table 06: Ranking Table**

	Observations		Previsions		
			Code DEF		Pourcentage correct
			Sain	Def	
<b>Etape 4</b>	Code DEF	Sain	268	15	94,7
		Def	29	62	68,1
	Global Percentage				88,2

Source :

Author

We note that the total percentage of classification drops minimally from 88.8% in the first stage to 88.0% for stage 3, then goes back to 88.2% for stage 4. In this last step, 94.7% of the healthy

companies are classified correctly, but only 68.1% of the defaulting companies are. Compared to the preceding results, the improvement is significant and our model is satisfactory.

### Validation of the model: Evaluation of its discriminating power

#### 3.1 Validation of the model's quality

After having obtained the coefficients of the various ratios retained in our model, we validate the model by carrying out the following steps on the basis of the remaining data after modeling.

We validated this equation on a validation sample of 744 observations. As part of the validation of our model, we obtained an error rate of 7%. The model is 93% predictive.

We apply the selected model on the basis of the validation sample, then carry out the same steps as for the processing of the modeling sample :

Computation of the score:  $\gamma = \sum^J$

$\alpha X_i$

Computation of the probability of default:  $\pi = \frac{EXP(Y)}{(1+EXP(Y))}$

- We predict the state of default thanks to the condition:  $\pi > 0,5$ , i.e Def=1

We compute the confusion matrix from the validation data:

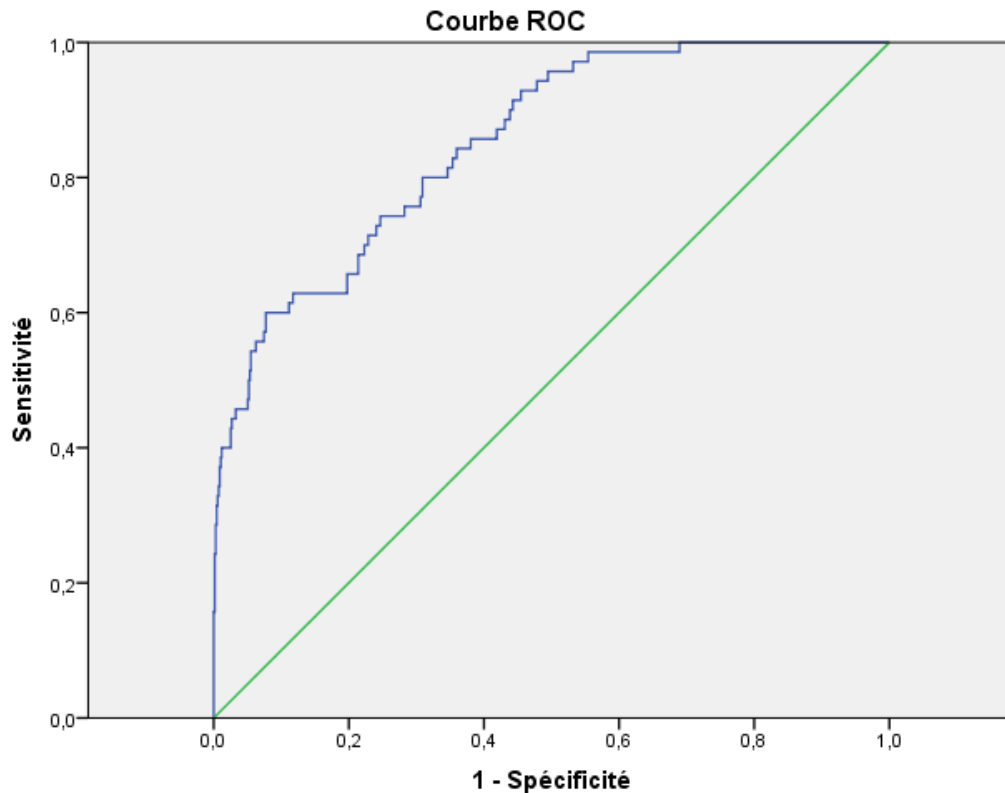
**Table 07 : Confusion matrix**

Matrice de confusion	estimation
Correct	93%
Incorrect	7%
Total	100%

Source : Author

The ROC curve is presented below:

**Figure 02 : ROC curve obtained from validation data**



<i>Area under the curve</i>
Variable(s) of test results: Y
Area
0,852

*Source:  
Author*

From these indicators, we can validate the model since the error rate is low and the surface under the ROC curve,  $AUC=0.852$ , is excellent (see ref., table of model efficiency according to the AUC value).

