

WEI

NIAGARA FALLS,  
CANADA,  
NOVEMBER  
20-22, 2018

2018 WEI  
INTERNATIONAL  
ACADEMIC  
CONFERENCE PROCEEDINGS

**BUSINESS & ECONOMICS**

BY THE WEI | ISSN 2167-3179 (ONLINE) USA

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## ECONOMIC LOSS AND HEALTH IMPACT OF AIR POLLUTION IN THE CAPITAL CITY OF ETHIOPIA

AEMADE MISTRU TEREFE

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### ABSTRACT

*Despite many years of environmental regulation, significant levels of air pollution are generated by the provision of goods and services and such Economic and domestic activities have been causing a profound deterioration of air quality in developed and developing countries.*

*Air pollution mainly refers to human activities or the natural processes that cause a certain substance to continuously enter the atmosphere at a sufficient concentration that disturb the dynamic equilibrium in the atmosphere and thereby affect the health of human being.*

*Economic and domestic activities have been causing a profound deterioration of air quality in developed and developing countries. Air pollution in developing countries are much more increasing due to their fast growth of their population and recent industrialization results the demand for essentials hence the amount of waste and emission being generated increased enormously.*

*Air pollution reduces people's well-being through medical expenses associated with treating pollution-induced diseases which include the opportunity cost of time spent for obtaining the treatment, averting expenditures associated with attempts to prevent pollution-induced disease, changes in consumption pattern, disutility associated with the symptoms and lost opportunities due to diseases and Changes in life expectancy or risk of premature death. Therefore, this study*

*provides an empirical evidence of economic loss and health impact of air pollution in the capital city of Ethiopia.*

**Keywords:** Air Pollution, Economic Cost, Human Health, Willingness to pay

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## PROFESSIONAL SERVICES STAFF PERCEPTIONS OF PERFORMANCE MANAGEMENT AT THE UNIVERSITY OF KWAZULU-NATAL: A CASE STUDY OF THE COLLEGE OF HUMANITIES

AGHASHPHREE RAMSAMY, DR ROSEMARY SIBANDA

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### ABSTRACT

*In a contemporary society, globalisation-induced competition has given rise to significant improvements in human resource management styles to improve competitive advantage. This is not only in the private sector but in the public sector as well. Higher education institutions (HEIs) have caught on to this phenomenon and have adopted these management practices. This means that the same principles involved in managing the private sector, such as introducing performance management systems, are now applied in the public sector. The University of KwaZulu-Natal (UKZN) recognised that “managing and reviewing employee performance and fostering employee development are critical factors in achieving institutional strategic priorities and overall success.” In pursuit of its vision and mission, UKZN had embarked on a strategic plan to introduce a performance management system to the organisation in 2008. There is very limited knowledge on what the perceptions of professional services staff regarding performance management are. Furthermore, there is minimal empirical evidence relating to how professional services or support staff perceive performance management. The aim for this study is to investigate the effectiveness of performance management at the College of Humanities as a strategic tool for motivation. Since the appraisee or employee is meant to be the beneficiary of performance management, knowing how they perceive the process can result in the rehabilitation of strategic procedures in the organisation. The researcher used a survey research design and conducted a*

*quantitative research analysis for this study. A pilot study and pretesting confirmed the reliability and validity of the questionnaire. Purposive sampling method was used to forward the online questionnaire to a sample of 166 professional services staff. The response rate was 106. The raw data was statistically analysed by descriptive and inferential tests. The results indicated positive responses for the research objectives. The research findings indicated that professional services staff are satisfied with the performance management process and its strategic purpose of improved performance objectives. It was recommended that additional training in the use of the system is required and for management to consider both monetary and non-monetary incentives.*

## **INTRODUCTION**

Past approaches to performance management in higher education in South Africa were given limited emphasis by government, and its contribution to enhance institutional performance and quality has been neglected (Simmons, 2002). As a result, universities adopted a laissez-fair approach to performance management and therefore operated on a high 'trust' basis within an ethos that emphasised independence of thought and scholarship, academic freedom and collegiality (Molefe, 2010). However, it seems that this is something of the past. Due to pressure to increase productivity (measured through student pass rates and research outputs), responsibility and accountability, this approach resulted in higher education institutions (HEIs) developing and introducing performance management systems, such as the integrated performance management system and the 360-degree performance management system. This was done despite considerable literature on the ineffectiveness of performance management systems in other sectors as well as the widespread dissatisfaction of employees with actual performance management systems (Hainess & St-Onge, 2011; Karuhanga, 2010; Moullakis, 2005).

In today's world, competition has taken over the market place and organisations can only compete with their competitor by innovation. An organisation can only be innovated through an efficient human resources system. This has led to managers experiencing major challenges by the advent of globalisation to advance into long-term human resource (HR) policies and procedures to ensure that business goals are optimised (Imran, Arif, Cheema and Azeem, 2014).

Stanton and Nankervis (2011) advised that it is crucial for managers to consider managing each employee's performance and the team's merged contributions as the focus for success of an organisation. Islam and Rasad (2006) view the performance management system (PMS) as an inseparable part of organisational life. This compelling necessity for businesses to effectively optimise performance has resulted in the

introduction of mechanisms that enable management to monitor the achievement of organisational goals on the one hand, and the level of contribution by employees to the achievement of these goals on the other. However, there has recently been a considerable quantity of literature and articles to suggest that discontent exists among employees regarding performance.

## **LITERATURE REVIEW**

### **Performance management in higher education**

Higher education Institutes in a country have a pivotal role in developing human capital (Jalaliyoon & Taherdoost, 2012) cited in Sherwani, 2015. Therefore, higher education plays a fundamental role in the future of nations, developing countries and improving their position in the world economy.

Higher education institutions have revealed increased evidence of slowly adopting a managerialist ideology stemming from the inherent practises of the private sector (Kolsaker 2008, 513). “Through such means as mission articulation, strategic planning, evaluation and commercial marketing, higher education managers are to ensure that their institutions become more entrepreneurial, adaptive and commercially responsive (Meek et al. 2010) as cited in Annemarie Davis, Mari Jansen van Rensburg & Peet Venter (2014).”

Even though published research and graduate throughputs in South African universities result in economic gain or subsidies from government, these gains tend to provide a third-stream income for universities; and this gain is trickled down to research-productive academics, thus making the business of research publication a commercial enterprise rather than scholarly engagement (Bogt & Scapens, 2011; Hill, 2010; Flaniken, 2009) as cited in Maimela, E.M., & Samuel, M.O. (2016).



## **History of Performance Management**

Evidence reveals that performance management has been in use in a flexible style over the past two millennia. According to Murphy and Cleveland (1995), the Chinese had incorporated performance appraisal systems in the third century AD. Murphy and Cleveland went on to discover that the Chinese were also scrutinising their colleagues' preferences during evaluations of employees. In the eighteenth century, at the time of the Industrial Revolution, factory supervisors had realised the benefit of their team's or staff's performance to their production outputs (Murphy and Cleveland, 1995). The advancement of the rationale of performance management systems in the US was contributed by prominent researchers known as "Peter Drucker and Douglas McGregor," who had developed ideas around management by objectives (MBOs) and employee motivation (Murphy and Cleveland, 1995). Spreigel, W.R. (1962) reported that by the early 1960s close to more than 60% of American companies had incorporated a performance appraisal system into their organisations. Since then, researchers have contributed to the development of theories of how different performance evaluation methods can contribute to the success of the organisation.

Performance appraisal changed dramatically from an exclusively measurement focus to one in which the intellectual processes of appraisal dominated as a result of Landy and Farr's (1980) classic paper (see also Feldman, 1981). The 1990s were responsible for the next major change in this research area. The authors Murphy and Cleveland went on to publish their first book on performance appraisal in 1991. In it they supported the view of needing a new model or approach to studying performance appraisal. They contested Landy and Farr's model as there was inadequate attention to the organisational context and it lacked proven links between the appraisal research and appraisal practice (Murphy & Cleveland, 1995).

Ochoga (2007) reported that the increase in interest and use of performance appraisal in the United States stemmed largely from the theorised link between performance appraisal

and improved individual and organisational performance. Formalised appraisals were instituted later in some countries.

The history of performance management in higher education has not always been one of recognition and approval by both academics and professional services staff. According to Doidge, Hardwick and Wilkinson (1998) that marked discontent amongst academics exist regarding the process of performance appraisal and performance management. Orientation toward performance began in 1982 when in the United Kingdom within the central administration, the Audit Commission was set up with the responsibility in assessing the efficiency and effectiveness. Thus a new thinking method developed in the public sector i.e. "value for money. This new approach "Value for money", expresses the simplest model from an economical point of view of collecting and effective use of resources in the process of assessing and improving the quality and performance within educational institutions, while respecting the three criteria of assessment namely, effectiveness, efficiency, economy.

### **The Performance Management system**

Spangenberg (1994:49) reiterates that the Performance Management System (PMS) starts and ends with a strategic policy. He further articulated "that it is an ongoing process that involves planning, managing, reviewing, and rewarding (Spangenberg, 1994:29)." Gary (2009:9) defines the PMS as a "translation of plans into results-execution and a process of managing an organisation's strategy." Gary's views are also supported by Radnor and McGuire (2004) cited in Quinton, (2006:106) who defines the PMS as the "entire set of variables that one wishes to measure, influence or control." It is important to note that the objectives need to be precisely measured in a uniform manner so one can use them periodically to verify their validity and fairness (Brown & Armstrong, 1999) cited in Whittington-Jones, (2005:39).

## **Employee motivation**

Motivation is defined “as the driving force by which humans achieve their goals.” Sheema, Shujat and Alam (2013:25) cited Armstrong (1977) that motivation at work operates in two ways i.e. intrinsic or extrinsic. Individuals can be self-motivated by doing duties that intrinsically motivate them resulting in them realising their goals. Organisations use performance bonus, capacity training and development to motivate employees. This is known as extrinsic motivation. Sheema, Shujat and Alam (2013:25) cited by Ajila (1997) agreed that an employee is extrinsically motivated only to the extent that a gain or reward can be received.

In a situation of employees with low levels of motivation, generally their performance is poor and service levels are low. Keeping employees motivated will improve the welfare of an organisation. Research reflects “when employees are motivated adequately, their performance increases and consequently production is positively increased” Tzeng (2009) and Yildiz, Ayhan & Erdoğan (2009).

## **Training and development**

Training can be defined as acquiring a set of skills by ongoing practise. Grobler *et al*, (2002:315) state “that training and development have seven key objectives. These are listed as: improving employee performance, updating skills, preventing obsolescence, solving problems, job orientation, career advancement and personal growth.” Unacceptable performance from an employee would be identified as a candidate that warrants a need for training. Training should be provided to employees that lack certain skills to achieve the required competency levels of their job description. Training may not be the solution to all issues regarding poor performance, however, it can offset some of the ineffectiveness.

Line managers should be able to identify the strengths and weaknesses of their employees when conducting PA and to ascertain what actions should be taken to improve productivity and development. Training can enable the employee to improve their KSAs and hence improve ratings and results (Govender V, 2009:112).

Development focuses on higher level skills than training. These can include decision-making, planning, organising, communicating, motivating and developing interpersonal relationships. Development is continuous and long term as opposed to training which is more focused for an agreed period (Grobler *et al*, 2002).

The findings of the study carried out by Carolyn & Radka (2011) reflect that “training” did impact the level of productivity of employees in that organisation. Ongoing training of both new and current employees promotes improved staff ability and upholds the company image in terms of succession planning. Evidence reveals that training of employees is not only a source of motivation for the employee but the benefits received by the organisation outweighs the investment in training.

### **Rewarding excellence**

Rewards are known to have the ability to influence an individual. The fundamental purpose for a reward system is to invoke positive results for the desired level of performance (Wilson, 2003). A reward system was first introduced in the UK with organisations having high hopes that performance reward systems would affect a cultural change to encourage increased levels of employee performance. But since then research from reward specialists, organisational psychologists and academics have contested that rewards have a direct influence as an effective motivational tool.

Pearce Robinson (1997) states that reward systems should align the actions and objectives of individuals with objectives and needs of the organisation’s strategy.

Brignall and Modell (2000) outlines that the evaluation of employee performance against agreed objectives, assists in making key employee reward decisions. The big challenges

of following this strategy would be to identify the real performers. The effective implementation of performance management can help an organisation meet these big challenges of improving employee performance. Where line managers have highly rated employees that have achieved their objectives, such individual's performances should be tangibly rewarded.

