

2018



## **Oxford Conference Series | January 2018**

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5th Academic International Conference on Multi-Disciplinary  
Studies and Education

3rd Academic International Conference on Business,  
Economics and Management

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AICMSE & AICBEM 2018 (Oxford) Conference Proceedings



ISBN: 978-1-911185-57-4 (Online)

**FLE Learning**



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22<sup>nd</sup>- 24<sup>th</sup> January 2018**

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## **Format for citing papers**

Author surname, initial(s). (2018). Title of paper. In Conference Proceedings of the 5th Academic International Conference on Multi-Disciplinary Studies and Education and 3rd Academic International Conference on Business, Economics and Management,, (pp. xx-xx). Oxford, January 22<sup>nd</sup>- 24<sup>th</sup>, 2018.

**AICMSE & AICBEM © 2018 FLE Learning Ltd  
ISBN: 978-1-911185-57-4 (Online)**

These proceedings have been published by the FLE Learning Ltd trading as FLE Learning.  
T: 0044 131 463 7007 F: 0044 131 608 0239 E: submit@flelearning.co.uk W: www.flelearning.co.uk

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02- BF27-5634

## THE DETERMINANTS OF AIRPORT OPERATIONAL STRATEGIES TOWARDS THE REGIONAL SUSTAINABLE APPROACH: A CASE STUDY OF PALMERSTON NORTH AIRPORT

ESWARANATHAN EHAMBARANATHAN<sup>1</sup> AND SHAGESHEELAMURUGASU<sup>2</sup>

### ABSTRACT

Over a century ago, airports then were almost not existent, and its function was undoubtedly unknown to many. Today, airports are essential in every city as airports integrate with individuals, the economy and environment as well as portray the symbol of growth. Similarly, Palmerston North Airport in New Zealand has been providing commercial and general aviation services since the 1930s. Thus, this paper is designed to explore the importance of this airport in the region as well as highlight its past and present operational activities and strategies. The secondary findings indicate that this airport was recognised as an international airport but now only serve the domestic market. Since its operations, the airport has faced several achievements and failures. So, based on its past and present strengths as well as weaknesses, this paper concludes this airport's future operational opportunities and threats as well as its determinants towards the region sustainability.

**Keywords:** Operations Management, Airport, Sustainability, Palmerston North Airport

### INTRODUCTION

Palmerston North Airport is located in the Manawatu region which is also situated in the lower region of the North Island of New Zealand. New Zealand has two main islands which are known as North Island and South Island. Therefore, New Zealand is an island nation as the country in the Pacific Continent, and geographically, New Zealand is not located in a strategic location as the country is situated in Southwestern Pacific Ocean and is a distance away from most of the countries in the region. Thus, New Zealand does not share any land borders with other states, and New Zealand nearest neighbours such as Australia and Fiji are 3 hours away via flight.

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**Figure 1: Map of Australasia (2017)**



**Figure 2: Map of New Zealand (2017)**



Meanwhile, New Zealand is the home for 4.8 million people. Due to the small market, the New Zealanders or also known as the Kiwis rely heavily on exports and imports. New Zealand is one of the largest dairy producers in the world and the most significant commodity exported in 2016 was milk powder, butter and cheese worth 11.2 billion in New Zealand Dollars. The total commodity and services export and import in 2016 were valued at 70.1 billion and 66.4 billion in New Zealand Dollars (Statistics New Zealand, 2017).

Therefore, the geographic isolation and economic needs have made the aviation industry an essential gateway for the country. Due to these reasons, the recent globalisation in the aviation industry in New Zealand is one of the critical and growing sectors to date. Over the past years, particularly in the commercial aviation community, it has been witnessing significant social and economic growth. The sharp increase in trade, tourism as well as migration has supported the air services which uses almost 14 percent of New Zealand exports (Ministry of Transport, 2017). Interestingly, there has been a sharp increase in tourist and

demand towards commercial aviation over the recent years because New Zealand is known for its beautiful and friendly environment (Fountain, 2016).

The commercial aviation community in New Zealand includes air transport, air rescue, air ambulances services, aircraft design and manufacture, services and engineering as well as aviation airports (Aviation New Zealand, 2016). In most situations, the growth of airports is vital for the regional economy and environmental sustainability. Similarly, airports in New Zealand is the major transportation hub that normally consists of runways, buildings, aircrafts that aim to promote direct and indirect employment through trading, tourism, education and other industries in the regions (De Neufville, 2016). Thus, in 2014, most of the New Zealand airports have been improving their operational efficiency to maintain regional growth but also have been experiencing regression in technology. The significant factors that have contributed to the efficiency would be the airport hub status, airport operating hours and airport ownership (Kan Sui et al., 2014).

The aviation airports in New Zealand are associated with New Zealand Airports Association. The membership of this association comprises of 31 airports across New Zealand. The council owns most of these airports through the joint ventures between the council and The Crown or privately owned (NZ Airports Association, 2017). Meanwhile, the Airways Corporation of New Zealand Limited traffic services is sole air traffic services provider in New Zealand which is wholly owned by the Crown. The Crown also holds approximately 53 percent majority shares in Air New Zealand Limited which is the national flag carrier of New Zealand (Ministry of Transport, 2017).

Similarly, the Palmerston North City Council (PNCC) entirely owned that Palmerston North Airport Limited (PNAL). In recent years, the main activities of this airport have been providing airport facilities to its users who are airport users and airlines (Palmerston North Airport Limited, 2016). Palmerston North is a city located almost centrally in the North Island (Statistics New Zealand, 2014). Meanwhile, it is a most prominent city in Manawatu region which its economic strength derives from various sectors such as education, bio-industry, defence and distribution. Palmerston North is the home for numerous distribution providers as the city is strategically reachable via roads. The city is 2 hours away from Wellington in the South, 6 hours away from Auckland in the North, 2.5 hours away from Napier in the East and 3 hours away from the New Plymouth in the West. The city is also accessible via rail which is also an essential stop for passengers and freight.

Despite being an important city in the region today, Palmerston North was actually known as an isolated village during the early 19 centuries. In fact, only in 1871 the word “North” was included in order to differentiate another town Palmerston which is located in South Island. Meanwhile, Palmerston was named in honour of the former British Prime Minister, Viscount Palmerston. The population in Palmerston North was only 800 in 1877 but after the presence of railway, the area witnessed a sharp increase in population as the population grew to 6000 in 1900. By 1930, Palmerston North was officially known as a city and the population reached 20,000. During this period of time, Palmerston North played an important role in the New Zealand’s economy particularly in the agricultural industry. Thus, transportation services were essential and improvement especially on air services was very much required towards the regional sustainability (New Zealand Tourism Guide, 2017).

However, at present, the population and small market demand have certainly not encouraged the growth of the airport. The current population of Palmerston North is only 83,500 and the Manawatu region is the home for 135,000 (Palmerston North City Council, 2017). Thus, with the small population, businesses and people in Palmerston North have been experiencing difficulty in pushing for a bigger airport. Nevertheless, the airport which has a

long history in place, reaffirms its ability to meet full potential in future as well as to grow and progress to achieve regional stability.

### **PAST OPERATIONAL ACTIVITIES AND STRATEGIES**

Palmerston North airport started its activities back in the 1930s. A year after Palmerston North was officially proclaimed as a city, Milson Aerodrome Society an essential association in the region created the airfield site and subsequently in 1936, the Union Airways provided the first commercial air services at this airfield (Palmerston North Airport Limited, 2016). During the same period, Dominion Airlines Limited officially launched its first daily air service between Hastings to Gisborne (Reader's Digest New Zealand, 2001). A few years later, the Palmerston North City council purchased the site. On 16 January 1936, daily flights were established between Palmerston North and Dunedin though New Zealand's first trunk air service (Reader's Digest New Zealand, 2001).

In the 1940s, this airport was used as the military field and only in 1950s, the National Airway Corporation or known as NAC extended its air services to the airport. Therefore, to meet the demand, the runway and terminal building were constructed according to the requirements. In 1958, the airport was jointly owned by the Palmerston City Council and The Crown. During 1975 to 1979, the airport had significant runway extension and constructions done due to the Boeing 737 services that were provided by the NAC. 1989, PNAL was formally formed, and in 1992, a new terminal building was opened. Subsequently, in 1996, the airport was at its peak of its operation when Freedom Air initiated its commercial flight services to Brisbane and Sydney, Australia and recognised Palmerston North airport as an international airport. In 2006, Palmerston North City council regained its full ownership by purchasing all of its airport shares. Therefore, everything seemed perfect, and the airport was heading towards greater heights. However, due to the global and domestic economic pressure, in 2008 the Freedom Air had to shut down its operations, and Palmerston North airport had suffered the most as it had to close the international flights' routes. Since then for many years, Air New Zealand was the only airline service provider for the Palmerston North Airport. Meanwhile, in 2012, the airport is considered to be operating efficiently alongside with five other airports in New Zealand with an increase of productivity level at 3.4% which was above the 2.6% average level (Kan Sui, et al., 2014). Thus, in 2016, Jetstar a low-cost airline, began its domestic operations at the Palmerston North Airport. Besides, Air New Zealand and Jetstar, currently the Origin Air also operates the Palmerston North – Nelson routes. Thus, at present, the airport is busy with its domestic operational activities.

### **PRESENT OPERATIONAL ACTIVITIES AND STRATEGIES**

The transformation of inputs such as raw materials into outputs which produces goods and services is known as operation management. Therefore, the operational management activities are vital for any organisation as it provides relevant stakeholders with the appropriate information to improve the productivity and quality as well as reduce the operating cost of the products or services (Heizer and Render, 2014a). Similarly, operational activities in airports are essential because it provides the opportunity for the relevant members to make critical operational strategies to improve the existing system. In the context of Palmerston North Airport, location and layout strategies are crucial towards the growth and sustainability of the airport and its region. The United Nations in 2005 defined sustainability through a framework that includes the three pillars which are economic, environmental and social (Chopra and Meindl, 2016). So, this report will be emphasising and associating the two components which are the economy and environmental component. The location strategy in this report will highlight the current location and facilities of this airport as well as its strength and weaknesses. Meanwhile, the facilities are also being discussed in the layout strategy which explores the existing layout as well as its benefits and challenges.

## LOCATION STRATEGY AND CONNECTIVITY SERVICES

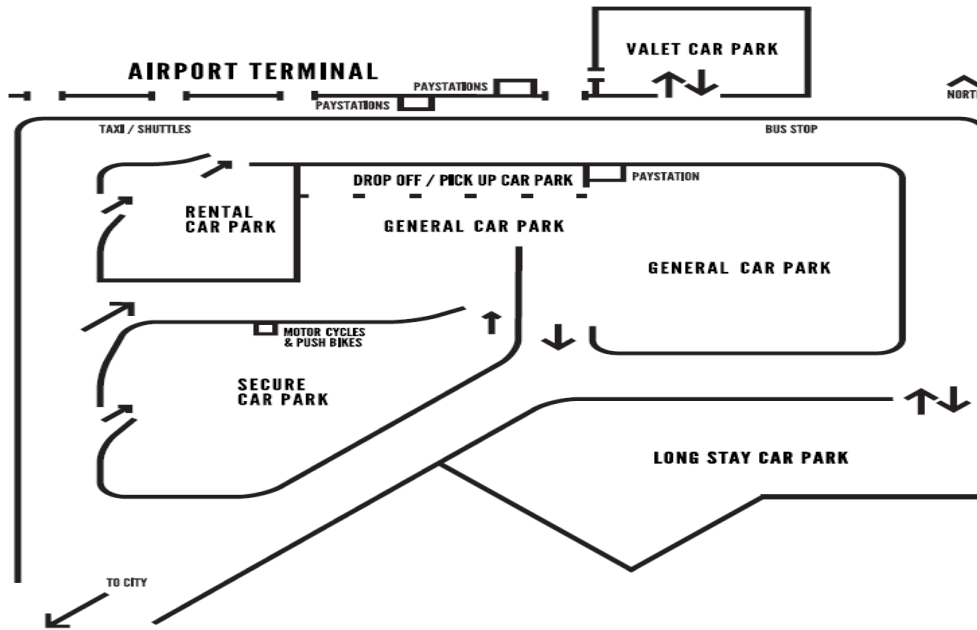
50% of the operating expenses usually is determined by the location. Thus, revenue, as well as the tangible and intangible cost of the organisation, are dependable on the area. The factors that affect places are labour productivity, political risk, values and culture as well as proximity to markets, suppliers and competitors (Heizer and Render, 2014b).

At present, the Palmerston Airport caters approximately 40 flights each day to 5 different cities across New Zealand. The available flight services are to New Zealand's important cities such as Auckland, Hamilton, Wellington and Christchurch which is mainly operated by Air New Zealand. Meanwhile, budget airways, Jetstar Airlines provides its only flight services to Auckland and Origin Air has recently started their flight operation to Nelson. As a result, the Manawatu regional air travellers are offered choices in order to fly to these major cities in New Zealand. However, travellers who wish to fly abroad are frequently required to fly to Auckland or Wellington to catch their international flights.

Besides, flight services, the Palmerston North airport together with Fieldair Holdings, an aircraft maintenance company based in Palmerston North have collaborated with New Zealand Post for freight services from Auckland to Christchurch. The Auckland-Palmerston North-Christchurch route seems vital due to the Manawatu region that is strategically located in the lower North Island (Stuff New Zealand, 2016). Therefore since 2016, the increasing number of passengers to Palmerston North as well as the city being a hub for distribution and logistics have provided positive indicators towards the regional economy and environment. As a result, investors have been pouring into the region lately. Palmerston North is now well recognised as the lower North Island's distribution hub which is yet to boost the employment and businesses in the area (New Zealand Herald, 2017).

However, the airport has its limitation as it currently has only one active runway with a total length of 1902 meters. Thus, only limited types of aircrafts could operate at this airport at any point of time. Aircrafts such as Bombardier Q300 with the capacity of 50 passengers and Aerospatiale ATR72 with the capacity of 68 passengers are the general operating aircrafts at this airport (Air New Zealand, 2017). Meanwhile, for freight services, Boeing 737 are being used frequently (Stuff New Zealand, 2016).