### 3.2 Interpretation of the results:

There is a particularly interesting property specific to the logit model, which facilitates in particular the interpretation of the parameters  $\beta$  associated to the explanatory variables  $X_i$ . The numerical values of the estimates do not offer a direct interpretation, because of the problem of the standardization of the residual variance. Thus, it should be retained that the only direct information which is really usable is the sign of the parameters, indicating if the associated variable influences the increase or decrease of the probability of default. However, we can also calculate the marginal effects, which measure the sensitivity of the probability of the  $Y_i = 1$  event, compared to variations

in the explanatory variables  $X_i$ . And it is precisely in this context, that the use of a logit model can facilitate the analysis of these marginal effects.

The variables whose estimated coefficient is positive influence positively the probability of default, whereas the negative coefficients indicate that the variables to which they refer affect this probability negatively.

Next, we focused on the Odd Ratio (OR) to measure the association of the variables to the probability of suffering from monetary insecurity. In the case of the logistic model, the exponential of the coefficient of an explanatory variable is interpreted as its OR. During the estimation, OR are given by the last column of the table.

Indeed, we determine, from the carried-out tests, that the majority of the explanatory variables have a significant predictive capacity and the expected sign.

- Age has a negative effect on the prediction of default. SMEs having sufficient history ~~only~~ obtain funding because of their low risk profile. Moreover, the SME statute is only one stage in the cycle of life of the company. The existence of a negative relation between the age and the prediction of default, means that mature SMEs have a low chance to default.
- Inventory turnover and the probability of default are positively dependent. A weak inventory turnover is often associated to difficulties in the flow of goods and bad planning, which implies problems of liquidity and a worsening of the working capital, which are generally perceived as bad by the banks.
- Accounts receivables turnover has a positive effect on the probability of default, which suggests that the longer the average duration of credit granted by the company to its customers is, the less liquid the company is.
- Asset turnover is correlated negatively to the probability of default; it emphasizes the ~~capacity~~ of the company to generate sales revenue for each dirham invested.
- The Total Balance Sheet has a negative effect on the probability of default. The link ~~between~~ the size of the company and its risk is increasing for SMEs, but decreasing beyond a certain size. The largest the company is, the less risky it is. The two economists Bun and Redwood (2003) proved that small-sized companies have a strong probability of default.
- The Total leverage is correlated positively to the prediction of the risk of default. A level ~~of~~ leverage is a source of financial weakness for the company. In other words, the state of the company in question is unbearable on the average to long term, and it should imperatively raise funds to honor its engagements. This variable has a crucial importance; the increase in the proportion of the company assets compared to its own capital stocks raises the probability of the firm defaulting, and in fact exposes the bank to risk.

### 3.3 Construction of the rating scales:

On the basis of the equation default prediction model, built under SPSS, we built a rating grid on the basis of the companies' score. The technique of the rating scales definition can be described as follows:

- **Definition of the key parameter for classification:** We retained the Z-Score, which ~~was~~ calculated for each company using the Logit model. This parameter was adopted because of the possibility of deducing the probabilities from them on the one hand, and of its continuous distribution, which enables it to be used as a basis for the definition of the classes, on the other hand;
- **Computation of the probability of default<sup>27</sup> for each company:** On the basis of the Z-scores of our model and according to the following equation: 
$$\pi = \frac{EXP(Y)}{1+EXP(Y)}$$
- **Computation of the rate of default for the validation of the model:** The principal ~~problem~~ at this stage was the decision rule to consider a company in a situation of default, because the application of the circular of BAM was going to simply result in a too high rate of default, including many of the companies which are not necessarily in final suspension of payment. On the basis of the statistics of the rating agencies, we retained as a threshold of classification the rate of default observed by the main international rating agencies for the "Default" classes, i.e. approximately 77%;
- **Definition of the target number of classes:** This definition was based primarily on ~~the~~ practices of large Moroccan banks<sup>28</sup> and international rating agencies<sup>29</sup>. The analysis of these practices showed that the systems of notation adopt an odd number of classes with a minimum of seven classes, according to the quality and the quantity of available data. On the basis of these reports, we tested several configurations before retaining a system based on seven classes. The principal criteria used to evaluate the configurations and to approve the final grid were as follows: normal distribution with a concentration of the observations around the median classes, significant difference between the classes in terms of risk profile, and finally increasing average rates of default (cf. default profile and sample distribution in the graph below);