Rewards generally take the form of increased remuneration, bonuses or non-cash awards. Financial incentives, also known as performance-related pay, are important reward mechanisms because they encourage managerial success with organisational and human resource strategy (Kaplan, 2007). A research study was conducted by Khan and Farooq (2010) on "impact of rewards on employee motivation in Commercial Banks. The results of the study revealed a positive significant relationship between rewards and employee motivation among the employees of commercial banks in Pakistan."

### **Organisational culture**

Robbins *et al*, (2009) identified organisational culture as being able to distinguish an entity by the common practices and beliefs of its members. According to Solomons (2006) the organisational culture of an organisation does impact its overall performance. Solomons (2006) emphasises that for an effective PMS, the organisational attitude and culture of the employees of that particular institute should be receptive to the metamorphosis that can be created by the introduction of performance management in that organisation/institute.

In recent years, the efforts of many organisations in both the public and the private sectors have been directed towards creating a 'performance culture' (Mullich, 2008). For an effective change in behaviour there needs to be a reorientation to the thinking process to embrace a new way of doing things. Mullich (2008) further states that to develop a culture that embraces accountability, employees and the organisation as a whole must be able to see quantifiable progress toward specific goals.

PM creates a culture of shared responsibility where employees take responsibility for the continuous improvement of business processes and of their own skills, behaviour and contributions.

### **Organisational justice**

Organisational justice is defined as the study of fairness at work. Brown *et al*, (2010) explained that performance appraisal has a sizeable effect on a number of important employee attitudes, such as job satisfaction, organisational commitment and turnover intentions. Furthermore, justice perceptions are related to attitudes towards organisational commitment (Farndale *et al*, 2011).

Byrne & Cropanzano, (2001) explain organisational justice as having trust in your employer due to their fairness. According to Walsh (2003) there has been a transfer of performance management from being a measurement tool to becoming a motivational tool i.e. consideration of an employee's receptivity and employers' interactions during the performance management process. Meyer *et al*, (1997) reiterate that if an employee's perception of equity and fairness manifests that an organisation is committed to their employees. Further to this Walsh (2003) explains that when an employee perceives the performance appraisal to be fair this invokes employee satisfaction and acceptance. In order for employees to have an increased commitment to performance management practices, according to Farndale *et al*, (2011) these practices need to be perceived as fair by employee. Organisational justice is divided into different dimensions, i.e. distributive, interactional and procedural justice.

Farndale *et al*, (2011) identify distributive justice "as the perceived equity of outcomes for individuals and procedural justice as the individual's perception of the fairness of the process carried out." Tang & Sarsfield-Baldwin (1996) stated that distributive justice with regards to performance management procedures focuses on the extent of fairness in decision-making in terms of the entire process.

## **RESEARCH METHODOLOGY**

### **Motivation of the study**

A survey conducted by the Chartered Institute of Personnel and Development (CIPD) (2009) examining the views of employees from both profit-seeking and non-profit organisations as well as governmental institutions on performance management systems, revealed that only 20% of the respondents believed that performance management systems have a positive impact on individual performance. A further 59% remained neutral, while 21% disagreed that it had a positive impact. Similarly, only 8% of the respondents said that the performance management systems contribute significantly to their performance or that of their organisations. This reflects that only a minimal number of employees believe that performance management is beneficial. This observation supports the view of Aguinis (2011) that performance management is not effective. Therefore, as the system is perceived to be ineffective, this could lead to employees feeling that performance management systems are introduced merely to put pressure on them to perform at specific levels, which is equivalent to taking away their autonomy.

This ‘rethinking of performance management’ has intrigued the researcher’s investigation to exploring the perceptions of Performance Management of professional services staff at the College of Humanities. The University of KwaZulu-Natal (UKZN) has identified that the main factors that contribute to organisational success is “managing and reviewing employee performance and fostering employee development”. This research study will contribute to various stakeholders such as executives of the College of Humanities, line managers, staff, students and contracted third parties.

### **Focus of the study**

Performance management sets expectations for employee performance and motivates employees to work hard in ways that are expected by the organisation. This study

investigates the experiences and perceptions of professional services staff at the College of Humanities since its implementation in November 2008.

This study is only focused on the professional services staff, also known as support staff. No academics are included in this research. The University has four colleges but this study is only specific to the College of Humanities.

Professional services staff set their objectives based on their Job descriptions. The employee's performance for the year is formally assessed and rated on a four- point scale. All professional services staff at the University of kwazulu-Natal are rated based on this scale.

According to Ewenstein, B., Hancock, B., & Komm, A. 2016, organisations have been 'hush-hush' regarding the annual or bi-annual ritual of planning, evaluating, appraising, rating and ranking the performance of employees to the extent that it epitomises the absurdities and red tape of corporate life. Both managers or supervisors and employees resonate the same view that "performance management is time-consuming, excessively subjective, demotivating, and ultimately unhelpful."

### **Problem statement**

According to the CEO of Council on Higher Education (CHE) Narend Baijnath's report in the 2016 review he states that "Higher Education still remains, as it was then, central to the projects of modernisation, transformation and renewal in the country. (CHE) Higher education in South Africa in the post-apartheid era has never been more volatile than it is currently, despite the many advances and achievements of higher education outlined in this review, however, the student protests of 2015 and early 2016 have given expression to underlying fault lines in quite a dramatic way. The pressures of worsening underfunding in the context of enrolment growth and increasing student expectations and frustrations with respect to access and financial aid, have led to widening fissures in the system." (McKenna, 2018)



Administrative support provided by professional services staff have been seen only as “peripheral function,” has now been modified and developed to carry out essential and efficient tasks for the success of teaching and research in an higher education institution (Rhoades & Sporn, 2002; Schneijderberg & Merkator, 2013). Administrative support as reiterated by Rhoades (2009) has not yet been acknowledged as intellectual property that is instrumental for a higher education institute. A motivated professional services staff member can contribute to a higher education institution’s strategic outcome.

The University of Kwazulu-Natal had embarked on implementing their Performance Management Policy i.e. HRE/10/08/CO on 01 November 2008. In pursuit of its vision and mission to be the premier university of African scholarship, a Performance Management System (PMS) was implemented in an institution-wide strategy for the purpose “to facilitate and promote the achievement of institutional objectives through the effective management of employee performance.”

There is very little empirical evidence of perceptions of performance management on professional services staff in higher education institutions. It is imperative to quantify professional services staff’s perceptions of performance management to establish its effectiveness, efficiency and contribution to staff motivation. This study sets out to understand this under-examined subject by ascertaining how professional services employees perceive the effectiveness of performance management, for positive employee outcomes and ultimately motivating staff to achieve the organisation’s strategic goals. Organisations need to safeguard the process to be fair and transparent and ensure that there is acceptance from the employees to obtain the optimal outcomes from performance management. The employee’s perception of performance management can impact an organisation in either a positive or a negative way.

### **Aim of the study**

The study aims to examine the professional services staff’s perceptions of performance management.

## **Methodology**

Professional services staff are present on three of the campuses at the University of KwaZulu-Natal, i.e. Howard College, Edgewood and Pietermaritzburg.

The study adopted a quantitative survey methodology to carry out the research. Disadvantages do exist in a quantitative study (Jones, 2012) but the undeniable benefit of a quantitative study is the skill to scale down a complex scenario to a statistical figure that is simple to understand, interpret, analyse and review. It can be generalised that quantitative studies are much more cost-effective and time-saving than qualitative studies.

Thereafter, permission was received to carry out the research to be conducted by a Gatekeepers letter from the registrar's office at the University of KwaZulu-Natal.

There are 166 permanent professional services staff at the College of Humanities for the year 2017.

The questionnaire was adapted from an existing online questionnaire from Kardas Larson, Human Resource consulting. A non-probability purposive sampling method was used. Participants were requested to take part in the self-administered online survey using QuestionPro as the electronic survey system. The questions on the questionnaires have been linked to the objectives to form a measurement from the stats done on SPSS.

A Cronbach alpha test was done with a result of 0,965.

The researcher developed the questionnaire to use a five-point Likert scale. A Likert scale consists of options to indicate either a favourable or an unfavourable response to the question or statement. The questions were short and simple to understand in order for the measuring instrument to yield a high response rate, as recommended by Terre-Blanche, Durrheim (1999). The questionnaire was made up of two sections. Part 1 contained the personal questions to provide demographic data. Part 2 was the 28 Likert scale questions developed to answer the aim of the study. The questions in Part 2 of the questionnaire

were based on the literature review. The questionnaire was adapted from a web-based questionnaire from Kardas-Larson Human resources consulting company.

In order to collect data that are trustworthy and reliable, the researcher adapted a web-based self-structured questionnaire to be the best instrument to use. The questionnaire for participants was centred around the research objectives to enhance the data for the study.

### **Objectives of this study**

- 1 To investigate the professional services staff's perceptions of performance management planning.
  - 2 To ascertain the line managers' role in performance management.
  - 3 To assess the impact of performance management on employee motivation.
  - 4 To advise on the challenges of the performance management system.
1. To ascertain the professional services staff perceptions of performance management planning.

2, 3, 4, 5, 6, 7, 11, 12

2.	My appraisal meeting with my manager is beneficial to me.
3.	My Appraisal meeting with my manager allows for key discussion.
4.	I am satisfied with my involvement in the setting of my key performance areas.
5.	My performance objectives are clear to me.
6.	My performance objectives are set at the right level for my position.
7.	My current performance objectives are attainable.
11.	My ratings are accurate.
12.	My Ratings reflect my actual performance.

### **Questions for objective 1**

2. To ascertain the line managers' role in performance management.

13, 14, 15, 16, 17, 18, 19

13.	I think my manager is trained to conduct the appraisal.
14.	I think my manager performs the appraisal timeously.
15.	My Manager rates me based on actual performance.
16.	My manager does not rate me based on their personal feelings.
17.	My manager applies the performance management system in accordance with the institutional policy.
18.	My manager treats the process as ongoing versus once a year.
19.	My manager deals with performance problems effectively.

### Questions for objective 2

3. To assess the impact of performance management on employee motivation.

20, 21, 22, 23, 24, 27

20.	Once the performance assessment is complete, I feel motivated to improve in the next assessment.
21.	The criteria used to calculate the performance bonus is fair.
22.	The performance bonus motivates me to strive for excellence.
23.	The reward system aligns the actions and objectives of staff with that of the
24.	My understanding is that the reward system interventions are used to elicit the desired levels of performance.
25.	I think my manager is able to identify my training needs.
26.	I think my manager encourages capacity training for staff.
27.	The line manager encourages staff development.

### Questions for objective 3

4. To advise on challenges of the performance management system.

1, 8, 9, 10, 28

1.	The training I received on the performance management system is adequate.
8.	I understand how my current key performance indicators are aligned to UKZN's mission and goals.
9.	I feel the appraisal process is simple.
10.	I feel the appraisal process is quick to do.
28.	I regularly attend courses, conferences, workshops, etc to keep abreast with the developments in my field of work.

#### Questions for objective 4

#### Data analysis

Data analysis is responsible to convert the raw data that participants inputted into QuestionPro to provide the outcomes of each objective. Statistical Package for the Social Sciences (SPSS) was used for the statistical analysis. This allowed the researcher to draw out the significant outcomes. Descriptive statistics were used to process and analyse the biographic data collected. The SPSS program was used to analyse the inferential statistics using the one-sample t-test statistical technique. The main purpose of the statistical analysis in this study was to analyse the experiences and perceptions of professional services staff performance management at the College of Humanities, University of KwaZulu-Natal.

The research was quantitative in nature. Descriptive statistics technique was used to analyse the findings from the questionnaire. The descriptive statistics includes measure of central tendency (mean scores), percentages, measure of variability (standard deviation) and measure of relative frequencies which were used to show the employee's perception of performance management practices.

## DATA ANALYSIS AND INTERPRATION

### Participants

The questionnaire was sent out to 166 participants and a total of 106 participants completed the anonymous questionnaire. The response rate is 64%.

### Cronbach Alpha

The reliability analysis calculation reflected that the data is reliable as the value for the Cronbach's Alpha calculation was 0.965.

**Table 1: Reliability test output**

Reliability Statistics	
Cronbach's Alpha	N of Items
.965	28

### Demographic distribution

The frequency distribution of socio-demographic information showed that the majority of the participants were female (74%), 60% of them had been working for more than 10 years, more than half (53%) were African, and 62% were between the ages of 36–55 years.