The airport is also connected by bus services. For an instance, the Intercity bus is the most extensive bus network that connects the airport with other major cities in New Zealand. Thus, the airport is linked from the Square in the Palmerston North city via the InterCity bus service from or to cities such as Wellington, New Plymouth, Napier and others. Besides buses, cars are commonly used by the local visitors and passengers to and from the airport. The car park at the airport could accommodate 102 vehicles. As illustrated in image 1, the airport also offers to drop off zone for drivers as well as provides several types of parking services such as general car parking, long-stay parking, secure car parking, valet parking and mobility car parking. According to the Palmerston North Airport (2017), the car parking rates are competitive compared to other airports in the lower North Island. For instance, the pricing for long-stay parking starts NZD 5.50 per day and 15 minutes free parking offered to all drivers at the general car park. Meanwhile, the passengers drop zone is just 20 meters across from the terminal, and the secure car park provides additional security services. The Valet car parking services are designed personalised for each customer. Car rental, taxis and shuttle bus services are also available for the travellers and public.

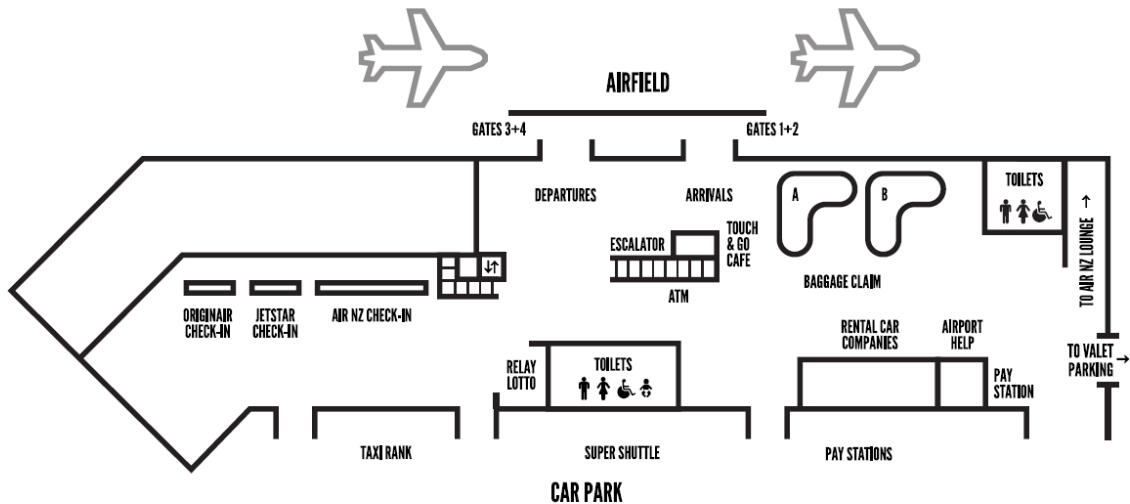


**Image 1:** Palmerston North Airport (2017)

## LAYOUT STRATEGY AND TERMINAL SERVICES

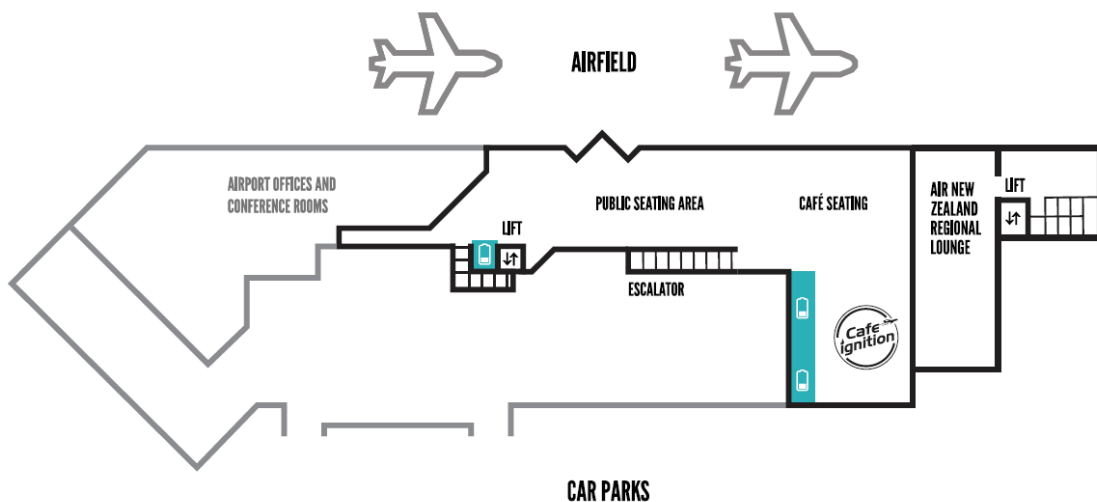
Operating efficiency occurs through the existence of substantial layout. In operations management, there is seven common layout strategy which are office, retail, warehouse, fixed position, process-oriented, work cell and product oriented (Heizer and Render, 2014c). The Palmerston North Airport has fixed-position layout whereby the operations of remains in one location and the resources such as workforce, machines and materials integrated into the airport area. Meanwhile, the airport also has a process-oriented layout as the airport currently handles a variety of services. In addition, the airport facilities and equipment's are placed to deal with a range of services and accommodate the reasonable volume of passengers.

At present, the airport operating hours especially the airport terminal changes daily as it only opens between 5 a.m. and closes 30 minutes after the last arriving or departing flight. Despite being a small airport, the airport is equipped with several facilities. The essential facilities such as the passengers' check-in counters, departure and arrival hall as well as baggage claim area and airport help desk are located on the ground floor (Palmerston North Airport, 2017). As stated in image 2, at the arrival hall, an express café is available for the public which operates from 5 a.m. until the last flight arrives. It is known as the Touch and Go Café because it is a perfect location to get quick coffee and snack for arriving passengers. The ground floor is also home to a shop which is known as the relay/lotto shop. The store is tailored for passengers and is just located beside the check-in counters that sells a range of products such as maps, newspapers, books, magazines, food, drinks and other essential product for travellers. The ATMs, as well as toilets including baby changing rooms, unisex and accessible toilets, are also located on ground floor.



**Image 2:** Palmerston North Airport (2017)

Meanwhile, the first floor as illustrated in image three is equipped with café that operates every day and seven days a week between 5 a.m. until the last flight departs. The café is situated perfectly as it offers passengers and public a great view of the airfield. The café best place for relaxation as it offers several USB charging ports and known for its wheelchair friendly services. Air New Zealand regional lounge, as well as the airport offices and conference rooms, are located on this floor. Overall, the terminal also offers free wifi network as well as with two public telephone, tablet or laptop charging station areas.



**Image 3:** Palmerston North Airport (2017)

## LOCATION OPPORTUNITIES AND LAYOUT THREATS

Palmerston North Airport is a critical facility that facilitates the economic development and plays an essential infrastructure for the region. One of its opportunity is its location strategy. The location strategy of this airport provides significant opportunities from the perspective of revenue and cost. The revenue focus is based on the volume of passengers and airfreight services as well as physical and non-physical quality.

Therefore, as highlighted before, the airport is situated in the central of lower North Island which is accessible to various major cities such as Napier, New Plymouth and

Wellington. Thus, the airport can be seen a great location to be an efficient logistics and distribution hub as the airport services are supported by a reliable and regular rail and road transport. Palmerston North Airport is seen as the perfect hub as well as transit for goods to be delivered to other cities in the lower North Island region. The smaller capacity airports from other neighbouring airports such as the Napier and New Plymouth airport provides a competitive advantage for the Palmerston North airport. The environment, particularly the weather condition in Wellington also provides opportunities for the Palmerston North Airport to be a better option. Due to the location at the edge of Cook Straits, Wellington has been experiencing severe weather such as heavy wind. The windy weather in Wellington has caused several flight disruptions at Wellington International Airport. As a result, over the recent years, many flights at the Wellington International Airport have been delayed, rerouted and even cancelled. In fact, despite being the capital city of New Zealand, Wellington has been regarded as among one of the windiest city in the world.

Therefore, the proximity of the airports in this region provides clustering opportunity to the Palmerston North Airport. According to Heizer and Render (2014b), clustering occurs when competing companies are operating near to each other for operational benefits. Thus, in the case of Palmerston North Airport, the grouping may stimulate high traffic flows and increase the volume of passengers.

Therefore, due to its current location, this airport has also high potential to serve a high volume of logistics providers and passengers as the gateway. As highlighted, despite being a small airport, Palmerston North Airport is well equipped with suitable facilities. The public access especially the public transport, parking services, lighting as well as other facility services in and off the location tends to create a positive physical quality image and brand for this airport. The airport supported is also by transparent management, secure environment, well established operational policies which serve as the non-physical location quality. Meanwhile, the airport's location is also subjected cost focus. The airport provides opportunities for its users to have added advantage towards reducing tangible cost. Due to its strategic location, business organisations can experience a reduction in their transporting and shipment cost of raw materials and finished goods.

Palmerston North Airport also faces threats towards sustainability through its current layout strategy. Palmerston North is only equipped with a single active short runway. Thus, bigger aircrafts especially international flights may not be able to operate at this airport. Besides that, the airport is currently experiencing limited space in its current terminal which it is not prepared to engage with a larger number of passengers.

In addition, The Palmerston North Airport is currently being served by three airlines which are Air New Zealand, Jet star and Origin Air. Thus, the airport is highly dependent on these airlines as its major source of revenue. Thus, the airport faces greater economic pressure. For instance, if the airlines or nation were to face financial crisis undoubtedly the airport will face serious economic consequences which may lead economic disaster.

## CONCLUSION

Palmerston North Airport is an important transportation hub in the region. The past and present operational activities and strategies prove that the airport has been providing remarkable commercial and general aviation services. However, the economic challenges, as well as the small population, has driven away from the airport from the growth which used to be an international airport. Therefore, the airport faces significant operational opportunities and threats in future. The location of this airport could be a fundamental operational strategy supported by appropriate regional economic growth and stable environment. Therefore, the location strategy can improve the airport's operations as well as serve as the crucial ingredient for its momentum of growth domestically and internationally in future. However, the layout

remains the challenge for this airport. The single and small runway stays as the potential threat for this airport. Moreover, the small airport with limited services is not sufficient to handle a large volume of passengers. Therefore, it is vital for the local authorities and airport management to improve the existing layout to meet domestic and eventually the global demand. Therefore, significant investment is required as the Palmerston North airport has its full potential to be a dominant regional airport as well as regain its international airport status.

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11-BF21-5578

**FINANCIAL REGULATIONS AND INSOLVENCY RISK OF ISLAMIC AND CONVENTIONAL BANKS OF PAKISTAN**SHUMAILA ZEB<sup>1</sup>**ABSTRACT**

The proposed study aims to investigate insolvency risk of conventional and Islamic banks of Pakistan. Furthermore, it empirically estimates the effect of already implemented financial regulations on the insolvency risk of banks. The banks are divided into four sub-samples i.e., large, small, medium, and Islamic banks as per their asset structure. To carry out the empirical analysis, a balanced bank-level panel data covering the period 2008-2016 is used. The Z-score methodology is employed for calculating the insolvency risk of each bank. The panel regression is used to investigate. The empirics reveal that the financial regulations enforced by State Bank of Pakistan have significant impacts on the insolvency risk of banks. The results further indicate that Loan ratio and Reserve ratio are positively, while current ratio and non-performing loan ratio are negatively significant to the insolvency risk of all banks. However, capital adequacy ratio does not affect the insolvency risk of banks of Pakistan. The results provide useful insight to the regulators and policy makers regarding the efficacy of already implemented financial regulations on the conventional and Islamic banks of Pakistan.

**Keywords:** Financial Regulations, Z-score, Insolvency Risk, Conventional Banks, Islamic Banks

**INTRODUCTION**

Financial regulations are important measures of safety and soundness for the commercial banks. The financial regulations are generally publicized by government regulators to shelter investors, sustain systematic markets, and endorse financial stability of financial institutions specifically banks within the country. Financial regulations might range from setting minimum capital standards, making inspections periodically, and investigating any sort of misconduct. The conventional and Islamic banks just follow whatever financial regulations are imposed on them by their respective central banks and regulatory bodies. Minimal efforts are being done to investigate the already implemented financial regulations are actually beneficial for the insolvency risk of conventional and Islamic banks or not.

Although it is extensively believed that stricter banking regulations and supervision will improve the resilience of the financial sector. However the empirical evidence on the relationship between financial regulations and insolvency risk of banks is mixed. For instance, Demirgüç-Kunt and Detragiache (2011) failed to find a significant relationship between country's compliance with the Core Principles for Effective Bank Supervision as issued by the Basel Committee on Banking Supervision (BCPs). The banking risk was measured by the using the Z-score. In contrast, a survey conducted by the World Bank came up with totally different empirical results. The study of Klomp and de Haan (2012) reported that financial regulations did not significantly affect the low risk banks. However, financial regulations are significantly related with the high risk banks.

Most of the previous literature on the impact of financial regulations on risk taking activities of banks focused more on the industrialized economies ( Delis and Staikouras, 2011; Klomp and de Haan, 2012) or they used a sample of advanced and emerging economies like

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González, 2005; Barth et al., 2013). However, in the recent years some studies have been published that examine the impact of financial regulations on banking risk in non-industrialized economies (Ben Naceur and Omran, 2011; Klomp and de Haan, 2014).

There is another important issue gaining importance in the literature on the impact of financial regulations on insolvency risk is whether the impact of financial regulations on the insolvency risk varies among different types of banks. Furthermore, there is also need to investigate that either financial regulations impact Islamic banks in a similar manner or not. More specifically, this study aims to fill this gap that either financial regulation affects different type of banks differently or not.

The banking sector of Pakistan contributes significantly in its economic growth and development. A great emphasis is being made on the implementation and imposition of financial regulations keeping in view all the recommendations of Basel committee. The financial regulations are regulated and imposed in order to protect and boost the confidence level of both the consumers and investors in any economy. More precisely, the financial regulations are imposed to safeguard the financial sector against systemic risk, protecting consumers from high prices, and to attain some societal objectives, including stability (Llewellyn, 1999).

The main objective of this study is to empirically examine the relationship between already implemented financial regulations and insolvency risk of conventional and Islamic banks of Pakistan. A good understanding of the relationship between the variables will help for good policy formulation as well as capital regulation in the banking sector of economy. Furthermore, this study also investigates the impact of financial regulations on the insolvency risk of Islamic banks of Pakistan as well. In order to estimate the objective, the study used Z score to examine the insolvency risk of conventional and Islamic banks. The study used quarterly data of commercial banks from 2008 to 2016. Furthermore, the study estimated panel data analysis to determine the empirical relationship between already implemented financial regulations and insolvency risk of conventional and Islamic banks of Pakistan. The study used capital adequacy ratio (CAR), current ratio (CR), non-performing loans to total loans (NPL), total loans to deposit ratio (LD) and reserve ratio (ReR) as financial regulation variables to investigate the relationship between financial regulations and insolvency risk of commercial and Islamic banks.