- **Assignment of the companies to the suitable classes:** in order to better address this ~~as~~ an initial breakdown in a higher number of classes, before carrying out regroupings of the classes considered to be redundant in terms of contributions in information, while supervising the normal distribution (few observations in the very first and last classes with a gradual increase in the number of observations per class until the median class, followed by a gradual decrease). On this basis, the intervals of Z-score were retained to define the linkage of the observations to their respective classes;

<sup>27</sup> The probability of default is the percentage expressing the probability of loss on current receivables over a given timeframe.

<sup>28</sup> The concerned banks are mainly Banque Centrale Populaire, Attijariwafa Bank, BMCE Bank of Africa, BMCI.

<sup>29</sup> We relied on the international rating scales which are used by « The Big Three », for the construction of companies' rating grids. These agencies amount to 94% of the field's revenue : Moody's and Standard & Poor's both hold a 40% market share, and Fitch Ratings 14 %.

- **Application of the rating grid to the sample**

The rating matrix is presented below:

**Table 08: Rating matrix**

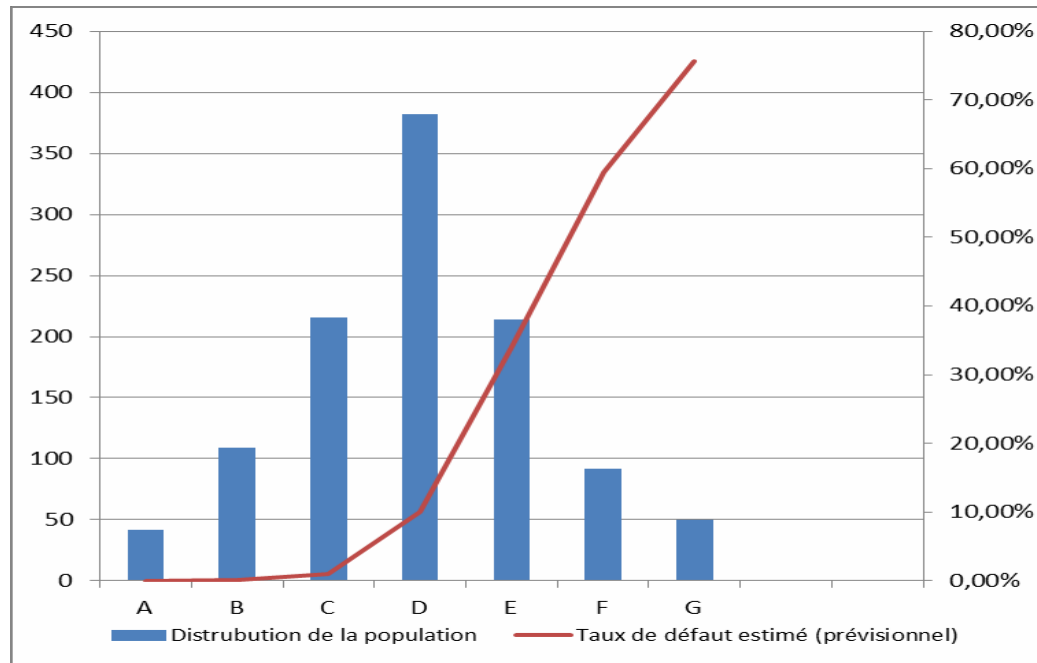
Note	Z-score Lower Bound	Z-score Upper bound	% Of the sample	Default rate (observed)
A	-	-10	4%	0%
B	-10	-7	10%	0,4%
C	-7	-4	20%	1,5%
D	-4	-1,5	35%	10%
E	-1,5	0	19%	14%
F	0	0,8	8%	28%
G	0,8	-	5%	54%

Source :

*Author*

The distribution of our sample follows a normal distribution also called Gaussian. This law is one of the laws of probabilities best adapted to model the risk of default coming from several random events. The normal law has a null average and a unitary standard deviation. The graphical display of our observations follows a normal distribution with a concentration of the observations around the median classes and a smoothing of few observations between the beginning and the end, at increasing average rates of default. The graph below illustrates the profile of default and the distribution of the sample.