**Table 2: Frequency distribution of socio-demographic information**

Variables	Frequency	%
Sex		
Male	26	26,00%
Female	74	74,00%
Grades		
Grade: 12	9	8,49%
Grade 11	11	10,38%

Grade 10	60	56,60%
Grade 9	9	8,49%
Grade 8	5	4,72%
Grade 7	2	1,89%
Grade 6	10	9,43%
Years in service		
0-1	5	4,81%
2-5	11	10,58%
6-10	26	25,00%
11-20	42	40,38%
21-30	18	17,31%
30 +	2	1,92%
Years in the current position		
0-1	14	13,73%
2-5	31	30,39%
6-10	30	29,41%
11-20	18	17,65%
21-30	9	8,82%
30 +	0	0,00%
Race		
Indian	31	28,97%
White	11	10,28%
African	57	53,27%
Coloured	8	7,48%
Age		
18-25	1	1,06%
26-35	31	32,98%
36-55	58	61,70%
56-60	3	3,19%
61+	1	1,06%
Name of School		
SOAHS	8	7,62%
Religion	4	3,81%
Education	22	20,95%
BEDS	6	5,71%
Sociology	6	5,71%
Arts	14	13,33%
College	45	42,86%

Each objective was related to questions in the questionnaire. The next section will show how the questions on the questionnaire relate to each objective.

**Result**

Results for objective 1- To ascertain professional services staff perceptions of performance management planning

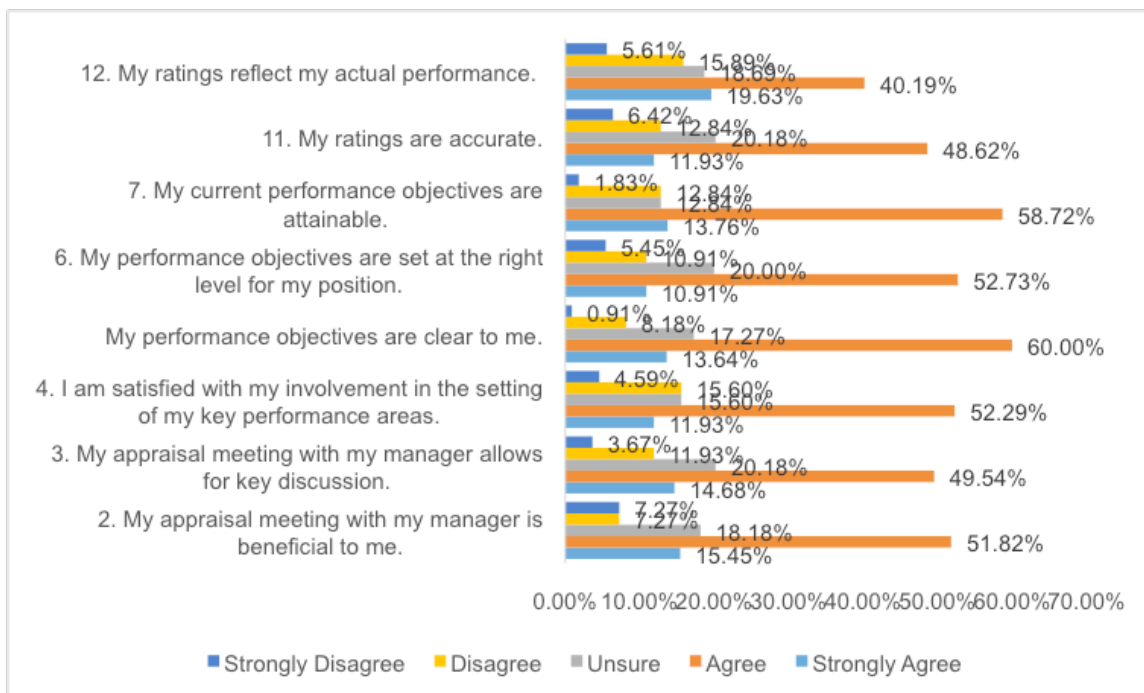


Figure 1: Statements regarding objective 1

Adding all the scores from the eight statements, it was found that 80% of the participants scored 24 or less indicating positive perception towards objective 1.



**Table 3: Overall scores for objective 1**

Overall scores	Frequency	Percent
8	5	4,6
9	1	.9
10	2	1,8
11	2	1,8
12	2	1,8
13	2	1,8
14	2	1,8
15	5	4,6
16	24	22,0
17	6	5,5
18	9	8,3
19	6	5,5
20	4	3,7
21	7	6,4
22	5	4,6
23	1	.9
24	4	3,7
25	5	4,6
26	7	6,4
28	1	.9
30	2	1,8
32	3	2,8
34	1	.9
35	1	.9
36	1	.9
39	1	.9

Results for objective 2 – To ascertain the line manager's role in Performance management

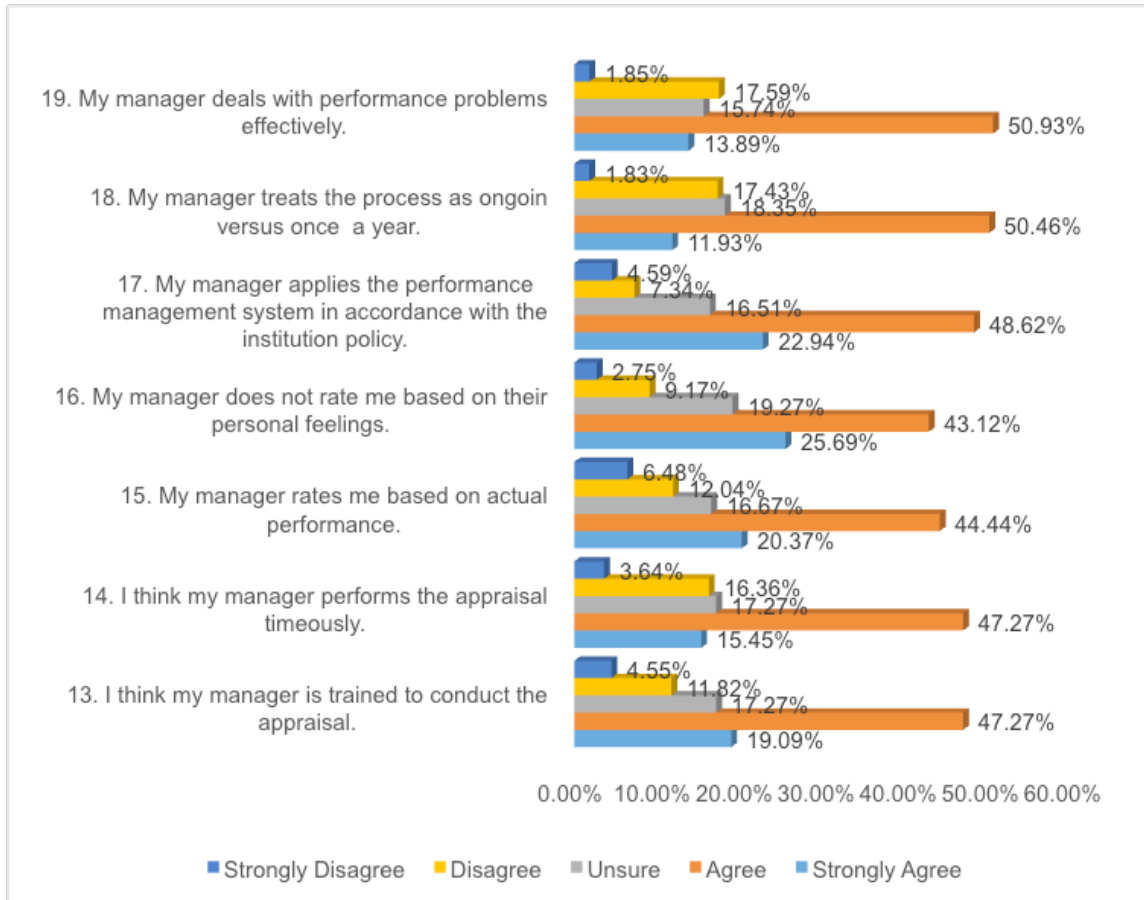


Figure 2: Statements regarding objective 2

Adding all the scores from the eight statements, it was found that 82% of the participants scored 21 or less, indicating having positive perception towards objective 2.

Table 4: Total scores for objective 2

Overall scores	Frequency	Percent
7	6	5,5
8	4	3,7
9	6	5,5
10	4	3,7
11	2	1,8
12	6	5,5
13	1	,9

14	23	21,1
15	5	4,6
16	9	8,3
17	5	4,6
18	7	6,4
19	2	1,8
20	6	5,5
21	3	2,8
23	1	,9
24	1	,9
25	5	4,6
26	1	,9
27	2	1,8
28	5	4,6
29	1	,9
30	1	,9
31	2	1,8
32	1	,9
Total	109	100,0

Results for objective 3 – To assess the impact of performance management on employee motivation

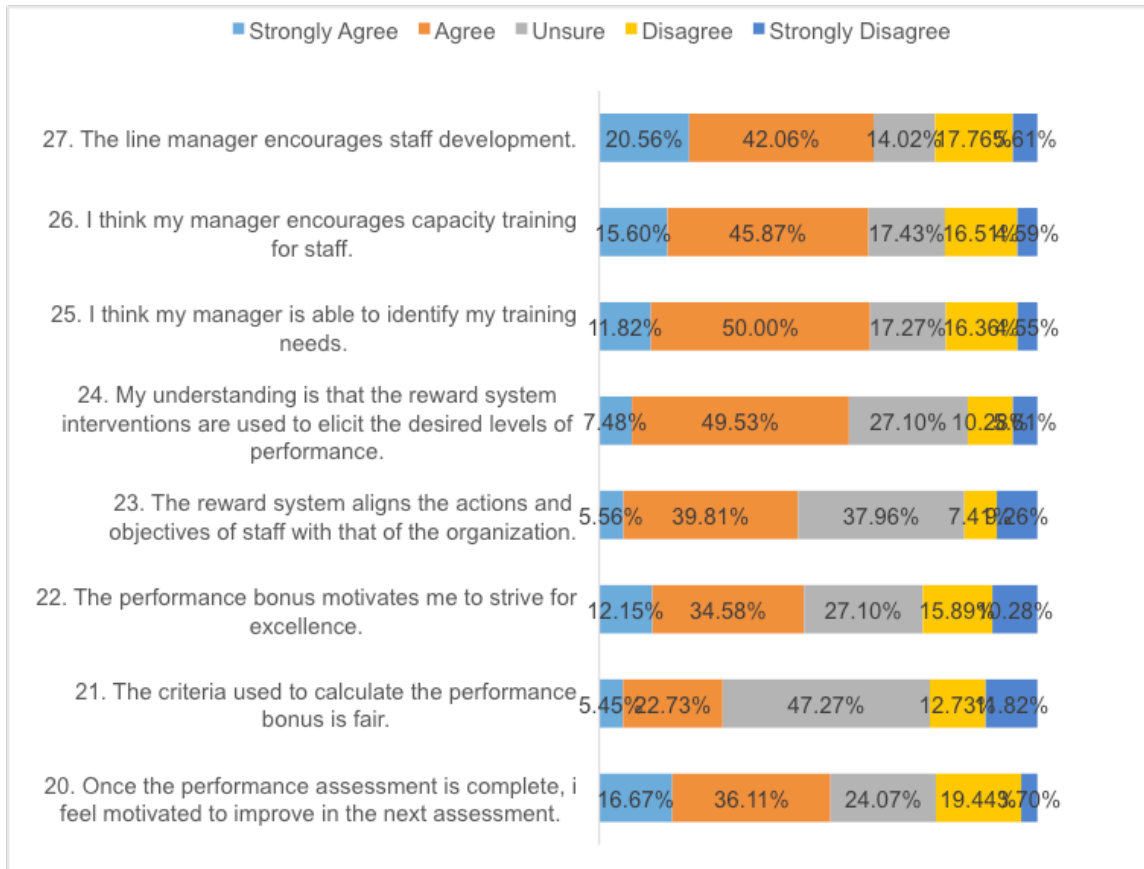


Figure 3: Statements regarding objective 3

Adding all the scores from the eight statements, it was found that 77% of the participants scored 24 or less, indicating having positive perception towards objective 3.