The study is significant for the academics, practitioners, and financial regulators to have deep understanding of insolvency risk when examining the efficacy of already implemented financial regulations on conventional and Islamic banks. The study is providing more insight about the efficacy of already implemented financial regulations on the insolvency risk of banks. Furthermore, it facilitates to provide concrete information to academia on banking system insolvency. Unlike various studies, our study has classified commercial banks of Pakistan on the basis of their total asset structure. According to the Banking Survey 2013 of KMPG, the study classified banks into large, medium, small, and Islamic banks. The Islamic Banks of Pakistan are also incorporated in the sample to see the difference between conventional banks and Islamic banks.

The findings suggest that stricter banking regulation decreases banking risk. The empirical results reveal that an increase in nonperforming loan to total loans (NPL) ratio can reduce insolvency risk of all commercial banks of Pakistan. A higher reserve ratio (RR) implies higher greater insolvency risk for all banks of Pakistan. However, capital adequacy ratio (CAR) is insignificant with insolvency risk of commercial banks of Pakistan. For small banks, the loan to deposit ratio (LD) reduces as insolvency risks increase. The current ratio (CR), nonperforming loans to total loans (NPL), loan to deposit ratio (LD) and reserve ratio (RR) are significant for large banks while capital adequacy ratio (CAR) for insolvency risk of large banks. All the ratios are significant for insolvency risk of medium banks while capital adequacy

ratio (CAR) and current ratio (CR) are insignificant for the insolvency risk of small banks. Furthermore, CAR, CR, and LD are found statistically significant for the insolvency risk of Islamic banks as well. These variables are found to have negative relationship with the insolvency risk of Islamic banks of Pakistan.

The study is organized as follows. Chapter 2 describes review of literature; Chapter 3 discusses the data description, empirical specification of the model, and variables construction respectively. The empirical results are discussed in Chapter 4. Chapter 5 concludes the study with relevant policy recommendations and suitable way forward.

## LITERATURE REVIEW

The existing empirical literature provides the mixed results about the relationship between the financial regulations and insolvency risk of financial institutions specifically banks. Besanko and Kanatas (1996) and Blum (1999) found that more stringent capital requirements enlarge insolvency risk of banks while Fernandez and Gonzalez (2005) proved that more strict capital requirements can influence insolvency risk of banks. Similarly, Awdeh, El-Moussawi, and Machrouh (2011) empirically examined that increase in capital can significantly increase insolvency risk of banks.

There are certain other variables investigated by the various studies. Like, Mercieca, Schaeck, and Wolfe (2007) investigated the effect of diversification and bank size on risk adjusted performance and insolvency risk of European credit institutions. They used sample of 15 countries consisting 755 small banks for the time period 1997 to 2003. The small banks were classified on basis of their turnover and number of employees. The Z score was used to calculate insolvency risk. The results revealed that earning diversification did not affect profitability of small banks. Similarly, banks with less diversification had low solvency risk.

Similarly, Deelchand and Padgett (2009) examined the relationship between risk and capital for Japanese cooperative banks. They concluded that inefficient banks had more capital and riskier. Another study conducted by Murari (2012) examined insolvency risk for 80 banks of India for 2005 to 2009. He found that probability of book value bankruptcy of Indian banks decreased over the period of time. He further proved that probability of book value bankruptcy of public sector banks was lower than private and foreign sector banks. Similarly, Das (2012) investigated insolvency risk of commercial banks of India for the period 1998 to 2007. He concluded that Indian private banks were most risky, while foreign banks were least risky. Lepetit and Strobel (2013) investigated the probabilistic foundation of linkage between Z score and insolvency risk of commercial banks of G20 countries. He found a negative relationship between insolvency risk and Z score.

There are few studies for the identification of determinants of insolvency risk as well. One of those studies include Klomp and De Haan (2015) examined 1238 banks of 94 developing and emerging countries to explore the impact of risk on the regulations of banks. The risk of the bank was measured using Z score. They proved that strict regulations and increased supervision results in the increase of risk faced by the banks. However, they also proved that effectiveness and efficiency of financial regulations and supervision also depends upon the structure of banks. The activity restrictions reduced the risk faced by the large banks, while the liquidity restrictions was found to be significantly related with the z score values of unlisted commercial banks of developing and emerging countries.

Following the similar pattern, Zhang, Xie, Lu, and Zhang (2016) investigated the determinants of financial distress in large financial institutions of United States. The financial distress of the 629 Bank Holding Companies (BHC) was calculated using Z-Score and Distance to Default (DD). The study was conducted for the time period 2003 to 2013. The results proved that short term whole sale funding, non-interest income, and Tier 1 risk based capital ratio are important determinants of financial distress.

Laeven and Levine (2009) examined the relationship between bank risk taking activities, bank governance, and the banking regulations. Specifically, they empirically investigated how governance and banking regulations jointly adds on the risk of individual banks. They used a sample of largest 279 banks in 48 countries. They found that right mix of cash flow played a significant role in the risk-taking activities of bank. They further proved that effect of banking regulation varies with the bank governance structure.

Pong, Bokpin and Andoh (2016) empirically examined the relationship between disclosure and risk-taking of banks in Ghana for the period 2007-2011. The study used panel regression model and relate risk-taking to disclosure, controlling for bank size, profitability, liquidity and treasury bill rate. Disclosure scores from a disclosure index were used as a measure of disclosure. Similarly, Z-score was used as a measure of total risk. Treasury bill rate, profitability and liquidity were found statistically significant with the risk-taking activities of banks of Ghana.

Zeb and Sattar (2017) examined to what extent bank structure matters for the impact of financial regulations on insolvency risk of banks using a sample of 21 banks of Pakistan. Their findings imply that financial regulations are significantly related with the profit efficiency and financial stability of commercial banks of Pakistan. However, their sample did not include Islamic banks.

## DATA DESCRIPTION, EMPIRICAL FRAMEWORK AND METHODOLOGY

### Sample and Data Description

The study examined a balance panel of 26 banks of Pakistan. Moreover, the study used quarterly data for the time period 2008 to 2016. The financial statements data are collected from the website of respective banks and State Bank of Pakistan (SBP).

Most of the previous studies have categorized commercial banks as private, public and/or Islamic banks as per their time of founding. This classification of banks may not be very helpful to examine the effectiveness of financial regulations and insolvency risk. Therefore, the study has categorized the sample banks as per their total asset structure. The sample of this study includes 6 large size, 8 medium size, 7 small size and 5 Islamic banks of Pakistan.

### Empirical Specification of Model

The Z score measures the stability of financial institutions by indicating the distance from insolvency, profitability, and leverage of commercial banks. Furthermore, Z score used probability of default being extracted by Roy (1952) and further developed by Goyeau and Tarazi (1992). It can be written as follows

$$\text{Probability of default} = \text{Prob}(\pi < -E), \quad (1)$$

Further, we divide it by total assets and obtain returns on assets, such as:

$$\text{Prob}(\pi/A \leq -E/TA) = \text{Prob}(ROA \leq -E/TA), \quad (2)$$

where ROA is return on assets, E is equity, and TA is total assets of financial institution

$$\text{Prob}[(ROA - \mu_{ROA})/\sigma_{ROA} \leq (-\lambda - \mu_{ROA})/\sigma_{ROA}] = \text{Prob}[(ROA - \mu_{ROA})/\sigma_{ROA} < -Z], \quad (3)$$

Where  $\mu_{ROA}$  and  $\sigma_{ROA}$  are mean and standard deviations and  $Z = (E/A + \mu_{ROA})/\sigma_{ROA}$  is parameter of bank fragility. Eventually, Z-score is calculated as follows:

$$Z - \text{score} = \left(\frac{E}{A} + \mu_{ROA}\right)/\sigma_{ROA}, \quad (4)$$

A higher value of Z-score indicates the greater stability of the respective financial institution or commercial bank. Pervious literature employing the Z-score as a measure of

insolvency risk or financial stability include Sundaresan (2013), Jarrow (2009), Houston et al. (2010) and Beltratti and Stulz (2012).

### Empirical Model

In order to estimate the fixed effects model with Z-score, as dependent variable – a measure of insolvency risk, the following equation is estimated:

$$Z - score_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 CR_{it} + \beta_3 LD_{it} + \beta_4 NPL_{it} + \beta_5 ReR_{it} + \beta_6 T_{it} + \varepsilon_{it} , (5)$$

In the above equation, for  $i^{th}$  banks over  $t^{th}$  time period, *CAR* stands for capital adequacy ratio, *CR* for current ratio, *LD* for loan to deposit ratio, *NPL* for non-performing loans to total loans ratio, *ReR* for reserve ratio and *T* for year of establishment.

### VARIABLES CONSTRUCTION

Z-score is taken as a dependent variable. The value of Z-score is obtained from estimating the Equation (4). The independent and control variable definitions are illustrated below.

#### Capital Adequacy Ratio (CAR)

Capital Adequacy Ratio (CAR) is considered as an international standard to measure bank's risk of insolvency due to excessive losses. SBP has also given minimal capital requirement of 10% to all the commercial banks of Pakistan which is in accordance with Basel. Islamic banks have to maintain CAR of 8%. The commercial banks which do not meet this requirement have to undergo some penalty from the central bank. We calculated CAR by dividing capital of the bank with the risk weighted assets of bank.

#### Current Ratio (CR)

The liquidity problem usually arises when the bank is unable to accommodate its reduction in liabilities or increase in funds on the assets side of the statement of financial position (Athanasoglou et al., 2006). The banks having with low liquidity ratio means that there is a high tendency of bankruptcy. The State Bank of Pakistan revised it from 15% to 18% since 2006 to enable the bank to advance more loans. We calculated this ratio by dividing current assets to current liabilities

#### Reserve Ratio (ReR)

Reserve ratio (ReR) is the amount of cash that a bank has to keep up with the central bank. As per the central bank policy, each bank must have a certain proportion of this cash in its reserve. We calculated this ratio by dividing cash to deposits.

#### Loan to Deposit Ratio (LD)

Loans to deposit ratio (LD) declined to 60 percent in April 2012 from about 67 percent in April 2011. Banks invest about 44 percent more funds mostly in government treasury bills, bonds, stocks, and other approved securities. We calculated this ratio by dividing total loans of banks to its total deposits.

#### Non-Performing Loan Ratio (NPL)

Non-performing loan ratio (NPL) is basically the percentage of the loan amount that the bank has set aside as provisions to meet the worst-case scenario where the loan might have to be written off it when loan becomes irrecoverable. It is the amount of funds which the bank has set aside for its bad debts. It is calculated by dividing the non-performing loans of banks to its total loans.

### *Time (TT)*

This variable is used as a control variable. It is the total age of banks measured in quarters.

## ANALYSIS AND RESULTS

We empirically estimated equation 5 for all banks, large, medium, small, and Islamic banks through panel regression analysis. The pooled, fixed, and random effects regression was applied to equation 5. The panel regression was repeated for all, large, small, medium, and Islamic banks. The fixed effect was selected on the basis of Hausman test. Table 1 describes the empirical results for all banks, large banks; medium, small, and Islamic banks being selected for empirical analysis.

**Table 01**

### **Fixed Effects Estimation for Financial Regulation Effects on Insolvency Risk**

<b>Dependent Variable: Z-score</b>					
	<b>All Banks</b>	<b>Large Banks</b>	<b>Medium Banks</b>	<b>Small Banks</b>	<b>Islamic Banks</b>
CAR	-0.21 [0.22]	0.61 [0.73]	-0.67 [0.17]***	0.37 [0.54]	-0.43 [0.10]***
CR	-0.20 [0.09]**	-0.94 [0.29]***	-0.54 [0.25]**	-0.25 [0.42]	-0.33 [0.11]**
LD	0.32 [0.11]**	-0.32 [0.06]***	-0.24 [0.07]***	-0.37 [0.19]*	-0.42 [0.07]***
NPL	-0.39 [0.09]***	-0.63 [0.18]***	-0.71 [0.23]***	-0.35 [0.15]**	-0.68 [0.11]***
ReR	0.27 [0.10]**	0.40 [0.10]***	0.19 [0.13]	0.62 [0.25]**	0.28 [0.19]
TT	1.42 [0.19]***	2.66 [1.66]	0.50 [0.25]**	0.57 [0.11]**	0.32 [0.47]
Observations	856	216	256	224	160
Adjusted R <sup>2</sup>	0.67	0.47	0.57	0.61	0.65
F-stat	32.51	13.54	9.67	11.23	18.92
Prob (F stat)	0.00	0.00	0.00	0.00	0.00
Hausman (p)	0.00	0.00	0.00	0.00	0.00
Autocorrelation (Wooldridge test)	0.24	0.33	0.25	0.40	0.54
(p)					
Heteroscedasticity (Huber/White test)	Heteroscedasticity robust standard error estimates are used				

**Note:** The table represents the results of panel data regression of all banks, large, medium, small, and Islamic banks. The heteroscedasticity robust White (1980) standard error is used for the estimation of linear panel. The coefficients and standard errors are presented in the table. The Wooldridge test is used for the autocorrelation. The p values are given in parenthesis. Hausman test is applied to select fixed effect or random affects estimator. Hausman test p value is also given. \*, \*\*, \*\*\* present the significance level at 10 percent, 5 percent and 1 percent, respectively.

The above analysis describes overall insolvency risk situation in all banks, which are selected for the analysis. In this way, empirical results based on entire sample information, being used for analysis, once at a time does not precisely describe the need and importance of required component of the analysis. In order to resolve this ambiguity, we classified the entire sample into large, medium, small, and Islamic banks.

The current ratio, loan to deposit ratio, non-performing loan ratio, reserve ratio and Time appears to be economically and statistically significant for all the banks of Pakistan. The current ratio, loan to deposit ratio and non-performing loan ratio appears to be negatively related with

the insolvency risk of banks of Pakistan. The capital adequacy ratio is insignificantly related with all the banks of Pakistan.

Turning into the other samples of the study, some interesting facts were revealed about the financial characteristics being employed in the study. The capital adequacy ratio appears to be negative but significantly related with the medium and Islamic banks of Pakistan. Other things remains constant, one unit change in the capital adequacy ratio of the medium banks decrease the insolvency risk of medium banks by 0.67 units on average. Similarly, increase in the CAR of Islamic banks leads to decrease in the insolvency risk of Islamic banks.