**Figure 03 : Distribution of the default profile**



Source: Author

### CONCLUSION:

Our research first focused on the analysis of scoring techniques as decision-making help tools for loan granting and risk pricing needs. These techniques retrospectively allow a classification of the portfolio risk of the granted appropriations, and a budgeting of equity capital. In spite of the limits of the credit-scoring techniques, we conclude that the majority of the authors agree on the importance of methodology and the predictive capacity of a credit scoring model for the prediction of companies' credit default within the framework of internal ratings-based approaches (IRB) of Basel agreements.

Moreover, these methods make it possible to answer several key questions which arise as part of of the process of credit risk modeling, particularly: Which is the best customer evaluation method? Which are the relevant variables to integrate in the model? What type of information improves and facilitates the decision-making process? What is the best measurement to predict customer behavior (healthy or defaulting)?

To answer this issue, we built a predictive model of default risk for Moroccan SMEs using the method of the logistic regression (Logit). Thus, it stands out from the construction of our model of prediction of default, that failing Moroccan SMEs are characterized by weak inventory turnovers, which implies problems of liquidity and worsening of the working capital, which are generally badly perceived by the banks, a long customers receivables turnover, a negative causality with asset turnover, which emphasizes the capacity of the companies to generate sales revenue for each dirham invested, a weak total balance sheet and finally, a large percentage of medium and long- term debt (MLT) compared to capital stocks, which increases the probability of the firm to default, and in fact exposes the bank to counterpart risk.

At last, the obtained results are satisfactory, since the rate of good classification reaches 88,2%, and

the area under the ROC curve built from the modeling data is large, at  $AUC = 0.915$ . These results, which were obtained over a two-year period, are satisfactory compared to those obtained by comparable studies which were carried out in this field. For this reason, the choice of the method of logistic regression as part of our research work is justified, compared to the other methods, because of the nature of the issues, the type of data and finally, the nature of the variable of interest “Probability of default”, which is a qualitative binary variable, on the one hand, and on the other hand, regarding the good classification rates which this method offers, compared to the other probabilistic models and intelligent techniques.

Ultimately, through this empirical research, we ascertain that there is no optimal model of credit scoring, and no procedure which specifies the number of significant variables to retain, the grading scale and the threshold of optimal release, the sample size and the effective validation technique of the credit scoring model, which all differ from a bank to another and a field to another. After deepened research, certain researchers such as Al Amari (2002) reached the same conclusions. It seems justified to conclude that a good scoring model scoring must reflect the culture of the financial institution regarding risk and credit policy.

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## **An Evaluation Of The Management Of Micro And Small Enterprises (Mses) In Zimbabwe: A Case Study Of The Manufacturing Mses In Bulawayo Urban.**