Table 5: Total Scores for Objective 3

Overall scores	Frequency	Percent
7	1	,9
8	1	,9
10	1	,9
11	3	2,8
12	5	4,6
13	2	1,8
14	4	3,7
15	2	1,8

16	11	10,1
17	3	2,8
18	9	8,3
19	5	4,6
20	6	5,5
21	5	4,6
22	8	7,3
23	8	7,3
24	10	9,2
25	5	4,6
26	2	1,8
27	4	3,7
28	1	,9
29	2	1,8
30	1	,9
31	3	2,8
32	2	1,8
34	1	,9
35	2	1,8
38	1	,9
40	1	,9
Total	109	100,0

Results for objective 4 – To advise on challenges of the performance management system.

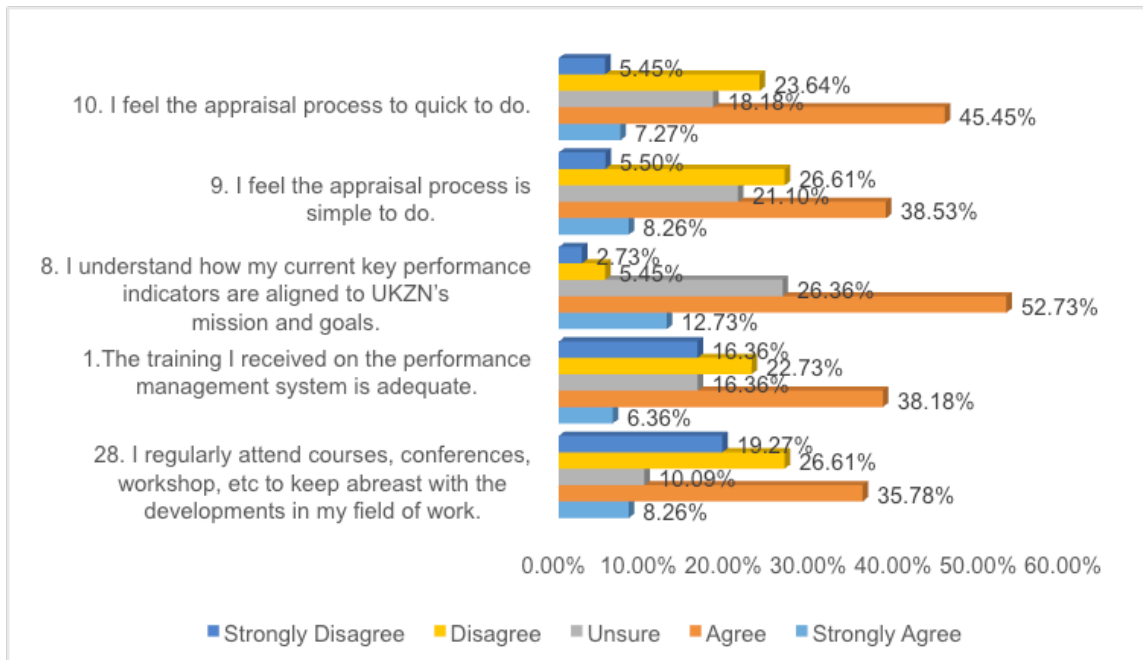


Figure 4: Challenges

**Further analysis**

For further analysis, normality test was conducted and found that not all the constructs were normally distributed. Therefore, non-parametric tests were performed to compare the means for the three constructs with regards to demographic variables.

**Tests of normality**

**Table 6: Tests of normality**

	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	df	Sig.
total for objective 1	.129	109	.000
Total for objective 2	.134	109	.000
Total for objective 3	.085	109	.049

### Lilliefors significance correction

Results below showed that gender of the participants had similar mean rank for all the three constructs ( $p>0.05$ ) even though females had a higher mean rank for all the constructs. Similarly, all other demographic variables had similar mean rank for all the three constructs except grades of the participants. Grades of the participants had significantly different mean rank for objective 1 ( $p<0.05$ ).

**Table 7: Lilliefors significance correction**

<b>Ranks</b>				
	Sex	N	Mean Rank	S u m o f Ranks
total for objective 1	Male	26	45.08	1172.00
	Female	74	52.41	3878.00
	Total	100		
Total for objective 2	Male	26	44.10	1146.50
	Female	74	52.75	3903.50
	Total	100		
Total for objective 3	Male	26	48.15	1252.00
	Female	74	51.32	3798.00
	Total	100		

Spearman's rank correlation test showed that all the three constructs were strongly positively correlated with each other ( $p<0.05$ ).

**Table 8: Correlations**

<b>Correlations</b>			total for objective 1	Total for objective 2	Total for objective 3
Spearman's rho	total for objective 1	Correlation Coefficient	1.000	.864**	.700**
		Sig. (2-tailed)	.	.000	.000
		N	109	109	109
	Total for objective 2	Correlation Coefficient	.864**	1.000	.696**
		Sig. (2-tailed)	.000	.	.000
		N	109	109	109
	Total for objective 3	Correlation Coefficient	.700**	.696**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	109	109	109
** . Correlation is significant at the 0.01 level (2-tailed).					



## **FINDINGS AND DISCUSSION**

The positive perception for objective 1 supports the “goal-setting” theory. This theory according Locke and Latham (2002) advocates that if the employee perceives the setting of objectives is done at the right level and they find that it is clear, understandable and attainable can motivate them as they now know what they need to work towards. Locke and Latham further indicated that certain objectives are set higher to push the employee to reach this target, which is viewed as motivation. The outcome for objective 1 is shows that clarity is found with setting of objectives and does result in job satisfaction.

It is clear that a significant percentage of respondents agreed or strongly agreed that the performance goals and standards are clear to them and they know precisely what their responsibilities are. These results are consistent with the argument proffered by Aguinis (2013) that there should be discussions of KPIs between the line manager and employee. This study reflected that close to 65% of the participants found the appraisal meeting with their manager allows for key discussion.

Employees’ perceptions of PM is highly influenced by the fairness of the appraisal process and line manager’s behaviours (Bretz *et al*, 1992). The issue of fairness is currently a common issue experienced in most organisations. Fletcher (2004) includes the issue of bias to how effective performance management could be. Colquitt (2001) identified distinct aspects that do impact on fairness including the extent to which procedures are “well-communicated, promptness in dealing with queries and issues, listening to employees’ perspectives, the extent to which procedures are implemented consistently; transparency, timely feedback and the extent to which outcomes are explained.”

Furthermore, if employees trust their line managers, they embrace positive expectations regarding the managers’ motives and have confidence that the managers will act in their best interest. The research indicated a strong relationship for trust and understanding

between supervisor and employee. It is evident that staff trust their line managers as majority agree that their line manager appraises them based on their actual performance and majority disagree that the manager's rates are based on his/her personal feelings. The respondents were confident that their ratings are objective and that the outcomes are without any bias by their managers.

An employee's attitude towards their line manager is an imperative issue as the employee can view this as negative and unsupportive towards performance management (Milkovich and Boudreau, 1997). Should there be conflict that creates ill-feelings during the performance appraisal, the employee may perceive the line manager to be unfair during the ratings (Boswell & Boudreau, 2000). These authors are alluding to the impact the line manager or appraiser has on the employee's perception of performance management.

A reward system has been proven to motivate improved employee performance. Employees are motivated if they believe their actions and behaviour would be rewarded. Having a tool that makes measuring the performance objectives possible needs to have a reward system to show the magnitude of the measurements ratings that take place. "What gets measured and rewarded gets attention" (Bohlander *et al*, 2001). Motivation can be interpreted as receiving a reward that directly impacts performance outcomes (Njanja *et al*, 2012). An effective reward system can be an organisation's strategic driver to meet its vision and mission goals by increasing employee performance (Njanja *et al*, 2012).

It can be seen that assessments have a negative connotation whereas training and development have a very positive connotation to the individual receiving it (Milkovich & Boudreau, 1997). Aslam (2011) reiterates this, that implementing performance management with more emphasis on mentoring and training shows relatively positive reactions from appraisees.

The outcome from a performance appraisal is decisions related to training and development. Employees associate the investment of training and development to equip them current knowledge and skills. Employees perceive this as the organisation investing in their employees which ultimately increases motivation. In objective 4, question 28,

less than 50% of the participants agreed to have attended courses, conferences, etc. Less than half the sample received training, this needs to increase to improve employee motivation. Employees that know that their organisation has pledged funds towards their development will result in those employees feeling indebted and putting in more effort into their performance as a repayment for the development investment. Development and training creates a perception to employees about being valued by the organisation. Employees increase their organisational commitment when they perceive that specific organisation has invested in them.

According to Kreitner and Kinicki (2008) knowing an organisation's strategic mission and vision will improve an employee's understanding of how they are able to contribute to attaining the organisation's goals for competitive advantage. By management including employee participation for activities surrounding strategic decision-making will increase their awareness of the organisation's strategy. 34,54% of participants do not understand how their key performance indicators are aligned to the university's mission and goals and cascading down to the College.

## **CONCLUSION**

At start of the research, the researcher anticipated an expectation of being able to interpret and explore how the professional services staff perceive performance management at UKZN. The researcher's objectives selected for this study were aimed at finding a deeper understanding of what motivates employees within performance management. The study had four objectives. The research study adopted a quantitative method and the constructs of the instrument were aimed at achieving the objectives. The researcher did not expect any unrealistic outcomes or any conclusions not in line with the literature. The most surprising outcome was the fact that not all participants felt that a performance bonus motivated them to strive for excellence.

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## ANALYZING THE RELATIONSHIP BETWEEN COLLEGE STUDENT FUNDING AND VARYING FACTORS

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### ABSTRACT

*The purpose of this study will be to examine patterns of funding for college students' tertiary education. In essence, how are college students funding their college education? Is this primarily through loans, scholarships, working, parental or family assistance? Overall, the results of this study provide sound knowledge and reliable information that a variety of critical factors affect college student funding and the extent to which students will take loans, based on demographic, socioeconomic and perceptual factors.*

**Keywords :** college funding, student loans, college athletes

## **INTRODUCTION**

In the last few decades, college tuition costs have escalated to what some have described as astronomical levels. This has led to a heavier reliance by college students on alternative sources beyond family financing. Such sources have included grants, scholarships, private loans, federal loans and alas credit cards. This study examines the impact of this increased and high tuition costs on the source of funding options students pursue and apply to their college education. A lack of comparability of studies across countries have been noted by a few observers. Less is also known regarding the role that varying factors play in college students' borrowing funds for college

The purpose of this study will be to examine patterns of funding for college students' tertiary education. In essence, how are college students funding their college education? Is this primarily through loans, scholarships, working, parental or family assistance? The sample will consist of undergraduate students recruited from Siena College, a small liberal arts college in upstate New York, USA. Discussion from the results will focus on implications for college students as they seek to navigate the changing landscape for funding their college education. The importance of new information and studies on college affordability and factors impacting students' college loan decisions is particularly significant in today's environment – where college costs are seen as exorbitant and defaulting on college loans by graduating and non-graduating students is at a critical level.

## **LITERATURE REVIEW**

Two detailed studies to have looked at college students and their college choices looked specifically at the impact of high-tuition, high-loan approach as it relates to the role of socioeconomic status on educational choice within varying situated contexts (Lillis, 2008). The author used a questionnaire that assessed college-choice behavior across various socioeconomic groups within and between high-cost and low-cost private postsecondary institutions. The study concluded that lower income students are more likely to choose more affordable or lower-tuition college choices but also more likely to graduate, compared to their more affluent counterparts.

In a similar vein, a study by Johnson et al (2016) looked to understand the decision making process college students maneuver when borrowing money to finance their education. The authors concluded the following critical points: (a) students relied heavily on advice from parents, guidance counselors, and friends ;(b) attending college was not possible without student loans; and (c) students knew very little about the loans they would be responsible for repaying (Johnson et al, 2016). Breier (2010) in a study in South Africa noted that students from higher income levels were less likely to borrow funds for their higher education and when they did borrow, they requested smaller amounts and repaid it at a faster rate than their counterparts from lower income households.

Three key studies have looked at the impact of rising tuition costs on family income (Hamilton, 2013; Cheng et al, 2012; Handwerker, 2011). Using data from nationally representative postsecondary datasets to determine what effect financial parental investments have on student GPA and degree completion, Hamilton (2013) showed that parental financial investments increase college attendance. In addition, the author found that parental aid decreases student GPA, but it increases the odds of graduating—net of explanatory variables and accounting for alternative funding Hamilton, 2013). The author further concluded that students with parental funding often perform well enough to stay in school but dial down their academic efforts (Hamilton, 2013). In contrast, Cheng et al's (2012) study of 240 university students (62 men, 178 women) revealed that the level of perceived family *social* support was important not only as a “main effect” predictor of the magnitude and stability of the students' GPA scores across three successive semesters, but also as a factor that helped female students to succeed regardless of their level of family economic support. In general, the authors' data suggested that family social support is more important to women's success in college than to men's (Cheng et al, 2012).