The current ratio appears to be significantly negatively related with the insolvency risk of large and medium banks of Pakistan. The result suggests that this ratio is more important for the large and medium banks. The current ratio is also economically and statistically significant for the Islamic bank as well. The result implies that increase in the current ratio leads to decrease the insolvency risk of large, medium, and Islamic banks. The current ratio of small banks appears to be insignificantly related with the insolvency risk. Similarly, the loan to deposit ratio seems to have negative relationship with the insolvency risk of large and medium banks of Pakistan. Other things remain unchanged; one unit increase in the current ratio of large banks tends to decrease the insolvency risk of the banks by 0.94 units on average. The loan to deposit ratio donot seems to affect the insolvency risk of small banks of Pakistan. The non-performing loan ratio is also negatively related with the insolvency risk of large, medium, small and Islamic banks. The results imply that increase in the non-performing loan ratio tends to decrease the insolvency risk of the banks.

The reserve ratio is found positive and significantly related with the insolvency risk of large, medium and small banks of Pakistan. Other things remains constant, one unit increase in the reserve ratio will increase the insolvency risk of large banks by 0.40 units, medium banks by 0.19 units and small banks by 0.57 units on average. The reserve ratio does not appear to be significantly related with the Islamic banks.

## CONCLUSION

The SBP announces a set of guidelines in the form of prudential and financial regulations for the banking industry covering almost every aspect of banking. The study aims to investigate how already implemented financial regulations affect insolvency risk of conventional banks of Pakistan. Our study is important for the policy makers, regulators, and practitioners of Pakistan to obtain the efficacy of already implemented financial regulations as far as insolvency of conventional banks of Pakistan is concerned.

The capital adequacy ratio is found insignificant for insolvency risk of large banks. CAR is also insignificant for insolvency risk of small banks as well but is significant for insolvency of medium banks. The current ratio is also insignificant for insolvency risk of small banks. A higher Reserve Ratio implies greater insolvency risk for all banks. Our results give a fair idea that financial regulations must be implemented keeping a certain criterion in mind like as we distinguished banks in this study on the basis of their total asset structure. It is need of the hour to strengthen the regulatory framework and enhance supervisory capacity for dealing with large banks. Since the analysis reveals that insolvency risk is based on capital adequacy ratio, current ratio and reserves ratio, nonperforming loans to loans ratio and loan to deposit ratio. Therefore, based on findings and conclusions, it is evident that all financial obligations are essential for insolvency risk.

There are different tools that might be used to check insolvency risk of the conventional banks like Capital Adequacy Ratio itself can be used as a tool for measuring insolvency risk of a conventional bank. Few other ratios might be tested in the future like leverage ratio which is a part of Basel III.

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13-BD20-5657

## **ROLE OF HUMAN RESOURCE MANAGEMENT PRACTICES IN THE DEVELOPMENT OF MINT COUNTRIES: IMPLICATIONS FOR PAKISTAN**

MUHAMMAD SAAD<sup>1</sup> AND SANA AHMED<sup>2</sup>

### **ABSTRACT**

This paper is a descriptive research to analyse the human resources management practices of a group of four high growth rate economies namely; Mexico, Indonesia, Nigeria and Turkey. These countries have achieved stability in the economic, political and socio-cultural context while establishing themselves in an international industrial and business arena. The paper analyses the social and cultural forces that have constantly played a significant role in the implementation of human resources management practices by applying Hofstede's framework. The findings are related to the role of these similar forces in shaping the human resources management practices in Pakistan.

**Keywords:** Human resource practices, Hofstede's framework, MINT countries, Pakistan

### **INTRODUCTION**

Mexico, Indonesia, Nigeria and Turkey have shown tremendous economic development. With Purchase Power Parity (PPP) of these countries likely to increase in the near future, these countries will attract a lot of foreign attention and investment by multi-national corporations as well as trade agreements. Though these countries have accomplished substantial economic and human development success, their human resources management practices still lag behind to the economies of not only the developed countries but also the BRIC nations i.e. Brazil, Russia, India and China. These MINT nations have their geographical location as an advantage along with primary economic factors playing a very significant role in their growth. These factors are making big companies to invest in these markets but they fail to realize the challenges that these companies have to face due to existing human resources management policies.

This paper looks at the varying human resources management practices adopted by small, medium and large companies in Nigeria and Mexico, Indonesia, Turkey and how these human resources management practices shape the business strategies of various multinational and local players in these countries with discussion on implications for Pakistan.

### **LITERATURE REVIEW**

#### **Mexico**

With labor force growing at an annual rate of 2.53 percent, the agricultural sector in Mexico continue to shrink as the process of urbanization continues with mass migration of people to major cities like Mexico City and Guadalajara, Monterrey, Puebla, and Tijuana. Unskilled and semi-skilled labor makes up half of the entire labor force. The education index of 0.7214 is better than the average in the world and is one of the major reasons for considering Mexico as one of the biggest emerging markets in the world. The GNP per capita in PPP terms comes out

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<sup>3</sup> Human Development Report for Mexico 2015

<sup>4</sup> Human Development Report for Mexico 2015

to be \$12,9475, which indicates a solid foundation of economic growth for foreign investment.

## Indonesia

Indonesia is a land of very complex diverse socio-cultural life. Due to its multifaceted diversity the question is that “How do Indonesian companies organize human resources management activities in such a diverse nation?” (Nankervis, 2006). The answer to this question is that in Indonesia human resources management practices varies with the size and senior management of the company. Some companies prefer adhering to local human resources management practices while some are more compliant to follow the international human resources management practices. By not following standardised human resources management practices, the majority of employees and potential employees feel that the industry’s human resources management practices are plagued with nepotism, bribery and corruption. With more decentralisation, there is rising threat of increased bribery and corruption in recruitment and selection procedure of the public sector of Indonesia. It is now that the companies are realising that they have to focus on implementing human resources management initiatives more strategically in order to sustain in growing competition.

## Nigeria

The massive population makes Nigeria highly attractive for foreign organisations to invest in the country. The increasing level of foreign direct investments is a sign of increasing employment opportunities. This new change is also catalysing the evolution of human resource management in Nigeria. According to research by Fajana et al in 2011: “HRM as a concept got introduced into the Nigeria literature in 1940 during the colonial era; with industrialisation and commercialization, which later became wage employment”. Since then it has been incorporated and it’s being practiced in the Nigerian corporate world. One important factor that has a major effect on the human resources management practices in Nigeria is its legal framework. It dictates most of the human resources management policies. For instance, there are defined norms, corresponding to legal system, for conducting negotiations between management and unions. We can say that the culture has a much greater effect as the legal system has been derived from the cocoons of Nigeria’s culture (Anyim, F.C. et al., 2011).

In Nigeria, human resources management has been carried out within boundaries of economic, political, and legal environment. Therefore, we need to ponder upon its cultural dimensions to understand the conception better. Research also shows the strong influence of the culture on the job environment, “Nigeria is characterized by over reliance on culture, language, religion, gender and educational qualifications as a basis for determining who get employed” (Fajana et al., 2011).

## Turkey

Turkey is emerging as an important part of the European Union. With its perfect blend of both western and eastern values, it is one of the most desired tourist destinations. The tourism industry is ever flourishing and has secured most of the strategic focus of the government. The involvement is high with planning and strategizing policies to favor the industry in the future (Ministry of Culture and Tourism, 2007). The industry rolls out many employment opportunities.

One other factor that is driving the growth of employment opportunities is Turkey’s recovery from economic crisis in 2001 (Macovei, 2009). It has gradually become less volatile

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<sup>5</sup>World Bank Data Report Mexico 2015

with productivity driven growth and being led by private sector. The recovery also showed perseverance in the form of the substantial downward trend of inflation. This has resulted in better quality of life throughout the country, which translates further into the evolving human resources management practices (Vos, 2008).

## **HOFSTEDE'S CULTURAL DIMENSIONS AND HUMAN RESOURCES MANAGEMENT PRACTICES**

### **Mexico**

A power distance score of 81 signifies the fact there is inequality in the society. Mexico is a hierarchical society, which is seen to be reflecting inherent inequalities. With a score of 30, Mexico is considered to be a collectivist society. Rather than working for individual gains, every individual intends to work for a "group" or a "family". Loyalty in a collectivist culture is paramount and the society fosters strong relationships where everyone takes responsibility for fellow members of the group. Mexico with score of 69 is regarded as a masculine society. Employers are expected to be rationally decisive and assertive, the emphasis is on parity, opposition and performance and engagements are resolved by fighting them out. Mexico has a very high preference for uncertainty avoidance signifying intolerance of nonconformist ideas and behavior. (The Hofstede Centre, 2012).

#### ***Human Resources Management Practices:***

In Mexico, most of the recruitment is done by reference system i.e. word of mouth. The biggest challenge firms face in Mexico is trying to change their "old" Mexican skills to the "new" way of management i.e. the social assumption that working values should not be changed. Training and development of employees is considered to be highly theoretical with little too few structured programs helping the government and the employers. The authoritative management lends itself to the Mexican worker needing a great deal of supervision. Employees expect managers to be the authority with power and decision-making in their hands. Mexicans view a woman's role in society as one restricted to household chores resulting in poor representation of women in the workplace. In recent years, women have started to make inroads into the Mexican workforce now. Some domestic companies still resist to the staffing of women employees for higher management positions. Family, friends and group occupy fundamental importance in the Mexican culture. Employment, promotion, contracts or rewards determine commitment to the family that frequently demands special treatment. Unfortunately, because of this practice there is a significant problem with absenteeism and turnover, which adversely impacts productivity, which offsets any gains that can be recognised with the cheap labor costs. Unlike developed nations, overtime compensations are usually distributed on the notion of the employer and even recreational leave is assured on the seniority basis.

### **Indonesia**

Indonesia has a high score of 78 on power-distance with taller organizational structures and clear and strict lines of authority. It is a collective society and thus more importance is given to the in-group members. The uncertainty-avoidance score of Indonesia is 48 inculcates the preference for structured and organised practices. Indonesia has high score on long-term orientation that is 62 which relates that the culture of Indonesia prefers to plan long term and strategically think of the time ahead (The Hofstede Centre, 2012).

#### ***Human Resources Management Practices:***

Since years preference was given to blood ties and family roots than to merit in terms of qualification and experience, but after the dramatic Asian crises and other financial setbacks, employers felt a growing need for merit and qualification across the nation. According to

research of Rowley and Abdul-Rahman in 2008, In order to remain ahead or at least in par with competitive multinational competitors it is necessary for the local organizations to include nine years of compulsory education for every Indonesian citizen to get recruitment. There has been a change in recruitment practices references from family and relatives to candidates' qualifications since 1990s in Indonesia. (Rowley and Abdul-Rahman, 2008). However, the most common method employed for recruitment and selection of blue-collared workers is still word of mouth. Indonesia ranks lowest in terms of investment in training and development and does not focus much on improving the job specific skills of employees. For white-collar workers and managers pay and benefits are important consideration in deciding whether to work for a particular enterprise. However, there is less consideration of job performance for pay raise. Although it is a collectivist country but still the degree to which pay depends on group effort is quite low. It is employee's seniority or relations with the management that defines the compensation and pay packages.

## **Nigeria**

Nigeria score has high score of 80. Seniority is given a lot of respect and lower level employee cannot directly communicate with the top management. Nigeria has a collectivist society. There is a lot of emphasis of clans and groups that people belong to. On masculinity, Nigeria has a score of 60, meaning managers are expected to be decisive and assertive, the emphasis is on equity, competition and performance and disagreements are resolved by fighting them out. Nigeria is a short-term orientated nation with score of 16. The key characteristics of this dimension are that Nigerians look for personal steadiness and stability.

### ***Human Resources Management Practices:***

As the Nigerian culture is collectivist in nature, it emphasizes a lot upon relationships in a social context and employee refereeing their family and friends is the most common method of recruitment. Although the Nigerian economy allows for the import of latest technology to enhance its overall human resources management function, but the training is still a little sluggish due to expected "change" it would bring to routine. The legal-political system does have regard for employee compensation and benefits plans. In a broader perspective, the plans generally include the following; "Monetization, National Health Insurance Scheme, Contributory Pension, and Pension Benefits" (Odunlade, 2012). The foreign firms operating in Nigeria may offer the best pay systems as they try to implement international compensation and reward standards. We can say that this particular function of human resources might be thriving more as Nigeria is under a lot of scrutiny by foreign firms mainly because of its growing population. The foreign firms try ensuring and benchmarking best practices which results in better compensation plans than local firms (Anyim, F.C et al., 2011).

## **Turkey**

According to research by Tompkins et al (2011), Turkey ranks high on power distance. It scores 66. Seniority is celebrated. The ideal boss is a father figure for the subordinates. The same phenomena can be observed in the family systems, the father is seen as a leader and he makes the decisions for the whole unit. Turkey is a collectivist society. There is more focus towards addressing the societal needs rather nourishing the individuality. The Turkish society with a score of 45, at large is feminine, where nurturing and caring for others is a dominant value. In addition, quality of life is seen as an important factor behind success. Hence, the softer aspects of the culture are encouraged and valued. Conflicts are avoided at all costs and reaching consensus is very important for the Turks. Turkey ranks very high when it comes to uncertainty avoidance. It has a score of 85 which means that Turkey is an extremely risk averse nation. In result, the high score calls for a rule-orientated system, with strict laws, rules, regulations and

control in order to decrease the amount of ambiguity in the society. Turks have a short-term orientation. It translates further into the concept of 'face' and image (Strecker, 1993). They care for their self- portrayal in the public and there is a lot of emphasis on tradition, which derives from religion.

### ***Human Resources Management Practices:***

Studies show that in Turkey, the organisations that do not have a dedicated human resource department, suffer when it comes to recruitment and selection and retaining the employees. Studies also show that less than half of the firms engage in proper recruitment and selection drives (Aycan, 2001). The most common method of recruitment is employee referrals and other contacts owing to collectivist nature of the Turkish society. (Tompkins et al., 2011).

Performance appraisal is the most perplexing function of human resources in Turkish organizations. This is mainly due to the fact that although almost 72 per cent of the firms claim that they have a standard performance evaluation form, it is still difficult to extract 'objective' appraisals (Aycan, 2001). Many organisations reported that they base their evaluation on competency and behavioral criteria. The organisations lack the scientific backing to the factors on which the evaluation is done. Furthermore, the evaluation is only one-way; the supervisors evaluate their subordinates due to the high power distance. One more cultural influence is the collectivist nature of the Turks, due to this they fall under the trap of 'modesty-bias'. Which means that when it comes to self-assessment, the employees tend to rate themselves lower than their peers. This subconsciously maintains the harmony in the groups.