**Simbarashe Gandiwa**

Girne American University: Cyprus

### **ABSTRACT**

The study evaluated the management of the Micro and Small Enterprises (MSEs) in Zimbabwe. The study was prompted by the often perceived closing shop of these enterprises, disturbing entrepreneurship in the country and in Masvingo Urban in particular. From global perspectives on the role and contribution of the MSEs in leading the countries to meet some of their objectives of unemployment reduction, poverty reduction and economic growth and development, the MSEs are regarded as the veritable vehicles. Many countries of the world today rely on a vibrant MSEs sector. The manufacturing MSEs sector is viewed as the fulcrum for the general development of the economy. The study was a qualitative rooted in the interpretivist paradigm and was conducted in Zimbabwean manufacturing MSEs in Masvingo Urban in particular. A case study design was employed to allow for naturalistic methods of data generation. A sample of 10 managers and 10 owners of the manufacturing MSEs were selected to participate in the study. A multi-stage maximum variation sampling technique was used to cater for the various products that are manufactured by the MSEs in Masvingo Urban. These were purposively sampled to select information rich informants to be included in the research. The participants were either responding to open ended questionnaire or semi-structured interviews. The major findings of the research were that the managers and owners of the manufacturing MSEs in Masvingo Urban lacked management practices that are critical for success and survival of the enterprise in the contemporary and turbulent business environment. The management practices that lacked were capital management, marketing, accounting, purchasing, networking and training and education in business management. Another important outcome of the study was that the MSEs lacked awareness about principled business management. The major issues related to awareness about principled business management were the four fundamental business management principles of planning, organising, leading and control (POLC). It also emerged that the managers and owners of the manufacturing MSEs were affected by the business environmental factors in the category of regulations and policy issues, competition, social, political and technological. Related to these factors were lack of adequate infrastructure, access to justice, discrimination and lack of power to protect intellectual property rights as issues of concern to the performance and management of the MSEs. The study recommends that attempts be made by the Ministry of Micro, Small and Medium Enterprises Development to make sure that the owners and managers of the manufacturing MSEs access training and education in the area of business management. In fact the ability of these firms to become renowned entrepreneurs relies upon the relevant education and Vocational Education systems to provide and equip the entrepreneurs. Manufacturing MSEs must form alliances to safe guard against discrimination access to justice and protection of intellectual property rights. These alliances assist in making the voice of the MSEs heard in the various quotas of the manufacturing industry.

## **Security perception of Thai government towards migrant workers from Myanmar in a year prior to the emergence of ASEAN community**

**Sipim Sornbanlang**

### **Abstract**

The main purpose of this article is to study a perception of Thailand's government towards migrant workers from Myanmar, the largest numbers of migrant workers in Thailand in a year prior to the emergence of ASEAN Community.

The perception towards migrant workers, as observed, is quite distinct from perception towards migrants from any other neighboring countries even we were getting to become ASEAN Community in 2015. The main reason is because the government had remained their fear and suspicion towards these migrants workers which shaped their perception into what we call "threat perception".

The study also finds that significant factors contributing Thai government to perceive migrant workers from Myanmar as "threat" include with 1) Present situation 2) Historical experience 3) Cultural difference 4) Behavior of migrant workers and 5) Leaders' anxiety.

**Keywords:** migrant workers, fear, threat perception



# Compensation committee, company board attributes, and company performance: The moderating effect of leadership position

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## Abstract

Previous literature around the world has investigated and focused on a number of internal corporate governance mechanisms and their effect on company performance (Alabdullah, 2016). Different models with different samples were used by the previous literature and the results in line with the notion that corporate governance (CG) is the control system that leads to good company performance. Nevertheless, prior works' results inconsistent regarding the impact of corporate governance internal mechanisms on company performance (Abor & Biekpe, 2007; Alabdullah, 2016; Alabdullah, Yahya, Nor, & Majeed, 2016; Alabdullah, Yahya, & Ramayah, 2014). The objective of the current study is to examine the relationship between two internal mechanisms of CG as independent variables; compensation committee and board size and company performance represented by ROA as a dependent variable. Moreover, the current study investigated the role of leadership position (CEO duality) as a moderator variable on the relationship between compensation committee and board size and ROA. The sample of the present study consisted of 55 industrial companies listed on Amman Stock Exchange (ASE) in Jordan for the fiscal year 2014 as a cross sectional study. The hypotheses related to this study are tested through SPSS and EViews to analyze its data. The findings of this study reveal that a company's financial performance is positively related to board size and compensation committee and thus this enhances company performance. On the other hand, firm size as a control variable has no effect on company performance. Surprisingly, there was no effect of CEO duality of both independent variables; board size and compensation committee on company's performance; ROA. In summary, the current study provides support for the widely accepted notion that good CG practices have a positive impact on corporate performance.