In looking at financial college support and parents' income support, one author showed that after controlling for the total number of children who attend college and the total number of those whose college expenses are paid for by older parents, found that those parents are more likely to be working (by 10.5 percentage points for fathers and by 6.9 percentage points for mothers), Handwerker (2011). The author also found that these said parents were less likely to be collecting Social Security benefits, and less likely to report that they are retired if they were currently paying for a child's college education (Handwerker, 2011). In essence, these parents were delaying retirement to fund their children's college education.

One of the most robust areas of research in this area of college funding, has looked at college students' college funding and government funding, including state and federal sources. First, Martin (2002) discussed the rising costs of college tuition, attributing it to less public subsidies and the increased costs of professors as they pursue scholarship opportunities (Martin, 2002). Hemelt and Marcotte (2016) used student-level data on twelfth graders in 1992 and 2004 and found a relative decline in the likelihood of attending an in-state public four-year institution among high school graduates from states where public tuition costs increased substantially. Students in states where public tuition increased the most, were considerably more likely to enroll in a public two-year college than their counterparts in states that adopted more modest increases (Hemelt and Marcotte, 2016). Generally the two authors found that large tuition increases at public four-year colleges had weakened the propensity of high school graduates to enroll in such institutions in their state, and increased their likelihood of enrollment in less prestigious in-state public colleges, out-of-state public institutions, or private universities (Hemelt and Marcotte, 2016). These effects were most pronounced among students from families

of low socioeconomic status, and non-elite students who performed below the 90th percentile on twelfth-grade math tests (Hemelt and Marcotte, 2016). Similar results were found from Chen et al (2011) whose study concluded that state funding of need-based aid was positively associated with college students' chances of persistence.

Perna et al's (2008) study drew on data from descriptive studies of 15 high schools and highlighted constraints in the availability of college counseling, concluding that in the context of limited fiscal and other resources, as well as changes in federal and state financial aid policies and positive changes in district policies will help to ensure that all high school students receive the appropriate help regarding college counseling and specifically college counseling related to financial aid. In a similar vein, Mclendon et al (2014) using a sample of undergraduate college students concluded that states who invested heavily in financial aid counselling, saw students who are more equipped to make the best decisions regarding sources of funding for their higher education. Henry and Smith (2017) who used a sample of community college students, also found that educational assistance financial aid programs led to improved knowledge overall and higher retention rates among said college students. The positive relationship between increased financial aid education as it relates to college finances and improved performance by the college students was reinforced in studies by Greenfield (2015), Kaufman et al (2008), Harrington et al (2016) and Shireman (2009).

In a few miscellaneous but important studies on college students and their higher education funding mixed results were found. Bertolas' (2018) article focused on the National Collegiate Athletic Association (NCAA), which help the college student-athletes who compete in college sports through the athletic programs of many colleges and universities in the United States and Canada. The author concluded that athletes received adequate funding through their colleges and didn't need additional college funding (Bertolas, 2018). Gaston and Hu's (2009) study examined factors related to student athletes' engagement in education and found it to be purposeful. Gonzalez (2017) completed more than 40 years of research found a positive relationship between increases in the proportion of non-resident students enrolling in an institution and increases in the tuition prices this institution charges to these same students. Finally, Hountras and Brandt (1970) looked at the relation of student residence to academic achievement in five colleges of an upper Midwest university, concluding that those living on campus were likely to do better academically.

## **RESEARCH DESIGN AND SAMPLE**

The research methodology section of this paper is divided into the following sections: sample, and research instrument.

**Sample**

The sample for this study was derived from students at a primarily undergraduate liberal; arts college, located in upstate New York. The college was originally established as a male commuter school in 1937. It remained a single sex institution until 1969, when the first female students were admitted. By 2009, the female population at the institution had grown to 56%. The students who participated in this study included freshmen, sophomores, juniors and seniors. A total of 432 students ultimately completed from the three Schools/Divisions at the college, namely the School of Liberal Arts, the Schools of Business and the School of Science.

**Research Instrument**

Some students were sent an email soliciting their participation in an online questionnaire. Other students were read a script in class by their professor, again soliciting their participation in either a hard copy or an online questionnaire. The questionnaire was designed to assess the source of funding for the students' college education. In the questionnaire, participants were asked to respond with varying degrees of intensity in regards to the source of their college funding, as well as demographic data to be used for a correlation assessment.

**RESULTS – CORRELATIONS**

*Table 24  
Correlation Tables and Results*

<b>Correlations Analyzed From Data</b>	<b>Correlation Coefficient Values</b>	<b>Level of Significance</b>
Relationship Between Loans and Year in School	-0.73*	strong
Relationship Between Loans and School of Business/Arts/Science	-0.32**	weak
Relationship Between Loans and Source of Entry (high school, community college, 4 year college)	0.68*	strong
Relationship Between Loans and residence (on campus versus off campus)	0.41**	moderate
Relationship Between Loans and number of hours per week worked	0.39**	moderate
Relationship Between Loans and family income	-0.71*	Strong
Relationship Between Loans and order of birth in family (first/second/third child, etc.)	-0.52*	moderate
Relationship Between Loans and order of sibling to go to college	-0.64*	Strong
Relationship Between Loans and GPA	-0.43**	moderate
Relationship Between Loans and single/dual income family	-0.56*	moderate
Relationship Between Loans and going to graduate school	-0.31**	Weak

\* p = 0.05 level of significance

\* p = 0.10 level of significance

The correlation coefficient statistical analysis was used to analyze relationships between likely variables. Correlation coefficient or R is a measure of the degree of linear

relationship between two variables. The value ranges from -1 to +1, the closer the results to -1 or +1, the stronger the relationship.

As shown in the preceding table, there were some predictable and some not so predictable results. To begin, strong relationships were found between students taking loans and the longer they had been in school (-0.73) with the value indicating that the longer they were in school (4<sup>th</sup> versus lower years) the less likely they were to take loans. Students who had entered the college from another four-year college were also more likely to take loans (0.68). Students from families with higher incomes were also less likely to take loans (-0.71). Finally, a surprising result showed that students who were later in their family (fifth versus a second sibling) to go to college were also less likely to take a loan (-0.64).

Five moderate relationships were found. To begin, students who lived on campus (versus off) were more likely to take loans (0.41). Students who worked more hours were also more likely to take loans (0.39). Students born later in their family were also less likely to take loans (-0.52). As expected, students with higher GPAs were less likely to take loans (-0.43). Also as expected, students from dual-income families (single-income families) were also less likely to take loans (-0.56).

Weaker relationships were found for students, depending on the school they belonged to. Specifically, students from the School of Science were less likely to take loans (-0.32) and students who were planning to attend graduate school were also less likely to take loans (-0.31).

## CONCLUSION

A key overriding question was posed at the beginning of this study - specifically this key question addresses what were the factors that lead to students taking out loans for college. With regard to this overall question, five factors indicated a strong relationship for the students who took loans – namely students taking loans and the longer they had been in school, students who had entered the college from another four-year college were also more likely to take loans, students from families with higher incomes were also less likely to take loans and students who were later in their family to go to college were also less likely to take a loan

In addition, five moderate relationships were found. To begin, students who lived on campus were more likely to take loans, students who worked more hours were also more likely to take loans, students born later in their family were also less likely to take loans,

students with higher GPAs were less likely to take loans and students from dual-income families (single-income families) were also less likely to take loans.

Weaker relationships were found for students, depending on the school they belonged to. Specifically, students from the School of Science were less likely to take loans and students who were planning to attend graduate school were also less likely to take loans.

The result on family income and the negative relationship it had to students taking loans was echoed in a previous study by Breier (2010) – showing that we can have confidence in the current data. Bertolas' (2018) study on athletes found that NCAA funded athletes were less likely to take college loans. However, a significant relationship cannot be shown between these two variables in the current study. Handwerker's (2011) study on students and college loans found that parents were likely to keep working longer years to support their college attending students, even postponing retirement. The results in the current study may partly allude to this, as we see students later in line in the family being less likely to take loans – maybe relying more on their not-yet-retired parents. Cheng et al's (2012) study found that students with more family social support were less likely to take loans. This could be seen as in keeping with the current study, which found that siblings who were later in line to attend college were less likely to take loans – possibly an indication that such credit sources are not needed since the students were obtaining support from other or previous family members.

Overall, the results of this study provide sound knowledge and reliable information that a variety of critical factors affect college student funding and the extent to which students will take loans, based on demographic, socioeconomic and perceptual factors.

Were there limitations to the current study? Absolutely. This limitation begins with the sample, a convenience sample of students that is taken from a small liberal arts college in upstate New York. Furthermore, while the students covered all three colleges, namely Business, Arts and Science, there was some skewing of numbers towards Business students versus students from the other areas. However, stylized facts that could be most valuable for interested parties include conclusions made in this study regarding the source of college funding and the factors that impact the reasons impacting the necessity for increased college loans.

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## MULTIDIMENSIONAL RANKING USING STEPWISE APPLICATION OF KEMENY'S METHOD

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### ABSTRACT

*Multidimensional Ranking is a comprehensive ranking based on more than one parameters. The aim of Multidimensional ranking is to combine many different rank orderings on the same set of candidates or alternatives, in order to obtain a better and comprehensive ordering. It provides an aggregate or overall measure by Multiple Criteria decision Making method or Data Integration method. Multidimensional Ranking is being studied extensively in the context of social choice theory, sports and competition and Machine Learning.*

*The analysis of ranking data has recently received increasing attention in many fields (i.e. political sciences, computer sciences, social sciences, medical sciences, etc.). Typically when dealing with preference rankings one of the main issue is to find a ranking that best represents the set of input rankings. Among several measures of agreement proposed in the literature, the Kendall distance is probably the most known.*

*Our motivation is to combine individual ranking and estimate the overall ranking. There are many ways to aggregate rankings. For finding the best option from all feasible alternatives, we use some sound approaches to aggregate or rank with respect to more than one attributes.*

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# THE EFFECT OF INFRASTRUCTURE ON FDI AND ECONOMIC GROWTH IN SUB-SAHARAN AFRICA

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## ABSTRACT

*There is dearth of empirical evidence regarding the effect of infrastructure development on Foreign Direct Investment and Economic Growth in SSA. Economic theory and empirical evidence mostly from the developed world demonstrate that economic infrastructure provides favourable investment climate for profit-maximising foreign investors and boosts economic growth by reducing the real cost of production.*

*This paper analyses the effect of selected infrastructure development on Foreign Direct Investment and Economic Growth using panel data on 47 SSA countries for the period 2003-2017. Specifically, the study seeks to address the following questions; Does infrastructure development attract FDI inflows to SSA countries? Does infrastructure development promote Economic Growth in SSA? Do the effects of infrastructure development improve with increased institutional quality?*

*Data is analyzed using Random effects, Fixed effects and System GMM estimation techniques to ensure robustness of the results. Our findings indicate that infrastructure positively promotes economic growth and FDI inflows. The policy implications of the paper are discussed.*

**Keywords:** *Infrastructure; FDI; Economic Growth; Panel Data; Sub-Saharan Africa*

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## THEORATICAL EXPLANATION OF WAGE DETERMINATION PROCESS IN THE NIGERIAN PUBLIC SECTOR

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### ABSTRACT

*Wages determination processes poses one of the most significant labour market problems in developing countries. Most of the conflict experienced in the Nigerian public sector emanated from wage related issues. The objective of this study, therefore, is to provide a theoretical insight to the wage related conflict in Nigerian Public Sector. This paper adopted economics and sociological theories to adequately explain the problems and challenges that characterized wage determination process in the Nigeria Public Sector. This study suggests that trade unions and government should employ the use of collective bargaining to determine wages and salaries while other processes such as minimum wage, administrative wage policy, wage commissions should also be used to augment collective bargaining process. The paper concluded that in using sociological and industrial relations institutions to determine wages in the Public Sector, there should be recourse to the interplay of demand and supply of labour.*

**Keywords:** *wages, collective bargaining, trade unions, inflation, wage commission*

## **1. Introduction**

Theory provide explanation to events and phenomenon within our social environment because it's an abstraction from reality (Fajana, 2002) based on facts and evidences (Asika, 1991), application of theory to interpret and explain events within our social relations is an inevitable course of actions. Han and Wolfgang (2014) noted that without theory it would be impossible to acquire knowledge in a consistent manner. The notion of Han and Wolfgang (2014) on application of theory to social events has been collaborated and well explain by Abend (2008). He argued that theory is the most significant words in the dictionary of contemporary sociology, and Fajana (2002) opined that theory provide explanation to all events and phenomenon that occur within the world of work or employment relations. In a more specific approach industrial relations theories helps to provide explanation to observations (Otobo, 2000), and events experienced within an employment (Fashoyin, 1992). Applications of employment relations theories to provide explanation to events in the employment relations setting of developing countries especially in Sub-Saharan Africa is somehow cumbersome because of the peculiarity of employment relations context. However, application of employment relations theories advocated in the advanced or Western Nations may be difficult if adopted but can be adequately used through adaptation to contextual factors such as politics, legal system, economy, and socio-cultural factors. It is in this regards that this study provides theoretical explanation to wage determination process in Nigeria with reference to employment relations context in Nigeria.