According to (Aycan, 2001), "Two-thirds of the organisations reported that they had a system to ensure performance-reward contingency, but the efficiency of this system is doubtful. Performance-based reward allocation is evident especially for the white-collar employees (60 percent), and not so for blue-collar employees (27 percent)." Monetary rewards are given preference over intrinsic rewards, which include increase in salary and bonuses. Intrinsic rewards are shunned due to the collective nature of the society. It is believed that praising individual performance would cause unrest and hurt the overall group's feelings. Promotions are driven by performance appraisals, years of experience and qualification of the employee. Climbing up the hierarchical ladder into middle management require passing an official examination. Moreover, there are fixed increments to the basic pay. These increments depend on the national inflation rate. Apart from the pay increases, the fringe benefits level up according to the posts and promotions. There is also the concept of seniority pay in the public sector. However, there are no specific policies that ensure the advancement of under-represented groups. Research shows that 'networking' plays a critical role when it comes to considering an employee for compensation and benefits (Bakan et al, 2013). The fringe benefits in private firms are more spread out down the hierarchy than public firms where seniority gets to relish better fringe benefits.

### **IMPLICATIONS FOR PAKISTAN**

Power distance score for Pakistan is 55 making it difficult to determine the preference in the Pakistani culture. With a meager score of 14, Pakistan has a collectivist culture. As an idiosyncrasy of most Oriental cultures, any aggression leads to loss of face, the business relations like employer/ employee or client/ firm are measured in moralistic terms. The score of 50 for Pakistan shows no preference to masculinity or femininity. The score of 70 shows a high penchant for avoiding uncertainty in the Pakistani culture. Cultures with higher score sustain inflexible codes of belief and behavior and are unwelcoming of nonconforming behavior and ideas. Pakistani society shows signs of resisting innovation. (The Hofstede Centre, 2012).

Highly collective and masculine factors continue to influence the local recruitment and selection practices. Most of the recruitment is done by reference system i.e. word of mouth.

Far away relatives or friends are preferred over complete strangers. Having an agrarian economy with services being a major part of it, unskilled laborers are aplenty.

Not enough multinational brands of global appeal of Pakistani origin exist; foreign multinationals contribute not only with their direct investments but also with their knowledge and global standard practices. No standard recruitment practice is conducted to assess the physical and mental capabilities of the workers. Though private companies do assess the applicants in one way or another, hardly any recruitment policies are in place for applicants applying to the public-sector organizations. Some companies prefer to take direct interviews only, which indicate that employee personal networks (word of mouth) are one of the basic sources for the recruitment and selection process.

The selection process helps firms to assess the candidate's competence and behaviors in a way that can be measured and observed. Hence, they start by developing job descriptions and assess potential employees by requesting them either to give a thorough interview or a psychological test. In public sector organizations, job descriptions are followed. But in private organizations, going beyond the call of duty is considered a common practice leaving the purpose of developing job descriptions and functional roles questionable.

Employees anticipate managers to be handling the final authority with decision-making and ultimate power resting with the employer. One challenge that firms face in Pakistan is to make employees accept other ways of thinking. The widely accepted process of training and development is implemented in Pakistan to a limited success; where the firm starts with an induction process, the manager coaching, assessment based on competence, and feedback but the employees are responsible for their own development.

## **WHAT CAN BE DONE?**

### **Mexico**

Best HR practices need to be adapted by allowing foreign multinationals to make necessary adaptations to the existing regulations. In the case of Mexico, it needs to look at its neighbor United States who excels in not only the economic indicators but also in all dimensions of the Human Development Index.

### **Indonesia**

Until late 90's this country never got the recognition that it deserved because of its strategic importance but due to increasing literacy and decreasing poverty and other improvements that took place in its socio- economic indicators, it has become one of the emerging nations of the world in terms of industrial and business arena.

From historical perspective it is quite evident that in Indonesia small and medium sized enterprises have played a very important role in developing the Indonesian economy. Thus for a country like Indonesia it is very important that they set a standard and uniform framework for implementing human resources management practices apart from that Indonesia ranks lowest in Training and development of its human resources thus the companies need to develop this element of human resources management as it is the building block of the future workforce and this will definitely play a very important role in development of the economy.

### **Nigeria**

First and foremost, the HRM in Nigeria has to make a lot of efforts on its training and development function. The organizations need to assess the outcomes of the whole process in an objective fashion. The results of research by Salome et al (2013) also supports this fact.

Secondly, there is a slight inefficacy in the public sector of Nigeria. It exists due to poor management and appraisal of employee's performance. This shows that there is a dire need for

a Performance Management System. The research contemplates the fact that “The adoption of PMS will make public business effective, efficient and sustainable” (B. Esu and J. Inyang, 2009)

## **Turkey**

First and foremost, Turkish organizations need dedicated human resource departments. Their sole purpose would be to handle all the tasks related to human resource management. Research shows that most organizations suffer if they don't have a dedicated human resources department (Aycan, 2001).

Secondly, the organisations need to cater to the increase in globalization and its following trends. The managers need to build customized systems, which can adapt with the turbulent needs of the environment. To be better prepared and equipped the Turkish human resources management professionals need to establish a balance between being ‘local’ and ‘global’. The practices should be open to learning and changes according to global standards, as well as amalgamating them with the local knowledge.

Moreover, there is also a need for establishing a balance between theory and practice. The research shows that Turkish organizations have a negative attitude towards scientifically based knowledge (Aycan, 2001). This needs to be reproached in order to increase efficiency and effectiveness.

There is also a need for competent employees. As the research puts it, “Turkey is in a state of transition. The demand for competent employees is very high and employees are currently the beneficiaries of this demand.” (Bakan et al, 2013). One way to solve this scenario is to make the training and development function, more effective ensuring grooming and polishing the skills of the employees and making them more productive to meet the future organisational needs.

Lastly, Turkish firms needs to value its human capital. They did not previously see them as value adding resource (Kaya, 2006). There is a dire need for incorporating the concept of ‘Knowledge Management’ in Turkish organizations.

## **Pakistan**

With the rising challenges of the 21<sup>st</sup> century and a signatory to meet the Millennium Development Goals (MDGs), Pakistan needs to revamp its education sector if it aims to improve its overall human development index rankings. With the interest of foreign companies likely to increase with improved measures for Foreign Direct Investment (FDI), there is much needed impetus to the domestic organisations to either evolve to the modern standards of human resources management or perish against the evolving competition.

Dearth of education (literacy rate of 55% in adults)<sup>6</sup> needs to be addressed. This issue can be resolved if Government in collaboration with private sector organizations take initiatives to address the expected years of schooling (at least take it to the regional average of 11.8 from 7.3 years)<sup>7</sup>. The unskilled labor need to be admitted in vocational training institutes so that the majority of population (directly or indirectly associated with agriculture) learn a new trade. With being the sixth most populous nation in the world which is expected to be fifth by the year 2050, the working population will be young (23.9 years)<sup>8</sup>, primed to carry the country through the next century so that they meet the education requirements of modern age.

Pakistan's stagnating foreign direct investment due to multitude of issues (security, economy, and energy), policies need to be enacted that promote competition in the domestic market. With the improvements in technology infrastructure with 3G/4G services reaching out

<sup>6</sup> Annual Report 2015, Pakistan Bureau of Statistics, Government of Pakistan

<sup>7</sup> Annual Report 2015, Pakistan Bureau of Statistics, Government of Pakistan

<sup>8</sup> Annual Report 2015, Pakistan Bureau of Statistics, Government of Pakistan

to more than 17 million people<sup>9</sup>, initiatives can be carried out to meet the needs of the population, which is largely unequipped to meet the challenges of a modern economy. This technology infrastructure can help in attracting research & development initiatives of foreign companies to monitor as an emerging economy.

Credit reforms and reducing the duration to start a business should be a priority. Pakistan's performance is abysmal in both these aspects and in order for domestic industry and entrepreneurs to thrive; both of these aspects should be brought to the level of MINT nations on a priority basis.

According to the Global Entrepreneurship and Development Institute, Pakistan lags behind all MINT nations in startup skills, risk acceptance, technology absorption, and product & process innovation. These inefficiencies can be curtailed by promoting accelerators and incubation centers to promote entrepreneurial spirit of a burgeoning economy.

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<sup>9</sup> 3G/4G Deployment Report 2015, Pakistan Telecommunication Authority, Government of Pakistan

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15-BF23-5818

## THE RELATIONSHIP BETWEEN CUSTOMER-ORIENTED SERVICE BEHAVIOR, INTERNAL MARKET ORIENTATION, AND SERVICE CLIMATE

SHUN-CHING HORNG<sup>1</sup> AND LING-HUA WENG<sup>2</sup>

### ABSTRACT

This study explores the relationship of external market orientation, internal market orientation, service climate and employees' market-orientated behavior in the Food & Beverage industries in Taiwan, China and the United States. This is one of few studies that bring together the related market orientation constructs within international culture dimensions. The result shows that employees' market-oriented behaviors will be influenced positively by market-oriented culture, employee perceived service climate, as well as internal market orientation. While the market-oriented behavior will be formed more explicitly (the effect is larger) if market-oriented culture mediated by internal market orientation, which is in turn mediated by service climate.

**Keywords:** market orientation, internal marketing, service climate, bootstrapping.

### INTRODUCTION

A key factor distinguishing the service industry from physical product sectors is its intangibility and the human interface (Constantinides, E. 2006). There are four basic characteristics of service: Intangibility, Inseparability, Variability, and Perishability (Kotler and Keller, 2007). Intangibility is the fundamental attribute of services, which cannot be seen, tasted, felt, heard or smelled before they are bought. Services are usually produced and consumed at the same time and that they cannot be separated from their providers. Services are variable and difficult to control. This is because they greatly depend on who provides the service as well as when, where and how they are provided. Most services cannot be stored for later use or sale.

Food or gourmet has become one of the most valuable economic assets for Taiwan, while the chain food store and the franchise have accumulated to 25,000 stores in Taiwan, accounts for 25% of the food industry. The chained food industry in Taiwan is expanding its business internationally so as to capitalize the globalization surge. Many Taiwanese companies have established their chained stores in China and the United States, especially China and the Chinese circles in the US share a lot of similar culture elements.

The way the service providers (the front-line staff) interact with customers plays an important role when it comes to quality service delivery. It is increasingly recognized that service quality drives competitive advantages that will consequently deliver quality service. Schneider and Bowen (1995) emphasize that people (customers, employees, and managers) are a prominent key to success in service. Especially service employees have been long considered as internal customers in service companies.

As such, services quality requires managerial attention on internal employees, external competition and customers as well. Little academic research has been done to link the relationship of internal market orientation, external market orientation with service climate, especially in a cross-cultural context. Hence, we examine the relationships of market-oriented behavior, internal market orientation, and service climate of service (food & beverage) industries in Taiwan, China, US regions.

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## THEORETICAL BACKGROUND AND HYPOTHESES

### Market Orientation

Peter Drucker (1954) first articulated the marketing concept and noted that marketing was not a separate management function but rather the whole business as seen from the customer's point of view. Keith (1960) stated "we are moving from a company which has the marketing concept to a marketing company" that suggested a marketing revolution. Around the late 1980s and early 1990s, the marketing concept became crucial and viable for companies. The field of marketing largely moved on to market orientation as a way to focus on the implementation of the marketing concept. (Hult and Ketchen, 2017; Lafferty and Hult 2001). Market orientation is regarded as one of marketing's indigenous concepts versus one borrowed from another discipline.

The pioneering examinations of market orientation are derived from two approaches in the literature (Hult and Ketchen, 2017; Lafferty and Hult 2001) to conceptualize the phenomenon, namely, market intelligence and culturally based behavioral perspectives.

Market orientation is the organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it (Kohli and Jaworski, 1990). This definition focuses on specific behaviors and therefore facilitates operationalizing the market orientation construct. Market orientation is related to top management emphasis, risk aversion of top managers, interdepartmental conflict and connectedness, centralization, and reward system (Jaworski and Kohli, 1993). The effect of market orientation on business performance is quite robust across environmental contexts that are characterized by varying degrees of market turbulence, competitive intensity, and technological turbulence (Kirca, Jayachandran, Bearden, 2005). However, organizations are likely to differ in the extent to which they generate market intelligence, disseminate it internally, and take actions based on the intelligence, the market orientation of an organization should be conceptualized as one of degree, rather than as an absolute (Varadarajan, 2017).

Narver and Slater (1990) proposed a different theoretical stream of market orientation from a "culturally based behavioral perspective", which consists of three behavioral components – customer orientation, competitor orientation, and interfunctional coordination. Customer orientation and competitor orientation include all the activities involved in acquiring information about consumers and competitors in the target market and disseminating it throughout the business. Interfunctional coordination is based on the customer and competitor information and comprises the business's coordination efforts, typically involving more than marketing department, to create superior value for the buyers. Specifically, customer orientation is understanding company's target buyers to be able to create superior value for them. Competitor orientation refers to understanding the short-term strengths and weaknesses and long-term capabilities of both the key current and the key potential competitors. Interfunctional coordination is the coordinated utilization of company resources in creating superior value for target customers. Creating value for buyers is much more than a marketing function, it is a seller's creation of value for buyers is analog to a symphony orchestra in which the contribution of each subgroup is tailored and integrated by a conductor – with a synergistic effect.

Organizational culture is the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them norms for behavior in the organization (Deshpande and Webster, 1989). Member within an organization will perform as a reflection of organization's values and beliefs.

*H1 Market oriented culture influences employees' market-oriented behavior positively*

## Service Climate

It is important to distinguish between “culture” and “climate” as used in the organization behavior. Culture is a set of shared assumptions and understandings about organization function, and climate is related to members’ perceptions about the extent to which the organization is currently fulfilling their expectations (Deshpande and Webster, 1989). Climate refers to the ways organizations operationalize the themes that pervade everyday behavior – the routines of organizations and the behaviors that get rewarded, supported and expected by organizations (Schneider and Rentsch, 1987). To retain customer and stay competitive, many organizations are making customer perception of service quality a priority (Schneider et al., 1998; Berry, 1995; Zeithaml and Bitner, 1996). Service organizations must create a climate to promote the delivery of quality service to retain customers. Climate for service refers to employee perceptions of the practices, procedures, and behaviors that get rewarded, supported, and expected with regard to customer service and customer service quality (Schneider et al., 1998). When there is climate for service, employees have come to understand that superior customer service is expected, desired, and rewarded, and they are more likely to provide good services (Liao and Huang, 2004). Increased service quality ultimately leads to customer retention and eventually to higher profits for an organization (Schneider et al. 1998; Deshpande, Farley, & Webster, 1993).