**Keywords:** Board size; compensation committee; CEO duality; company performance

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## The Utility of Wealth and Debt: A research into loss aversion and debt relief

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Bernoulli derived in 1738 his utility function as the function that gives the utility of the monetary increment  $x$  relative to the initial asset position  $m$  (Bernoulli, 1738),

$$u(x|m) = q \log \frac{m+x}{m}, \quad (1)$$

where is  $q$  some positive constant, also known as the Weber constant. This utility function (1) was re-derived in 1860 by Fechner as the Weber-Fechner law that guides our sensory perception. Fechner himself was aware of this equivalence. Nonetheless, he believed his derivation to be the more general. Fechner argued that Bernoulli's derivation only applied to the special case of utility, whereas his law, though identical, applied to all sensations, as it invokes Weber's law. However, as pointed out in (Masin et al., 2009), Fechner failed to provide any compelling reason why the principles employed in Bernoulli's derivation of the subjective value of objective monies should not be extendible to sensations in general.

In the years following Fechner's publication of "Elements of Psycho-Physics", Bernoulli's utility function (1) proved to be so successful in predicting subjective sense perception that it elevated psychology from the merely metaphysical discipline it had been under Kant to a potentially mathematical and experimental science (Fancher, 1990). Moreover, one of the central tenets of modern-day behavioural economics, loss aversion, the psychological phenomenon that the disutility of losses may loom larger than the utility of equivalent gains, and (Tversky and Kahneman, 1992), was already predicted as early as 1738, by Bernoulli as a consequence of his utility function (Bernoulli, 1738).

One may derive Bernoulli's utility function in the following manner. First we formulate that the distance between an initial asset position  $x$  relative to a final asset position  $y$  should adhere to the desiderata of unit-invariance and path independence (Van Erp et al., 2016). The desideratum of unit-invariance is based upon the consideration that the to be determined distance measure  $f$  should be the same if formulate our  $x$  and  $y$  in dollars or dollar-cents, and translates to the functional equation

$$f(x, y) = f(cx, cy). \quad (2)$$

The desideratum of path independence is based upon the consideration that the distance between  $x$  and  $y$  should only be a function of  $x$  and  $y$ , and translates to the functional equation

$$f(x, z) = g[f(x, y), f(y, z)]. \quad (3)$$

The functional equations (2) and (3), together with the boundary conditions that the distance of the initial asset position  $x$  relative to itself is zero:

$$f(x, x) = 0 \quad (4)$$

and the distance from initial asset position  $x$  to some higher final asset position  $y$  should be positive

$$f(x, y) > 0, \quad \text{for } x < y, \quad (5)$$

then may be solved to give us Bernoulli's utility function (1), or, equivalently, the Weber-Fechner law of sense perception, as the only distance function that adheres to the desiderata of unit-invariance and path independence (Van Erp et al., 2016).

Now, the boundary condition (5) is appropriate if  $x$  and  $y$  refer to wealth; more wealth means more utility. For debt however, we need to replace this boundary condition with the alternative boundary condition

$$f(x, y) < 0, \quad \text{for } x < y, \quad (6)$$

as more debt means more disutility (i.e., negative utility). The functional equations (12) and (13) together with the boundary conditions (4) and (6), give the negative Bernoulli utility function which models the utility of increments in debt:

$$\Delta u = -q \log \frac{y}{x}, \quad (7)$$

or, equivalently, if we denote the initial debt position as  $d$  and the debt increment as  $y$ :

$$u(y|d) = -q \log \frac{d+y}{d}. \quad (8)$$

where is  $q$  some positive constant.

Loss aversion, the phenomenon that the disutility of losses may loom larger than the utility of equivalent gains, as stated previously, is a corollary of Bernoulli's utility function (1). In this paper we present as a corollary of the negative Bernoulli utility function (20) the phenomenon that the utility of debt reduction may loom larger than the disutility of an equivalent increase in debt. We will call this corollary 'debt relief', the relief of paying off one's debts. And as we discuss the psychological reality of the phenomenon of debt relief, we will demonstrate that the Bernoulli utility functions of wealth and debt, (1) and (8), respectively, are predicted to conspire to make those who have scarce wealth and an abundance in debt (i.e., the poor) particularly vulnerable to the temptations of easy credit.

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