## **2. Review of Literature**

Industrial dispute is perceived as an inevitable course in an industrial setting due to differences in ideology and orientation between employers and employees. Differences in ideology and orientation create a continuous state of dynamic tension between actors in industrial relations. Wage related issues account for the state of dynamic tension and the inevitable conflict in industrial relations. Examining the study by Rhynes, Gerthat, and Minette (2004), on the centrality of pay on employee motivation, revealed that there is no relationship between pay and workers' reactions. Contrary to the study of Rhynes et al. (2004), the study of Ayobami (2010), shows that there is a relationship between pay, motivations and employees reactions. Although, Ayobami (2010) is able to determine that pay relates to employees reactions, his study focuses more on individual reactions to pay and fails to investigate the influence of wage on trade unions' reactions.

Salawu, Hassan & Adefeso (2010) assert that the administration of industrial compensation in Nigeria is always associated with some problems such as industrial conflict in the form of a labor strike. Contrary to the conceptual analysis of Salawu et al. (2010), the empirical analysis provides by Ige, Adeyeye & Aina (2011) in their study of factors influencing industrial conflicts in Nigeria indicate strike actions significantly affect wages. In their conclusion, Ige, Adeyeye & Aina (2011) opine that strike action are not affected by wages. The study by Ige et al. (2011) can be regarded as inconclusive for neglecting other aspects of trade union reactions to wages. Therefore, their conclusion may not be true when other aspects of trade unions reactions are factored into the strike-

wage equation in the public sector. The study of Ige et al. (2011) also did not consider the possibility of a reversal in the strike-wage equation and the outcomes that it will produce.

### **3. Methods/Theoretical Perspectives and Underpinnings**

The researchers view wage determination process from economic and sociological perspectives which are the major consideration in wage determination in Nigeria and in most Sub-Saharan African Countries. Therefore, the most appropriate theories for this study were restricted to sociological and the economics perspectives. Psychological and related motivational theories were not considered because within the purview of Public Sector wage determination in Nigeria motivational issues were never considered as a factor. Government wage determination stressed more on issue of productivity, ability to pay and bargaining power of trade unions.

The Human Capital Theory (HCT) and Marginal Productivity Theory (MPT) are selected from the economic perspective, while Collective Bargaining Theory (BCT) and Equity Theory (EQT) are selected from sociological perspective. Also Rent Theory of Wage (RTW) is deployed in order to explain areas of convergence between the economic and sociological perspectives.

### **3.1 Human Capital Theory /Perspective to Wage Determination**

The Human Capital Theory is credited to Adam Smith in his classic work ‘Wealth of Nations’ in the eighteenth century. However, there are other proponents of the theory such as Alfred Marshal (1890/1930), Irvin Fisher (1906) and Gary Becker (1964) with emphasis on on-the-job-training. Human Capital Theory stressed that human capital in the form of formal education and on-the- job training, accounts for the greater part of wage differential and that a worker who receive more formal education can receive higher wages. According to Becker (1964), there are two basic aspects of Human Capital Theory: investment in human capital and on-the-job training.

The basic assumptions of this theory are; (i)Educational meritocracy determines wage rate of a worker such that socio-economic status of an individual is determined by their educational investments (ii)The productivity of educated people are higher than that of less educated people and that is enough to explain all social inequities (iii)Social inequities are not injustice, exploitation and oppression, but natural and inevitable outcomes of the competitive free market (iv) The free market is the only social institution that can regulate and explain human behaviors and achievement and appeal to non-market forces is not relevant. However, in spite of its good sides, the human capital theory failed to explain the supply side of wage structure. This is even more obvious since educational attainment is enough to explain inequity wages.

### **3.1.1 Implications of Human Capital Theory of Wage Determination in the Public Sector.**

The Human Capital Theory explains how government uses administrative wage policies to determine the wages of workers in the public sector. Because of the excessive rigidity of the administrative policy, it may become obsolete and fail to reflect the reality of the economy and the industry. This explains the reason for frequent strike actions experienced in both the health and education sectors. For instance, the hazard allowance for academic staff in the university has been three hundred and thirty-three naira, and the government is not willing to review it. However, HCT failed to put into consideration behavioural aspect of wage determination processes. This is because it focuses mainly on quality of labour demanded by an employer places less emphasis on the willingness of individual to work for the employer.

### **3.2 Marginal Productivity Theory/ Perspective on Wage Determination**

Marginal productivity theory of wage was advocated by Clark (1899). The theory assumed that there is perfect competition, and laws of diminishing returns apply to the marginal productivity of labour. Also, the theory considers that factor of production like labour is homogeneous; there is full employment while mode of production is constant. The Marginal Productivity Theory also provides a basis for considering a worker's wage as equal to marginal and average productivity. The import of this is that marginal revenue productivity (MRP) of a worker determines his wage. However, the employer of labour may be at loss if the wage he pays his employees is higher than MRP. The MRP is the addition made to the total revenue by the employment of an additional unit of a worker.

An employer will maximize profit at the point the wage of worker equate his MRP, and the employer will be at a loss if the wage is higher than MRP. The Marginal productivity theory has been criticized on a number of grounds, for instance the theory place so much emphasis on the demand side and ignores the supply side of wage determination. The theory failed to take into consideration social and behavioral factors and the productivity of a vulnerable group of workers.

### **3.2.1 Implications of Marginal Productivity Theory of Wage Determination in the Public Sector.**

Considering the economic theories of wage determination, government considered the amount of formal education and on-the-job training, productivity and risk involved in the jobs so as to determine wage in the public sector. This explains the reason for using administrative policy to fix wages of civil servants. The administrative wage policy relies on the amount of formal education, productivity and risk involved in a job or task to determine remuneration in the public service. Marginal productivity theory, like most economic theories of wage also failed to focus on social factors surrounding wage determination such as work attitude, morale, behavior, needs, and motivation of the worker.

### **3.3 Equity Theory/ Perspective on Wage Determination**

John Stacy Adams put forward Equity Theory on job motivation in 1965 (as cited in Mullins, 2007). The theory acknowledges the subtle and variable factors affecting individual assessment and perception of their relationship with their work, and therefore their employer. According to Adams' Equity Theory is concerned about the fair balance between the efforts an individual puts into his/her work and what he deserves from it is what Adams calls the inputs and outputs ratios. Workers form their perception of what constitute a fair balance or trade of inputs and outputs by comparing their situation with others. Adams (1965), therefore, concludes that workers are influenced by their colleagues in establishing a benchmark and their responses to them regarding the ratio of their inputs to outputs.

Equity Theory focuses on people's feelings of how fairly they have been treated in comparison with the treatment received by others. The theory is relevant to this study because fairness is always a key concern in any pay decision. When there is an unequal comparison of ratios, the individual experiences a sense of inequity.

#### **3.3.1 Implications of Equity Theory of Wage Determination in the Public Sector.**

In Equity Theory of wage determination, managers may seek to eliminate tension and perceived inequality among workers in the organization by attempting to change the input of the worker and the object of comparison. Manager may adopt two courses of action. First, outcomes can be changed by increasing the pay of the worker, second, additional perks or improved working conditions or by instigating a person to leave the field

through transfer, resignation or as an extreme measure, dismissal (Mullins, 2007). In applying this concept to public sector wage determination, the government often set up a wage commissions/tribunal or imposed a minimum wage to reduce tension, but this can create inequity in pay and conditions of employment. It may also generate negative reactions from workers. This can be seen in Medical Doctors protest to opt out of the Universal Grading and Salary Structure (UGSS) because of the decline in their status, prestige and earning power in 1990 ( Ootobo,1987,Fashoyin,1992 and Fajana, 2002.). The major weakness of this theory is that it failed to recognize the need for, and the inevitability of pay differential and collective wage bargaining. In the public sector pay differential becomes inevitable owing to seniority rights, pay increase through performance appraisal.

### **3.4 Collective Bargaining Theory/ Perspective on Wage Determination**

Chamberlain and Kuhn (1965) theory of collective bargaining explains the process and predict the outcomes of wage bargaining in employment relations. Chamberlain and Kuhn (1965) view collective bargaining from three perspectives which represent different stages in the development of the collective bargaining process. The three perspectives are means of contracting for the sale of labour, form of industrial government; and a system of industrial relations. These perspectives are respectively called the marketing concept, the governmental theory and the industrial management concept.

### **3.4.1 Implications of Collective Bargaining Theory of Wage Determination in the Public Sector.**

Chamberlain and Kuhn (1965) theory of collective bargaining suggests that wage determination process should be subjected to bargaining process so as to benefit the industrial relations actors at both bipartite and tripartite level. However, in most cases, the use of this wage machinery drives the government to use its prerogative to amend the collective agreement to its advantage. As a consequence, there are reactions from trade unions in the form of protests, strikes and demonstrations. In 2014, the Academic Staff Union of Universities (ASUU) embarked on six months strike action to push home its grievance on non-implementation of the 2009 collective agreement with the Federal Government of Nigeria. Similarly, the National Union of Research Institutions (NURI) went on an industrial strike for over a year to protest the non-implementation of the 2008 agreement on the condition of work, remuneration and unpaid allowances.

### **3.5 Rent Theory/ Perspective on Wage Determination**

The Rent Theory was propounded by Sydney and Beatrice Webb in 1902. The Webbs' theory can be regarded as the forerunner of modern institutional economic perspective. The Rent theory combines the neo-classical economics and sociological perspectives to provide an explanation to wage determination in a capitalist economy. The theory brings in the social/institutional structure surrounding demand and supply to provide an explanation for a positive role for trade unions in economic wage theory (Kaufman, 2013).



The Rent theory stressed that the market forces are socially created by a government and enforced web of rules and resources endowments (Kaufman, 2013). It advocates the following assumptions: (i) that without the institutional structure the labour market cannot function (ii) the impersonal market forces of demand and supply that determine the wage structure are products of man-made institutional structure (iii) the wage structure is institutional and socially regulated by the sovereign power of the nation state (iv) trade unions should play constructive roles through collective action.

Deriving from these assumptions, the Rent theory concluded that it is social decision, and not the law of nature or operations of invisible hand that determines wages and functioning of the labour market.

### **3.5.1 Implications of Rent Theory of Wage Determination in the Public Sector.**

The Webbs theory agreed with neoclassical economic perspective on the interplay of demand and supply in wage determination. It also admits that worker differs in productivity due to acquired and innate ability regarding education, training and social capital (Ricardo, 1817). Based on these assumptions, employers hire the most productive workers first and worked down the queue until the return from the last worker just equals the market wage (Clark, 1899). The Rent theory rejects the self –regulating theory of labour markets and denied the concepts of the ‘invisible hand’.

The Webbs institutional views have been criticized heavily by neoclassical economist as an anti-theory view , and their contributions are just a mass of facts and description (Boyer and Smith, 2001).

Despite these criticisms, the rent theory of wage determination as put forward by Sidney and Beatrice Webb best describes the relationship between the social institutions and the conflicts that may occur in the course of wage determination process in a capitalist economy in both developed and developing countries.