*H2 Employees’ perceived service climate influences their market oriented behavior positively*

## Internal Marketing

Rafiq and Ahmed (1993) maintained that there were 3 phases of theoretical development of internal marketing conceptualization, namely an employee satisfaction phase, a customer orientation phase, and a strategy implementation/change manage phase. The first phase focusing on employee motivation and satisfaction is due to the roots of the internal marketing lie in efforts to improve service quality. Internal marketing treats employees as internal customers, viewing jobs as internal products that satisfy the needs and wants of them while addressing the objectives of the organization (Berry et al., 1976). The fundamental notion for achieving employee satisfaction is the treatment of employees as customers. The second phase was undertaken by Grönroos (1981) whose starting point was the concern that because contact employees in services become involved in what he terms “interactive marketing”, it is essential that they are responsive to customers’ needs. Hence the objective of internal marketing is to “get motivated and customer conscious employees”. George (1990) asserted that employees are “best motivated for service-mindedness and customer-oriented behavior by an active marketing-like approach, where marketing-like activities are used internally”. The third phase was marked by the insights drawn from a number of scholars who recognize the role of internal marketing as a vehicle for the strategy implementation. The third phase suggests that the scope of internal marketing activity is much wider than motivation of employees towards customer consciousness. Rafiq and Ahmed (2000) further defined internal marketing as a planned effort using a marketing-like approach to overcome organizational resistance to change and to motivate inter-functionally coordinate and integrate employees towards the effective implementation of corporate and functional strategies in order to deliver customer satisfaction through a process of creating motivated and customer-oriented employees. The behaviors associated with creating satisfied and motivated employees are what we call internal market orientation. Hence,

*H3 Internal market orientation influences employees’ market-oriented behavior positively*

## Mediating Effect of Internal Marketing Orientation and Service Climate

As stated above, the internal marketing concept has evolved from the original conceptualization of employee satisfaction and motivation by treating employees as customers and jobs as products for improving service quality, to customer orientation/market orientation and the use of marketing-like approach and marketing-like tools internally to motivate employees, to the use of internal marketing for the implementation of external marketing programs, also the extension of internal marketing to the implementation of any function strategy (Ahmed et al., 2003). Lings (2004) concludes that there are three sets of actions pertaining to firms who successfully implement internal marketing, similar to external market orientation, referring to “information generation”, “information dissemination”, and “developing job-products” which satisfy and motivate employees. Based on the three behavioral dimensions he proposed (a) internal marketing orientation has a direct positive impact on the internal aspects of organizational performance (i.e., employee satisfaction, employee retention, employee commitment), and (b) internal aspects of company performance impact directly on the external aspects of performance (i.e., customer satisfaction, customer retention, and profit). Gronroos (1982) asserted that one of the consequences of internal market orientation will be that employees are motivated to be more market oriented.

*H4 Internal market orientation mediates the relationship of market oriented culture and employees’ market oriented behavior*

Lam, Kraus, and Ahearne (2010) asserted organization culture could be diffused through a social learning process (Bandura, 1977), which suggested that individual behavior is determined by both the environment and a person’s motivation to learn proactively. Customers’ perceptions of the service quality provided by an organization are expected to determine their willingness to remain with that organization. These perceptions are often affected by interactions between customers and both service providers and the climate that characterizes the service organization (Yagil, 2001, Schneider and Bowen, 1995). Once some service frontline employees perceive the service climate from organization that encourages employees to take any tactics to serve customers, he/she is motivated to change own responses.

*H5 Service climate mediates the relationship of internal market orientation and employees’ market orientation behavior*

Therefore, we anticipate that once a market-oriented culture is established internally, with internal marketing activities that foster service climate, employees’ market oriented behavior will be successfully created.

*H6 Internal market orientation and service climate mediates the relationship of market orientation culture and employees’ market orientation behavior*

## RESEARCH FRAMEWORK

The theories and research hypotheses of H1 – H6 are consolidated as the following theoretical framework.

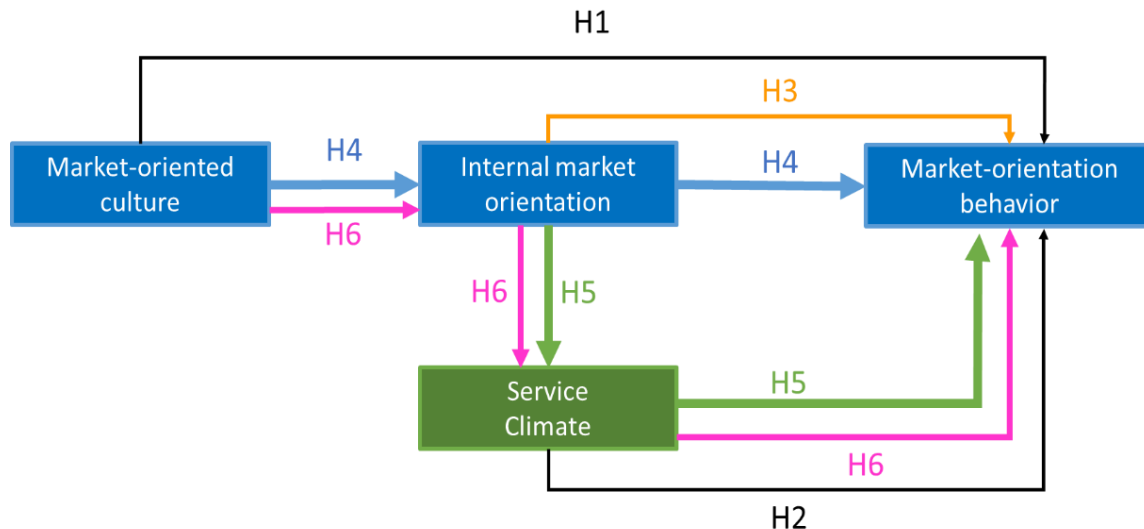


Fig. 1 The theoretical framework

## METHODOLOGY

### • Instrument and samples

The survey was conducted with web-questionnaire via key research agencies in Taiwan, China, and US respectively during April 5 – April 20, 2017. Respondents were the front line service staff in F&B industry. In total, there were 615 valid questionnaires collected, consisting of 200 samples from Taiwan, 210 from China, and 205 from US.

### • The questionnaire

There are four constructs in the study: market-oriented culture, internal marketing orientation, service climate, and employees' customer oriented behavior. We reference the questionnaire items used in previous studies with proved validity and reliability. The English and the corresponding Chinese back-translated versions are both cross-checked:

1. Market orientation culture: Farrell and Oczkowski (1997); Campo, Díaz and Yagüe (2014); Lin (2001).
2. Internal marketing orientation: Lings and Greenley (2005); Rodrigues and Carlos Pinho (2012); Chin (2009).
3. Employees' market-oriented behavior: Brown, T. J., Mowen, J. C., Donavan, D. T., and Licata, J. W. (2002).
4. Service Climate: Schneider, White and Paul (1998); Salanova, Agut and Peiró (2005); Wang (2009).

## DATA ANALYSIS & RESULTS

To ensure the validity and reliability, we conducted Confirmatory Factor Analysis (CFA) with SPSS by forcing to enter only 1 factor with principal components analysis, and eigenvalue is greater than 1. We only accepted items which factor loadings were greater than .5 (Tabachinica and Fidell, 2007), reran factor analysis with remaining items until all loadings are greater than .5. All the models reach KMO value that is greater than .5, Bartlett's significant value below .05. Also, reliability is further tested with Cronbach's alpha value to mark sure the coefficient is above .4 (Cronbach, L. J., 1946). In the end, there were 8 items removed from our analysis, so totally 63 items were included in the present study (was 71 items).

## Main Effect

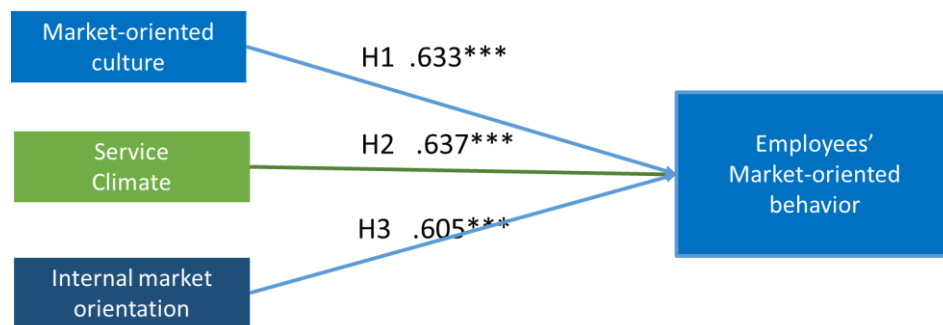
Simple regression was conducted for H1, H2, H3, the result shows that the 3 constructs, Service Climate, Market-oriented Culture, and Internal Market Orientation all have significant positive effects on employees' market orientation behavior, the standardized Beta coefficient is displayed in Table 1, ( $b=.637, .633, .605, p<.001$ ), all reach significant level. Therefore, H1, H2, H3 are supported.

**Table 1.** Effects of service climate, market-oriented culture, and internal market orientation on Employees' market-oriented behavior.

	Predictor	Outcome	Standardized $\beta$	$t$	$p$	$F$	$\Delta R^2$
H1	MOC	MOB	.633***	20.243	.000	409.798	.400
H2	SC	MOB	.637***	20.484	.000	419.575	.405
H3	IMO	MOB	.605***	18.835	.000	354.773	.366

\*\*\* $p<0.001$  \*\* $p<0.05$  \* $p<0.01$

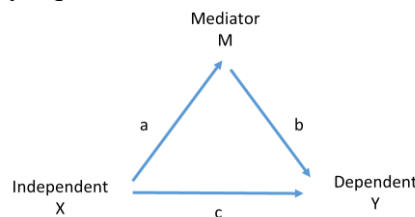
Note: MOC = Market-oriented Culture, SC = Service Climate, MOB = Market-oriented Behavior, IMO = Internal Marketing orientation



**Fig. 2** The effect of Market-oriented culture, Service Climate, and Internal Market orientation on the Employees' market-oriented behavior (H1, H2, H3)

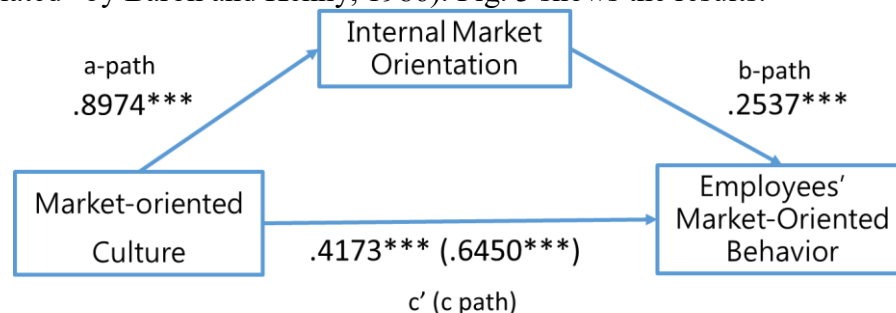
## Mediation Effect

Since some scholars question the often-used mediation model suggested by Baron & Kenny (1986) (LeBreton, Wu, Bing, 2009; Zhao, Lynch, Chen, 2010), we adopt the rationale proposed by Zhao, Lynch, and Chen (2010), who maintain the indirect effect (mediation) is the product of two parameters ( $a \times b$ ) by identifying the effect of X on Y derived from Baron & Kenny (1986) is in fact mathematically equivalent to be the "total effect" as  $c' = (a \times b) + c$ .



Zhao et al., (2010) claim that mediation is strongest when there is an indirect effect but no direct effect, the strength of mediation should be measured by the size of the indirect effect, not by the lack of the direct effect. As such, there need not be a significant "effect to be mediated" in  $X \rightarrow Y$  relationship. There should be only one requirement to establish mediation, that the indirect effect  $a \times b$  be significant. They recommend bootstrap test popularized by Preacher and Hayes (2004), which technique generates an empirical sampling distribution of  $a \times b$ . It takes the research's sample of size N and from it draws with replacement N values of (X, M, Y) to create a new sample.

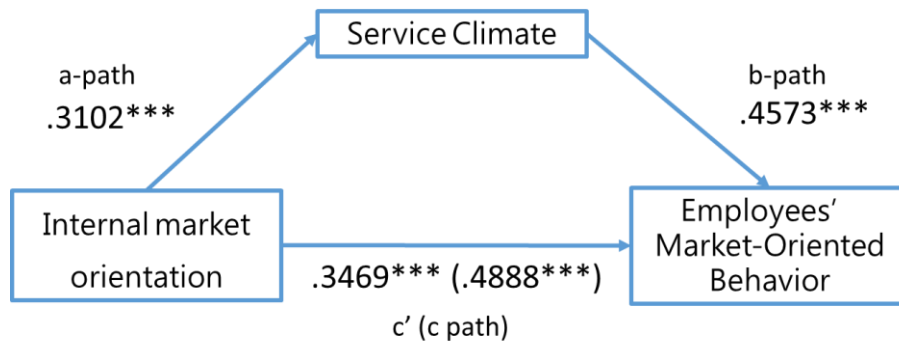
To test H4 and H5, the multiple regression analyses were conducted to access each component of the proposed mediation model. First, it was found that the market-oriented culture was positively associated with market-oriented behavior (c-path) ( $B=.6450$ ,  $t(613) = 20.2435$ ,  $p=.000$ ). Secondly, it was also found that market-oriented culture was positively related to internal market orientation (a-path) ( $B=.8974$ ,  $t(613) = 25.0312$ ,  $p=0.000$ ). Lastly, results indicated that the mediator, internal market orientation, was positively associated with market oriented behavior (b-path) ( $B=.2537$ ,  $t(613) = 7.3700$ ,  $p=0.000$ ). Because both the a-path and b-path were significant, mediation analysis were tested using the bootstrapping method with bias-corrected confidence estimates (Preacher & Hayes, 2008). In the present study, the 95% confidence interval of the indirect effects was obtained with 5000 bootstrap samples (Preacher & Hayes, 2008). Results of the mediation analysis confirmed the mediating role of internal market orientation in the relation between market orientation culture and employees' market orientation behavior (ab path) ( $B=.2258$ ,  $CI=.1407$  to  $.3165$ , significant as not including 0, (Preacher & Hayes, 2008)). In addition, results indicated that the direct effect of market-oriented culture on employees' market oriented behavior is still significant ( $B=.4173$ ,  $t(613) = 9.6022$ ,  $p=0.000$ ) when controlling for internal market orientation, while the value has dropped (from  $.6450$  to  $.4173$ ), which suggests a complementary mediation (or partial mediation). In this approach,  $c'$  represents only the total effect (as opposed to the "effect to be mediated" by Baron and Kenny, 1986). Fig. 3 shows the results.



\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

Fig. 3 Indirect effect of Market-oriented culture on employees' market-oriented behavior through internal market orientation (H4)

For H5, with the same bootstrapping technique, results of the mediation analysis confirmed the mediating role of service climate in the relation between internal marketing orientation and employees' market orientation behavior (ab path) ( $B=.1428$ ,  $CI=.1015$  to  $.1896$ , significant, as not including 0, (Preacher & Hayes, 2008)). In addition, results indicated that the direct effect of internal marketing orientation on employees' market oriented behavior ( $c'$  path) is still significant ( $B=.3469$ ,  $t(613) = 15.0239$ ,  $p=0.000$ ) when controlling for service climate, suggesting a partial mediation (or complementary mediation). Figure 4 shows the results.

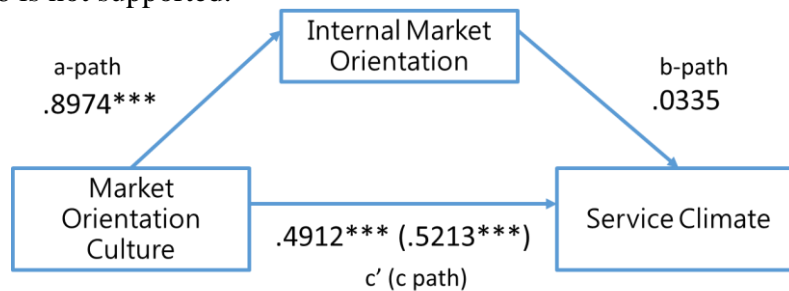


\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

**Fig. 4** Indirect effect of Internal marketing orientation on employees' market-oriented behavior through Service Climate (H5)

With H6, it was hypothesized that market orientation culture's indirect impact on employees' market orientation behavior, mediated by internal market orientation and service climate. So we had to test that if internal market orientation mediates the relationship between market orientation culture and service climate take effect, and that if the service climate mediates the relationship of internal market orientation and market oriented behavior, same as H5. (Logic from LeBreton, Wu, Bing, 2009).

The results showed that the b path is not significant ( $B = .0335$ ,  $t(613) = .7888$ ,  $p = 0.4306$ ). Moreover, the mediation analysis showed that the mediating role of internal market orientation in the relation between market orientation culture and service climate was not significant (ab path) ( $B = .0295$ ,  $CI = -.0717$  to  $.1287$ , not significant, as including 0, (Preacher & Hayes, 2008)). So H6 is not supported.



\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$

**Fig. 5** Indirect effect of marketing orientation culture on service climate through Service Climate (H6)

All the findings of hypotheses are summarized in Table 4.

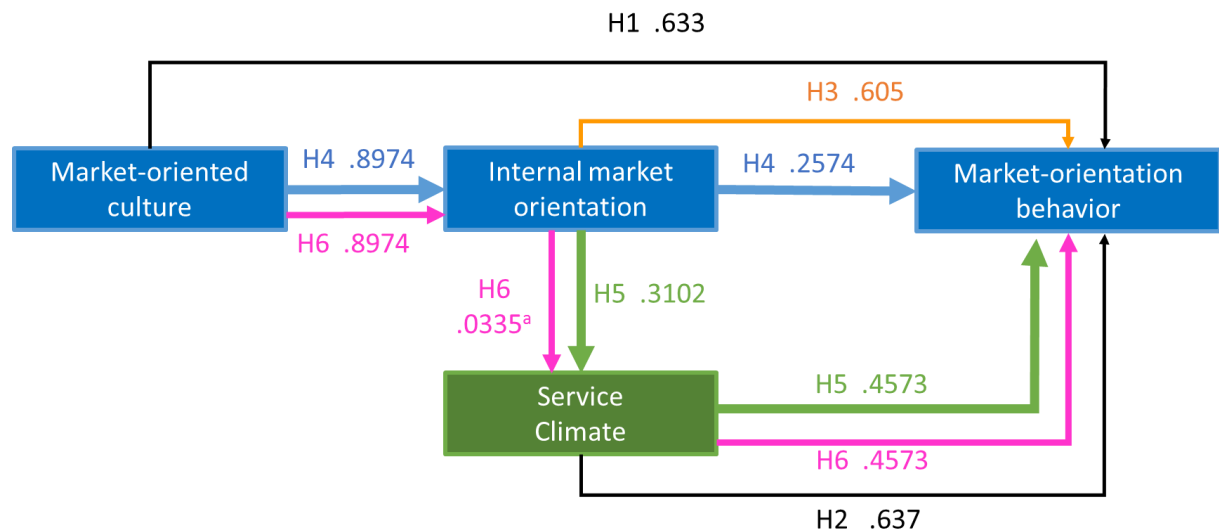
**Table 4** Summary of Findings

Hypothesis	Findings
H1: Market oriented culture influences employees' market oriented behavior positively	✓
H2: Employees' perceived service climate influences employees' market oriented behavior positively	✓
H3: Internal market orientation influences employees' market-oriented behavior positively	✓
H4: Internal market orientation mediates the relationship of market oriented culture and employees' market oriented behavior	✓
H5: Service climate mediates the relationship of internal market orientation and employees' market orientation behavior	✓

H6: Market oriented culture and service climate mediates the relationship of internal market orientation and employees' market orientation behavior n.s.

Note: ✓ = supported; n.s. = not significant. **CONCLUSION AND MANAGERIAL IMPLICATION**

Figure 6 presents the overall empirical effects of the proposed theoretical framework.



a: not statistically significant

**Fig. 6** Overall construct's relationship

We suggest several factors as important determinants of employees' market orientation behavior. The service climate perceived by service frontline staff helps to build their market-oriented behavior positively. A market-oriented culture in organization strongly helps to establish employees' market orientation behavior. Furthermore, the process of internal marketing (internal market orientation) also facilitates employees' market-oriented behavior.

It is also suggested that the relationship of market-oriented culture and employees' market-oriented behavior be mediated or reinforced by internal marketing practice. In other words, with an internal marketing programs that treat employees as internal customers can help transform such culture to be their service practice, in turn, it will help to improve organization's service quality. Also, the relationship of an internal market orientation and employees' market-oriented behavior is mediated by the perceived service climate. Hence an organization can create a salient service atmosphere which allows employees to exert any tactics to serve customers, the internal marketing efforts made to create market orientation culture can impact employees' market orientation behavior positively.

### A comparison of Taiwan, China, US

In order to further examine if there is significant difference among Taiwan, China, and US in these constructs, we did Scheffe post hoc ANOVA test to identify sample means that are significantly different from each other. The results are displayed in table 5.

For the main constructs, respondents from China perceived highest on most of the constructs, except service climate. Respondents from Taiwan perceived higher on market-oriented culture and internal market orientation than US counterparts. While US staff perceived better service climate in their working environment than the other regions. It is interesting to explore the cultural effect on the theoretical framework in the further research.

**Table 5.** Construct mean differences in Taiwan, China, and US

	Taiwan	China	US	Taiwan- China		Taiwan-US		China-US	
				$\Delta$	p	$\Delta$	p	$\Delta$	p
Market Oriented Culture	3.89	4.13	3.73	-0.24**	0.001	0.16**	0.001	0.4**	0.001
Internal Market Orientation	3.83	4.04	3.27	-0.21*	0.018	0.56*	0.018	0.77*	0.018
Market Oriented Behavior	3.97	4.17	4.14	-0.2**	0.008	-0.17**	0.008	0.03**	0.008
Service Climate	4.00	4.19	4.40	-0.19*	0.014	-0.4*	0.014	-0.21*	0.014

\*\*\*p<0.001 \*\* P< 0.01 \* P<0.05

Note: Delta ( $\Delta$ ) is the absolute difference between two countries.

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21-BF09-5652

## THE IMPACT OF GREEN INNOVATION ON ORGANIZATIONAL PERFORMANCE IN DIFFERENT INDUSTRIES OF PAKISTAN

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### ABSTRACT

This paper is a descriptive research on green innovation and practices of different organizations in Pakistan and its impact on their performance. In developing countries like Pakistan, organizations are now taking into consideration green strategies in various aspects of businesses because of emergence of environmental issues globally. Green product innovation has a positive impact on performance of organizations, however past researches pertaining to the topic were conducted in developed countries and very few studies can be seen in Pakistani context. Thus to compete, organizations in Pakistan must also become more innovative, adopt a proactive strategy to cater consumer needs and preferences and address global environmental challenges and concerns by bringing innovation in business processes. The findings of this study show a very positive relationship between green innovation and organizational performance.

**Key words:** Green innovation, Organizational performance, Environment, Brand loyalty, Environmental sustainability.

### INTRODUCTION

Companies in Pakistan have started to pay attention to green innovation in every facet of business due to rise of environmental concerns globally. Such green practices are regulated under strict code of conducts, laws and regulating bodies in many developed countries, but in case of developing countries like Pakistan these green practices are self-imposed by top management, which clearly shows that companies are concerned about environmental management behaviour which determines the degree of environmental concerns within an organization. Due to cut throat competitive environment, companies have to strive hard and strategize innovatively to stay competitive and gain competitive advantage. Innovative strategies regarding new products and services development are a key boost to Pakistan's competitiveness and growth. Green innovation now plays a very pivotal role in any organization because it helps to save environment from toxic waste, save energy, and recycle the useless materials. Technological innovation has led to many alternative ways of using energy. To save energy, companies are using machines and tools that solely work by solar system and hence help in saving environment from hazardous chemicals. Green innovation is a very new field in research and it is categorized as green product innovation and green process innovation. Many studies were conducted in well-developed and developed countries, very few studies can be seen in Pakistani context. The aim of this paper is to try to find the nature of green innovation and its impact on the organizational performance through conducting interviews with different employees of different business sectors of Pakistan.

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## LITERATURE REVIEW

Innovation and invention are used interchangeably but in reality, they both are very different and difficult concepts. There are many different ways to define these concepts. Invention is defined as a product or technology that may or may not provide any value or benefit to customer. On the other hand, innovation can be described as any product or service that has been developed and marketed to customer in such a way that they perceive it as novel or a product that has never been existed in market before. In this paper, different definitions of green innovation are taken into account from different authors. One such definition is that any measure taken by significant stakeholders to promote the development and application of improved or new process, products, techniques and management systems that contribute to reduce negative environmental impacts and attain specific ecological goals (Kemp, 2009). Green innovation can be defined in many different ways such as any hardware and software innovation, which leads to energy-saving, prevention of pollution, recycling of waste, new product development and green product designs and in return help to achieve corporate environment friendly image (Chen, 2008). Green product innovation is a multi-dimensional process which consists of three key types that are raw materials that have environmental friendly features, energy and pollution. The stages that are involved in green product innovation include manufacturing process, the eco-friendly use of product and disposal of product with minimum negative environmental impact (Pujari, 2010). Green product innovation requires a great deal of research in developing new green products. The company who aims to develop green products has to select the materials that later produce minimum amount of pollution, use minimum quantities of raw materials in manufacturing process and strategize in a way that product is easy to recycle and decompose.

Green process innovation is defined as the implementation of novel ideas which lead to change of product process and management practices that have minimum negative environmental impact (Yu-Shan Chen, 2016). Effective green process innovation strategy helps in reducing mission of harmful materials and waste, reducing consumption of energy sources like water, coal and oil, and reducing the use of raw materials. Developing countries have started to pay attention to green innovation and directly linking it positively to organizational performance. Organizational performance can be defined as a parameter that is used to evaluate the success of organization in creating and delivering value to all its stakeholders (internal and external) (Decramer, 2016). There are different studies that show influences green innovation have on organizational performance. This paper particularly focuses on influences green innovation has on organizational performance in Pakistan. On the other hand, environmental performance is defined as capabilities of manufacturing plants to reduce air emissions, overflow waste, and solid waste. Which in return leads to their ability to decrease consumption of harmful, toxic materials, decrease in environmental accidents, and improvement in an organization's environmental situation.

In recent years, green innovation is an interesting topic where there are many studies concentrated on the relation between green innovation (green product innovation and green process innovation) and its effect on the company's competitive advantage to gain positive organizational performance. Wong mentioned in his study that there is a positive relationship between green product innovation and competitive advantage (Wong, 2012). Whereas, in another article Yu-Shan focused in his study on discovering the positive impact of green innovation performance on the competitive advantage. Most companies thrive to achieve competitive advantage over their direct or indirect competitors, if companies strategize and implement the green innovation, it will definitely help them achieve their target (Yu-Shan Chen, 2006). Operational performance is also directly linked to company's overall performance, if green process innovation is successfully implemented business performance will increase drastically. Also Sang M Lee found a direct relation and link between green

supply chain management practice execution and business performance. Their findings show that overall organizational performance will be improved when there is intervention of green supply chain management that enhances operational performance (Sang M. Lee, 2012). This study focuses on green innovation and analyses the relationship between green innovation, firm performance, and competitive ability of management of organization. The relationship between green product innovation and firm performance is based on several factors. The efficient use of raw materials results in lower costs for raw materials and lead companies to find new and innovative ways to convert waste in saleable products, which in return lead to higher profits for companies (Micheal E. Porter, 1995). Consumer market is getting aware of the benefits of green products. Consumer's preferences are changing with the passage of time. Digitalization has made the consumer market more knowledgeable about the products, their use and benefits. It is now very challenging for companies to stay competitive and meet consumer needs and preferences. Green products have public and private benefits for consumers (Kammerer, 2009). Demand for green products is increasing day by day. The companies can exploit available resources to increase productivity through innovating green products (Chen, 2008). Different researches have been conducted in different regions of the world and they have shown a positive relationship between environmental innovation, organizational performance and environment. Green innovation has been used interchangeably with eco-innovation, environment and sustainable innovation. Innes conducted a research based on data of 127 US manufacturing industries. The result indicated that there is a very strong relationship between green innovation and environment (Innes, 2010). Many other researches have shown that pollution reduction targets set by companies can help promote the cost saving benefits of environmental research and development and hence encourages more innovation in processes and products.