#### **4. Major Findings/Results**

The impact of government policies on each of the subsystem of wage determination negates the efficacy of the wage determination process in the public sector. Government policies that usually negate the effectiveness of the wage determination process include government prerogative to amend collective agreement, minimum wage policy through imposition, wage commissions policy and government monetary and administrative policy. These policies affect the effectiveness of wage determination process with adverse implications on trade unions (Fashoyin, 1992, Fajana 2002; Otobo, 2007). This accounts for persistent dispute between trade unions and employers in the public sector as most of the industrial unrest experienced in the public sector are wage or remuneration related issues (Fapohunda, 2011; Adesola, 2004; Aiyede, 2002)

Government prerogative to amend collective agreement has impacted greatly on the efficacy of collective bargaining as a process in wage determination. In the public sector wage bargaining, government reserves the right to accept, amend or reject any collective agreement reached between government representatives and trade unions. This may result in conflict of interest and right disputes as workers rely on the use of strikes and other forms of industrial unrest for effective wage determination process in their favour.

However, the machinery set up for collective bargaining in the public sector - the National Public Service Negotiating Councils 1, 2 and 3 are not effective due to government interference and regulation of collective bargaining. The failure of the three negotiating councils undermines industrial peace and harmony in the public sector as workers resorted to the use of strikes and other forms of disputes to demand for better remuneration.

In the words of Aiyede (2002) and Adesola (2004), public sector wages have been set through government fiat or quasi-political wages commissions or tribunals. The implementation of agreements on wages reached through the machinery of nationwide negotiations that has predominated in the public sector, has often been chaotic, attended by controversy, agitations, and widespread strikes (Aiyede, 2002).

Considering the availability of other machineries for wage determination in the public sector, particularly government determination of wages by fiat and tribunals, which are usually, associated with the wage commissions, wage decisions can be regarded as a unilateral decision. This is because the wage commission can be described as an ad hoc body appointed by government to entertain petitions and memoranda from individuals, labour and other interest groups and therefore, lack negotiation, discussion and consultation principles which are essential for any wage determination machineries.

The awards by the wage commission are subject to final decision by the government because the government reserves the right to accept, amend or reject the recommendations of the wage commissions. Fajana (2006) observed that the absence of negotiating principle in wage commissions render the wage commission machinery

ineffective. This can be a major concern relating to wages and salaries in the public sector because wage tribunals lack consultation which invariably affects the outcome of wage determination process.

Moreover, government impose minimum wage to score political goals outside economic and industrial relations principles of wage determination process. Minimum wage imposition constitutes a barrier to what trade unions can gain from collective bargaining. This situation has always resulted in negative reactions from trade unions in the public sector. Furthermore, the use of fixed or bureaucratic administrative instrument to determine remuneration such as car loans, bonuses, transport allowances and incentives can at best be described as obnoxious. This rules and regulations on wages do not regularly consider changes in the contextual environment such as economy recession, inflation and price level. Often this had resulted in increased workers demand, agitations and strikes (Fajana; 2002)

## **5. Discussion of Findings**

The wage determination processes in the Nigerian public sector relies on collective bargaining, minimum wage policy, wage commission policy and administrative wage policy. The failure of this machinery influence reactions from trade unions. This may generate certain outcomes and consequences for the industrial relations actors in the public sector. In most instances, government influence on this machinery undermines the effectiveness of some of this machinery in the Nigerian public sector. In effect, collective bargaining, minimum wage, wage commission and administrative wage policy are

essential concepts and variables that likely impact on trade unions' reactions in the public sector of Lagos state.

Labour management relations (employers-employees' relations) is very essential in the collective bargaining process, especially reaching agreement and implementation of procedural agreement, failure of which will generate dispute. Also, the bargaining power of the trade union is key to agreement reached otherwise the discussion during collective bargaining will be one sided if government possess high bargaining power than the union. In addition, trade union uses strike action to enhance their bargaining power and to enforce decisions if management fails to implement collective agreement.

The trade union can only leverage on their bargaining power and strike actions only if stability of their organization is guarantee. In addition, government reserved the right to amend, accept and reject any collective bargaining agreement reached between the trade unions and representatives of government. This prompted reaction from trade unions in the public sector and they often resorted to industrial actions to ensure implementation of the collective agreement. Minimum wage policy accounts greatly for most industrial actions especially at the state level because most the state governments usually reneged from implementing the minimum wage policy. The wage commission policy and administrative wage policy lack the flexibility of an effective wage policy. This is because wage commission and administrative wage policy failed to consider the rate of changes in the cost of living and the rate of inflation due to rigidity of the bureaucratic apparatus in the public sector.

In the course of this study, collective bargaining process, minimum wage policy, wage commission and administrative wage policy were factored as machinery for wage determination processes that impacted reactions from trade unions in the public sector. In addition, the study put into consideration external and internal factors that may directly or indirectly affect wage determination processes with consequential effect in the form of trade unions reactions.

If all these factors are favourable, then wage determination become effective and trade unions will react positively but if otherwise, trade unions will react negatively. The negative reactions from trade unions usually generate negative outcomes and consequences for industrial relations actors.

## **6. Conclusion**

Considering the human capital theory government considered the amount of formal education and on-the-job training as agitated for by trade unions in the public sector to determine the pay of the civil servants. The human capital and marginal productivity theories provide the theoretical framework for the government used of administrative wage policies to determine the wages of workers in the public sector. For instance, the monetization policy implies that workers are not privy to wage determination process in the public sector.

The bargaining theory suggested that wage determination process should be subjected to bargaining process to benefit the industrial relations actors at the bipartite and tripartite

level. But most often the use of these wage machinery necessitated the government to use its prerogative to amend collective agreement to its advantage.

Considering the equity theory of wage determination where manager may seek to remove or reduce tension and perceived inequality among staff by attempting to change a person's inputs or encourage a different object of comparison. There are only two courses of action under the direct control of manager. Outcomes can be changed by increased pay, additional perks or improved working conditions or by instigating a person to leaving the field through transfer, resignation or as an extreme measure, dismissal. Applying this concept to public sector wage determination in Nigerian public sector, government often set up wage commissions / tribunal or imposed minimum wage to reduce tension created by inequity in pay and conditions of employment so as to change object of comparison. The Webbs' theory combines the neo-classical economics and sociological perspectives to provide explanation to wage determination in a capitalist economy. The RTW brings in social/institutional structure surrounding demand and supply to provide explanation for positive role for trade unions in economic wage theory. The study suggests that socio-political issues and other social institutions such as collective bargaining, trade unions and employers' association should be considered as a major determinant along with economic reality of the society in wage determination process.

This study suggested the following recommendations for effective wage determination processes in the public sector;

- i. Governments should honour collective agreements by ensuring the effective implementation of collective agreement at all levels (national, state and local).

- Effective implementation of collective agreement will likely reduce trade unions negative reactions such as strike, protests and demonstration.
- ii. Government should honour and ensure full implementation of any increase in minimum wage at all time. Effective implementation of minimum wage increase will generate positive reactions from trade unions in the public sector of Lagos State.
  - iii. Employers in the public sector should ensure adequate consultation with trade unions when formulating wage commission policy. Public sector employers should ensure involvement of trade unions in wage determination processes, especially before implementation of wage commission policy.
  - iv. Public sector employers should introduce flexibility in administrative wage policy to ensure the effectiveness of wage determination process. In this wise government should make recourse to changes in economic and environmental factors using administrative wage policy to determine the allowances and incentives of workers
  - v. To reduce wage-related conflicts in the public sector government should place less emphasis on the use of wage commissions and administrative instruments to determine wages in the Nigerian public sector. This is because both methods do not consider current economic situations during wage fixing. Should the use of wage commission become inevitable trade unions must be adequately represented. Also, negotiating principle should be encouraged between the tripartite actors to



- avoid unilateral imposition of wages on the workers. Moreover, administrative wage policy should also be subjected to collective bargaining process.
- vi. Government should avoid the use of unfair labour management practices during collective bargaining process so as not to undermine effective implementation of collective agreement. In this regard, government at all levels in the federation should be involved in wage determination processes during implementation phase.
  - vii. Imposition of minimum wage should not be politically motivated but rather on adequate consultation, discussion and deliberation between the tripartite actors through social dialogue and collective bargaining representation.
  - viii. Trade union should adopt innovative strategies to ensure stability of workers organization in order to equate their bargaining power with that of the management in the Nigerian public sector. Furthermore, the stability of trade union will enhance the use of strike actions to reinforce their bargaining power.

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# LEAN MANUFACTURING MATURITY MODEL

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## 1. BACKGROUND AND MOTIVATION

### 1.1. RESEARCH BACKGROUND

In the modern era of highly competitive markets, cost reduction and efficiency improvement become one of the key targets for every production organization. In order to meet those targets, multiple new methods and concepts were created. One of the most popular ones is Lean Manufacturing, which has proven to be very successful in increasing competitiveness of many companies.

Lean Manufacturing principles are nowadays applied in all kinds of production companies, from small local factories to big global corporations, regardless of their profile and volume. However, despite the indisputable popularity of the concept in the business environment and constantly increasing number of performed researches, still many questions are waiting to be answered. To identify existing research gaps Jaiprakash Bhamu and Kuldip Singh Sangwan [1] conducted a study of over 200 positions concerning the Lean Manufacturing. In their paper, the authors point out an urgent necessity to develop a Lean maturity model, which could support the Lean implementation process.

The demand for Lean implementation support is visible also from the business environment. According to The Industry Week research, only 2% of companies employing Lean Manufacturing have fully achieved their objectives and less than a quarter of all companies (24%) reported achieving significant results [2]. Using a proper Lean maturity assessment tool can definitely increase the success rate, by providing timely and accurate information about current gaps and shortcomings of the transformation.

### 1.2. EXISTING LEAN MANUFACTURING MATURITY MODELS

Although maturity models do not fall into the spectrum of the most popular Lean Manufacturing research topics, a significant number of studies have already been performed. Different instrument and tools to assess Lean adoption in Manufacturing environment have been developed from mid-1990s [3]. Based on performed literature review of over 28 existing Lean Manufacturing maturity tools and models, following existing gaps were identified:

- 1) Lack of existing Lean Manufacturing maturity models and tools providing complete diagnose of the organization's maturity level. According to Malmbrandt and Åhlström [3] in order to fully reflect the Lean adoption level, an assessment tool should include measurement of all three items: Lean enablers, Lean practices and performance results. However, in the existing literature there are no such complex models. This causes, that many of existing tools have limited ability to perform comprehensive assessment and do not provide valid results of the current Lean maturity level.
- 2) Limited number of Lean assessment models developed for the use of practitioners. Based on the literature review, most of suggested assessment models are prepared for the use of researchers.

## 2. RESEARCH OBJECTIVES

Based on the identified gaps, the main objective of the paper is to present an empirically proven Lean Manufacturing maturity model, which can be practically applied in production companies. In order to provide an adequate support to the Lean implementation process, the assessment tool should meet following requirements:

- 1) providing comprehensive assessment of Lean maturity,
- 2) providing quantified Lean maturity result,
- 3) enabling discrimination between companies at different Lean maturity levels,
- 4) enabling quick and simple self-assessment,
- 5) providing information about main gaps and improvement opportunities.

By achieving such objectives, the research will answer following questions:

- 1) How to assess Lean maturity in production companies? What kind of categories and criteria should be measured?
- 2) How can Lean assessment model support the Lean implementation process of production companies?

Answering the research questions will be highly beneficial for both researchers and practitioners. Practitioners will be able to use developed tool in their daily work to support the Lean implementation efforts. Researchers on the other hand, will benefit from enhancing theoretical knowledge in the field of Lean maturity models.

## 3. RESEARCH METHOD

The design of the research consisted of five steps, each of them described below:

- 1) **Literature review** – a comprehensive literature review was performed in order to gain understanding of current knowledge in the area of Lean Manufacturing maturity models. Review of existing papers served also to verify/ modify previously stated research objectives and research questions.
- 2) **Design of Lean maturity assessment model** – based on knowledge and information gained from the literature review, a desired characteristics of the assessment model was defined. Using those, a preliminary Lean maturity assessment model will be developed.
- 3) **Verification of Lean maturity assessment model through comparative case studies (data collection)** – a case study was performed on two production companies. The chosen companies presented the same production sector, but also two opposite stages of the Lean Manufacturing implementation: one with expected low Lean maturity level, second with expected high Lean maturity level. Thanks to this differentiation, it was possible to verify ability of the model to assess and indicate different Lean maturities.
- 4) **Finalization of Lean maturity assessment model (data interpretation)** - after performed case studies the correlation between each of the three assessed items was analyzed. The results provided with information about effectiveness of the model and enable its final modifications.
- 5) **Conclusions** – at the end of the research, achieving of objectives was verified and final conclusions drawn.

#### 4. FINDINGS

Through performing the research procedure, the Lean Manufacturing maturity model has been developed and empirically validated. Its structure is based on four categories, which describe different aspects of Lean implementation:

- 1) Leadership, which includes long term vision of the company, infrastructural support and management commitment to the Lean initiatives.
- 2) People, which includes employees engagement in continues improvement, empowerment and competences.
- 3) Process, which includes level of Lean principles and tools implementation within the processes.
- 4) Outcome, which includes the final performance results as an effect of the Lean implementation process.

Such a structure covers all main element of the Lean Manufacturing. It also relates to the tree types of the desired assessed items: Lean enablers (Leadership, People), Lean practices (Process) and results (Outcome).

In order to measure maturity of each category, the following maturity levels were defined:

- 1) Level 1 – Some awareness of this practice; sporadic improvement activities may be underway in a few areas.
- 2) Level 2 – General awareness; informal approach deployed in a few areas with varying degree of effectiveness and sustainment.
- 3) Level 3 – A systematic approach/ methodology deployed in varying stages across most areas; facilitated with metrics; good sustainment.
- 4) Level 4 – On-going refinement and continuous improvement across the enterprise improvement gains are sustained.
- 5) Level 5 – Exceptional, well defined, innovative approach is full deployed across the extended enterprise; recognized as best practice.

The developed Lean Manufacturing Maturity Model, unlike any other existing tools, provides a comprehensive assessment of Lean maturity within organization. It allows measurement of Lean enablers presence, at the same time assessing implementation of Lean tools and principles within production processes. The tool also quantifies an effect of the Lean initiative on key business indicators. Thanks to covering all of those three areas, the assessment shows the whole picture of the current state of Lean transformation, identifying gaps and allowing continuous improvement. Also, thanks to its simplicity, the instrument allows quick and easy measurement. Considering all the above, the presented concept can be successfully applied by the practitioners, to support their Lean transformation journey.

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# HETEROSCEDASTICITY OF DEVIATIONS IN MARKET BUBBLE MOMENTS – HOW THE GOODS AND BADS LEAD TO THE UGLY

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## ABSTRACT

*Heteroscedasticity of deviations in market bubble moments – how the goods and bads lead to the ugly Olivier Mesly and François-Éric Racicot a Université du Québec à Montréal (UQAM), Montreal, Canada; b Telfer School of Management, University of Ottawa, Ottawa, Canada*

*ABSTRACT We conjecture that market bubbles may be the results of the interplay of Goods and Bads (toxic products) which develop through three interlocking moments – herding, swarming and stampeding, with deviations marked by heteroscedasticity. We use our stylized model of financial predation, the Consolidated Model of Financial Predation, and data we have accumulated through in-the-field eight-year research and the study of 30 years of U.S. market history in order to explore the foundations of market crises. We find that blind trust (or the positivity bias) and of the fear to miss out on an opportunity to enter/exit a market impacts the investors' decisions to invest or retract. We show how markets are driven towards a make-or-break predatory dynamic that creates winners and losers due in part to weak regulations and identify a constant  $k$  that permeates market behaviours.*

**Keywords:** *Bads; goods; financial predation; consolidated model of financial predation (CMFP); crisis; regulation; 'badfare'*

**JEL CLASSIFICATION** *A10; D81; G41*



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## CORRELATES OF ENTREPRENEURIAL ORIENTATION AMONG AGRICULTURAL EXTENSION WORKERS IN A FARM SETTLEMENT IN NORTHERN NIGERIA

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### ABSTRACT

*Agricultural extension workers have received appreciable measure of exposure to agribusiness, yet their response to a clarion call by the Federal government to embrace agri-preneurship remains less than desirable. Therefore this study investigates personal and environmental predictors of entrepreneurial orientation among extension workers in a farm settlement. Using cross-sectional survey design and multi stage sampling techniques n = 176 participants responded to the survey questionnaire designed for the purpose. The survey instrument comprises of existing validated measures of entrepreneurial orientation and the predictors variables (Achievement orientation, need for autonomy, self-efficacy, perceived environmental uncertainty, perceived entrepreneurial competence) of interest to the study. Result indicated significant positive relationship between the predictor variables and entrepreneurial orientation. Achievement orientation, need for autonomy, self-efficacy, perceived environmental uncertainty, perceived entrepreneurial competence jointly and independently accounted for significant variance in entrepreneurial orientation. Implications of the findings are discussed.*

**Keywords:** *Achievement orientation, autonomy, self-efficacy, environmental uncertainty, perceived entrepreneurial orientation*

JEL CLASSIFICATION *A10; D81; G41*

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## PREDICTORS OF ENTREPRENEURIAL INTENTION AMONG PROFESSIONAL AND NON-PROFESSIONAL UNDERGRADUATES OF A FEDERAL TERTIARY INSTITUTION IN LAGOS, NIGERIA: THE MEDIATING ROLE OF ENTREPRENEURIAL EDUCATION

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### ABSTRACT

*Literature have established entrepreneurship as one of the primary drivers of economic development, however intention to engage in entrepreneurship is often marred by a number of factors which differs widely across persons and situations. Despite the mandatory entrepreneurship course in the tertiary institution curriculum, entrepreneurship intention, which is an individual judgment about the likelihood of engaging in one's own business in the near future, is generally low among undergraduates in tertiary institution in Lagos, Nigeria. Extant studies have identified three general factors namely; attitude toward venturing, perceived social norms and personal disposition, studies investigating dispositional factors and the mediating role of entrepreneurial education among professional and non-professional interns of entrepreneurship program in a federal tertiary institution are terse. This study examine the role of entrepreneurial education in the relationship between achievement orientation, achievement motivation, self efficacy self esteem, need for autonomy and entrepreneurial intention. Using cross sectional survey design, quota and simple random sampling techniques, n = 201 undergraduate students responded to the survey instrument designed for the purpose. Results show significant positive relationship between achievement orientation, achievement motivation, self efficacy self esteem, need for autonomy entrepreneurial education and entrepreneurial intention. The predictors jointly and independently accounted for significant variance in entrepreneurial intention. Also,*

*education partially mediated the relationship between the predictors and the criterion. Theoretical and practical implications of these findings are discussed.*

**Keywords:** *achievement orientation, motivation, self-efficacy self-esteem, autonomy, entrepreneurial intention*

## FOREIGN MIGRANTS AS ENTREPRENEURS. THE CASE OF THE ASIAN-BORN COMMUNITIES IN POLAND

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### ABSTRACT

*According to the UN data, there are more than 210 million of international migrants in the world today, and their number is growing. This constant process of international migration is one of the most important challenges of our times, as seen from political, economic and social perspectives of both – host and home countries. Immigrants establish families, participate in political life, create networks, work, or create jobs for others. This is why, entrepreneurship of immigrants is one of the important aspects of migration, and a research area that attracts growing attention of scholars and policy makers from around the world. Recently, the economic side of immigration has also become one of the key issues for public institutions and policy makers in Poland.*

*The developments described above also create a significant change in the position of Poland, after approximately 200 years, from the country of emigrants into a host destination for immigrants. Before that, from the beginning of the 19th century, Poland has experienced a great wave of emigration. Among the people who decided to find a better life outside their motherland were mainly the peasants, who wanted to find a source of employment, either in agriculture or in newly established factories. After the World War 2, many Poles, who due the wartime turmoil ended up in the West, for many different reasons – including the fear of harsh imprisonment of the loss of*

*life – did not decide to return to the country and settled in the rich countries of the anti-Nazi coalition, such as the United States, Great Britain, Canada and Australia. Then, in the after-war period, the number of people leaving Poland clearly decreased, due to the policy of limiting the right of the citizens to travel to the West, induced by the communist authorities. After Poland regained its sovereignty in 1989, the possibilities of traveling opened again for the Poles, but the scale of emigration from Poland at that time was not great. The situation changed once more in 2004, when Poland joined the European Union and the labour markets of the EU countries were gradually opening. With new opportunities, about two million young Poles benefited from legal employment in the West, of which some may never return. Their migration caused a noticeable lack of employees in the Polish labour market. This lack could now be filled by citizens of other countries, mainly these located to the east of Poland.*

*The scale of immigration to Poland is relatively small. The national census carried out in 2011 showed that there were around 47 thousand foreigners living permanently in Poland, which was approx. 0.12% of the number of permanent residents of Poland. A relatively small number of foreigners living in Poland is the outcome of uneven development of EU Member States. As a result, refugees often choose richer, more developed countries. However, the number of foreigners staying in Poland is gradually increasing, which means that our country is becoming more and more attractive as a place to study, to find temporary employment, and also to settle permanently. The largest group of migrants in Poland are people coming only for some time, just to earn and then go back to their home country. These are mainly the citizens of Armenia, Belarus, Georgia, Moldova, Russia and Ukraine, who can legally work in Poland without the need to apply for the status of permanent residence or a special work permit. Poland is an attractive job market for the people from these six countries because it is culturally close to them, it is relatively easy for them to communicate with the Poles. In the case of immigrants from the south of Europe, the Middle East, or Asia, the cultural and linguistic barrier is higher, thus it is more difficult for them to integrate and find the right job.*

*The people who came to Poland in the early 1990s for business purposes, usually came from countries that, at that time, prospered economically at a much worse level than Poland. Among them were short-term immigrants from the post-Soviet countries, who engaged themselves in*

*various types of activities, and also irregular immigrants (without the required permits for stay and work), who came to Poland on their way to the west of Europe. Very frequently the people arrived on the basis of tourist visas, however, for the actual purpose to work. A typical example of such migrants of the 1990s were the Armenians, Vietnamese and Ukrainians.*

*Currently, two groups of immigrants can be seen on the Polish labour market. The first would be the highly qualified people: owners or employees of international companies, investors, or professionals, such as doctors and IT specialists. Immigrants from this group come mainly from Western European countries. The second group, much larger in numbers, includes immigrants who are less educated and take (often illegally) employment in the less-paid professions, not popular among Polish employees. This group includes mainly foreigners from beyond Polish eastern border: Belarusians and Ukrainians. They are a cheap labour force, and are employed mainly in the construction sector, with seasonal work in horticulture and agriculture, as well as household aids and babysitters for children and the elderly people.*

*Regarding the immigrants from Asian countries in Poland, the situation could be described as most dynamic. The Asian-born people usually select such sectors of industry, as IT, construction and transport (among others), and either enter Poland as owners or representatives of big international companies, or simply work as employees. Also, among the Asian community in Poland there are many service employees and sellers – some establish their own small businesses, for example in the field of gastronomy. There are also some, who find employment as skilled employees and specialists. Recently, among the Asian immigrants, the number of employees who are coming from North Korea is astonishingly high. Also, a large immigration wave from Nepal should be classified as a recent, astounding phenomenon.*

*The proposed presentation would focus on the current situation of selected Asian-born communities in Poland, with special attention given to their entrepreneurship. The authors intent to present some of the outcome of the project, realised by the research team to which they both belong, with the main objective to explore and understand entrepreneurial activities undertaken by immigrants from China, Vietnam, South Korea, India, and the Philippines in Poland. These five groups were selected for several reasons, out of which the number and the duration of residence in Poland were the two basic ones.*

*In their presentation, on the basis of empirical examples from the field of the immigrants' entrepreneurial efforts provided by the conducted research, the authors intent to discuss entrepreneurial activities of different groups of immigrants, coming from geographically and culturally distant countries. They will also outline the strategies used by immigrants, as well as define the relationship between intercultural competencies of immigrants and entrepreneurial processes, and the processes of self-identification within different cultures. Based on the research conducted for the project, the presentation will show significant differences in business strategies between groups of immigrants, which are routed in the tradition and culture, as well as in the population size. Also, it will demonstrate how immigrants from different groups show different motives of starting own businesses, and that ethnic immigrant communities may constitute a stronger network and source of support, as compared to local communities in the host country. Considerable attention will also be given to describing significant differences between first and second generation of immigrants in their approaches to business.*

*In brief, in the presentation will the following issues will be discussed: 1/ Poland as the country of emigrants; 2/ the main characteristics of immigrants settling in Poland; 3/ occupational structure of immigrants and the employment strategies applied; 4/ the phenomenon of Asian immigration to Poland; and 5/ the entrepreneurship strategies of immigrants from Asia – based on the results of the ongoing research project. Also, 6/ the research methods applied in the project will be concisely presented.*

**WEI**

**NIAGARA FALLS,  
CANADA,  
NOVEMBER  
20-22, 2018**

**BUSINESS & ECONOMICS**

**BY THE WEI** ISSN 2167-3179 (ONLINE) USA