Another study conducted by Gluch about Swedish construction industries indicated that such organizations can adopt green innovation and hence improve the overall organizational performance and increase market growth and revenues (Pernilla Gluch, 2009). A research conducted by Pujari indicated that green product innovation has a very positive and sustainable impact on North American market (Pujari, 2006). There are many challenges and risks involved when environmental concerns pose a threat to many organizations and encourages them to move towards greener processes and products and shift towards green innovation and sustainability paradigm. European countries have been emphasising the importance of green innovation. Environmental innovations are considered to be best strategy for inclusive growth and gaining competitive advantage.

## **EMPIRICAL STUDY**

### **Background information on the selected companies**

#### ***Mobilink (Jazz)***

Mobilink was a trade name of Pakistan Mobile Communications Limited (PMCL). It is the largest mobile operator in Pakistan. It provides a wide range of telecommunication services to individual and corporate subscribers (contributors, 2017). Its parent company is VEON (previously known as Vimpelcom Ltd), which is a multinational telecommunication service company, operating in different regions of Asia, Africa and Europe (Wikipedia, 2017). Environmental sustainability is one of the essential components of a successful society. Mobilink has a very strong corporate responsibility (CR) department that is concerned with environmental issues, planet and natural resources. Eco-friendly practices are implemented in all segments of business and demand sustainable consumption of bio-degradable as well as non-degradable resources. Mobilink has adopted environmental management system in all office premises, which ensure careful consumption of electricity, water and fuel.

Environmental management system (EMS) in collaboration with World Wildlife Fund (WWF), is based on processes that enable the company to reduce the negative impacts on environment and increase overall organizational performance. Another initiative taken by Mobilink is Go-Green, eco-friendly solutions to reduce the impact of global warming on the earth. Mobilink has motivated and encouraged its customers to subscribe to E-bill rather than paper bills. This strategy has helped the company to reduce its manufacturing cost of producing paper bills and reduce the waste and in return helps save the environment from waste. Mobilink has won “Green Office Certification” from WWF<sup>4</sup>. (Foundation, 2015) Mobilink was awarded because for its environmentally sustainable practices that lead to a 35% reduction in the carbon footprint and 50% in solid waste.

### ***Silver Star Group***

An icon of excellence and unique soccer balls manufacturing and exporting company in South Asia, by using its own manufacturing facilities for casing material and bladders. It strives for highest compliance of corporate social responsibility that contributes value to all its stakeholders, strongly supports and absolutely ensures worker’s rights, and customers’ satisfaction by setting up sustainable new leadership standards, quality management systems and culture (Silver-Star, 2016). Working towards a sustainable future, Silver Star uses water-based chemicals in all manufacturing processes. All the chemicals are approved according to standards from international laboratories.

### ***Telenor***

Telenor Pakistan places great emphasis on Health, Safety, Security and Environment (HSSE) in conducting its day to day business. Telenor follows international standards and national laws to manage health and safety of its employees, internal and external environment in supply chain. <sup>5</sup>Telenor Pakistan has successfully executed an incorporated HSSE management system with ISO 14001 certification for Environment and OHSAS 18001 for occupational health, safety and security, keeping internal operations at priority in line with the global Go-Green initiative<sup>6</sup>. Telenor Pakistan has responsibly been working on green innovation and it has recently started its call centre which is energy efficient and is known as the Green Field Call Centre. The building consists of advanced technology, high international security standards and safe working conditions for all of its employees. Telenor has always followed the international trends and standards. Going green initiatives have helped the company achieve its targets and increased employee productivity. According to CEO of Telenor, the basis of this call centre has been laid with eco-friendly resources and strictly adhere to the standards of health, safety and environment.

## **RESEARCH QUESTIONS**

Despite the importance of implementing a business strategy that takes into account the ecological concerns, few studies have examined the relationship between market orientation and environmental practices. This paper will help to contribute to theoretical and practical knowledge to fill this gap by addressing the following questions:

- 1) Does the introduction of the environmental facilities help firms towards green innovation?

4 Mobilink Foundation.CR-Report 2015, ULR:<http://www.mobilinkfoundation.org/archives/CR-Report%202016.pdf>

5 Telenor Group Sustainability Report 2016

ULR: <https://www.telenor.com/wp-content/uploads/2017/03/Sustainability-Report-2016-Q-4e6018fc44e89edf8038884d8258b287.pdf>

6 Telenor Group Social Responsibility Report 2013

ULR: <https://www.telenor.com/wp-content/uploads/2015/04/Telenor-Group-Social-Responsibility-Report-2013.pdf>

- 2) How does Green marketing strategy of firms positively link with organizational performance?
- 3) Does green marketing communication reflect a positive corporate image?

The aim of this paper is to investigate if firm's green strategy can boost innovation, corporate reputation and increase overall performance. The evaluation of company's green initiatives and the effects on their performance have been achieved through the content of annual and sustainability reports as well as interviews with business managers.

## ANALYSIS

### Environmental facilities and green innovation

In response to the question regarding environmental facilities, most of the respondents said that environmental facilities eventually help the firm towards green innovation. Environmental facilities urge the management as well as the employees to go towards the green innovation and employ green ways to manufacture their products. In recent times a lot of importance has been given to green innovation and organizations are looking towards different ways to adopt the green practices, this is because of the fact that people nowadays prefer such organizations and brands which are helping the environment in any way. People like to be associated with such organizations or brands. This eventually helps the organizations in increasing the profits and gaining a competitive advantage. Because of the green facilities organizations are more inclined towards green innovation for example; Mobilink started its green sustainability initiative. The main purpose of this initiative is to cut down the consumption of electricity, water, fuel, power, and paper in the telecom industry. Mobilink is striving to reduce the paper usage and increasing the process of recycling. Because of the environmental facilities available Mobilink was able to innovate a new carpooling network by the name of "MobiRide". This initiative helps the corporate employees to travel together and cut down the fuel cost and reduce the CO2 emission. This program also helps in addressing the issue of parking space. Because of the environmental facilities available their organization is shifting most of its offices on the solar energy in the mission to reduce the use of electricity and finding alternate ways for power.

### Green marketing strategy and Green innovation

Green marketing strategy of the firm can help the firm to increase its performance in different ways. A firm can achieve many advantages by implementing the environmental management in the operations of business. The firms can easily increase their and its employees' performance by implementing green marketing strategy. There are a number of advantages associated with the green marketing such as:

- Good corporate image
- Reduced waste
- Increase in customer satisfaction
- High productivity
- Low cost
- Increase in good will
- High market share
- High profitability

All of the benefits which are driven by the green marketing can easily be used to gain competitive advantage over competitors as the green marketing helps in the reduction of overall cost of production, because of less waste, less use of raw material and saving energy a lot of cost can be saved which helps the company in increase profitability. One more advantage of green marketing is increased brand loyalty. If firm is practicing the green marketing, then

customers will like to associate themselves with such an organization. Green products have a different perspective, and this helps in building a loyal relationship between the firm and customer. When customer become loyal to an organization then they become less price sensitive and thus the firm can charge premium on the products and can earn high profit margins. Even in times of economic downturn green products will show less decline in sales. After the implementation of green marketing practices the environment of firm has become pleasant and chaotic business activities have reduced. Because of green marketing initiative, company was able to cut a lot of different production costs which helps in increasing the profit margins for the company as firm had to spend less. Green marketing initiative caused the customer base for their products to increase gradually because of the fact that people want to associate themselves with product which are healthier and are good for environment and society. The green marketing or green initiatives will result in a win-win situation for all of the stakeholders of the company because all of the skills and resources will be pooled and would be taken to build something better. The level of customer satisfaction will increase because customers will be able to get high quality and environment friendly products.

### **Green marketing communication and corporate image**

The environmental protection has become a very huge issue nowadays and it is also a very important factor in the markets from the perspective of customers. Recently because of the work and efforts of different organizations and non-profit organizations (NGOs) about the environmental problems, now customers are more willing to buy environmental friendly products. Thus the green marketing eventually helps in portraying a positive image of organization. According to management of companies, earlier times people didn't much tend to care about the environmental issues but now people have become aware of the limits of natural resources. Now people see it as a moral code because it has adhesive damages. Pollution cannot be eradicated fully but the organizations which are taking steps to keep it at the minimum are now highly appreciated by the customers and consumers now prefer to associate with such brands because that way they feel that they are indirectly helping the environment and nature. One major issue while talking about the environment is resources. It is now a known fact that the natural resources are very limited while the human needs are unlimited. So it has become very important for the marketers to think about the future and invest in green marketing. Green marketing helps the organizations and marketers to support the environment by creating a number of different advantages. Nowadays people have become very much brand conscious and they like to associate themselves with such organizations and brands which are more concerned towards environment because association with an environment friendly brand and organization tends to portray a positive image in society.

The concept of green consumer can be elaborated as an individual who avoids such organizations and products that tends to harm the environment, are dangerous to health or create pollution. After the proper introduction of green marketing concept and anticipating the importance of it, most of the organizations switch towards the green marketing to portray a positive image to the consumers and make a positive mark in the minds of customers. Nowadays organizations are spending a lot of money on different types of corporate social responsibility (CSR) activities that aim to build a good corporate image. So it would be valid to say that the organizations in Pakistan should invest more capital in green marketing as it will help in building a good corporate image, the environment and society will also get benefited from it.

### **Eco Friendly products and financial performance of organizations**

Products with environment friendly characteristics help in increasing the output growth. The environment friendly products tend to increase the customer base as nowadays people are more

inclined towards using the products which are environment friendly. In this way customers want to add value to their society.

It has also been seen that when people associate themselves with a product or organization because of its environment friendly characteristics then they become less sensitive to prices of the products and they become more willing to pay premium prices as well. Implementation of strategies regarding green innovation allows companies to increase revenue growth in products with environment friendly characteristics because of two major reasons:

- Increase in customer base
- Premium Pricing

Implementation of the recycling process has helped many organizations to cut down a lot of costs which eventually adds up to increased profits. The following ideas were implemented in the organization to cut down costs:

- The unnecessary material was totally avoided
- The staff was asked to print double sided to reduce the paper usage
- The staff was also asked to use the scrap paper for the purpose of message and notes taking instead of using new papers
- Papers were recycled commercially

All of these ideas helped in cutting down the costs to the minimum level which eventually increases the revenue for the company. Not only sales but environmental friendly tactics helps in increasing the overall brand value, people like to spend more on such brands where they can get a sense that they are also doing something for environment and society.

Environment friendly characteristics tend to impact the revenues of the firm in a longer run, however in the short run the revenues of the company may decrease instead of increasing because going green can be costly. It is quite possible that organization has to buy new eco-friendly machinery or make other arrangements which can be a costly investment for the organization, however after a period of time these activities will add up and help in increasing the overall revenue for the company.

### **Green innovation and Organization performance**

The green process includes the technological advancements such as energy saving, waste recycling and using technology to reduce and prevent pollution. Nowadays green innovation has become one good source to achieve competitive advantage and sustainable development. The green innovation is closely related to the new product development. The green product development helps the organization to portray a positive image in the society and attract the attention of customers. Customers are more willing to buy and try new products if they are environment friendly.

It requires a lot of marketing and communication but if the product is a result of green innovation then customers become more willing to buy the product thus increasing the performance of the company. Green innovation process helps in reducing the pollution and also saves a lot of cost by recycling and saving. Green innovation also includes re-designing the existing product by using the natural resources and save energy. The main aim should be to reduce the amount of waste and leave a positive impact on the environment. So it could be said that the effective development of green products and green processes are helping the organizations by increasing their performances. Due to the raising concerns about environment, 'go green' is the only way for organizations to deal with such issues and it is also very important to address these issue in a timely manner. To adopt the green practices the companies must undertake the important factors such as:

- Customer concerns
- Regulations by government

- Supplier's capabilities
- Preferences of owners
- Determinants of green practices

All of these factors mentioned by the respondent must be undertaken before looking towards green innovation.

## FINDINGS

It is analysed that the green marketing and environmental facilities have a lot of advantages not only for environment and society but for organizations as well. Respondents think that the green facilities help organizations to go for green innovation and build products which are environment friendly. Green marketing helps in increasing the overall performance by cutting down the manufacturing costs and by increasing the demand for the product. Companies reflected that their consumers nowadays also like to associate themselves with such organizations which care for environment and society and for that they are also willing to pay premium prices. Thus, it can also be implied that green marketing not only helps in increasing the performance of the organization, but it also helps in building a positive brand image. Other than increasing the sales and retaining the customers, green marketing also helps the organizations in building a positive atmosphere in the organization and employees also feel satisfied working for such organizations which are also doing something for the environment and society. Due to growing concerns about the environment and increasing pressure on companies it is observed that companies are looking towards green innovations to make things better for everyone.

## CONCLUSION

As reflected in the research, green innovation helps companies to improve their performance not only in terms of monetary performance but also non-monetary performance. Adopting green innovation is one of the best strategies for corporate social responsibility. The extent of results is though dependent on strategies and tactics, used by management at different levels. The research reflects that companies have claimed that their consumer market is ready to buy new products or to try new services if the organization offering the products or rendering services show concerns for the environment. This actually helps the organization in maximizing their returns by an increase in market share of new products. Though it has also been observed in research that "Going Green" might be costly for the firms in short run but it actually provides competitive advantage in the long. Though in the research conducted, companies have claimed that people were not too much concerned in earlier times for green environment, but due to increased awareness about limitation of natural resources, customers are savvier now and prefer to reward green companies. Summing up, "Going Green" helps the companies in improving brand awareness as well as brand image. This leads to increased brand usage which provides better financial returns to the company.

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24-BF14-5689

## **VALIDATION STUDY OF PUBLIC ACCEPTANCE ON WILLINGNESS TO PAY (PAWP) ON MAXIMUM DEMAND (MD) CHARGE IN MALAYSIA**

WAN MUHAMMAD ZAINUDDIN WAN ABDULLAH<sup>1</sup> AND WAN NUR RAHINI AZNIE ZAINUDDIN<sup>2</sup>

### **ABSTRACT**

The Malaysia Electricity Supply Industry (MESI) Reform aims for their society to pay for cost-reflective electricity price. One of the possible way is by having all electricity customers to pay a fair share of electricity producing cost which include Maximum Demand (MD) charge. A pilot survey has been conducted to clarify and validate on the dimensionality of the instruments of Public Acceptance on Willingness to Pay (PAWP) on MD charge that include willingness to pay, understanding on electricity bills, understanding on electricity pricing and awareness on amount electricity consumption using validation study. The study had conducted exploratory factor analysis (EFA), confirmatory factor analysis (CFA), discriminant and convergent validity and reliability on a survey of 154 Malaysian electricity users. Four variables extracted, and all the revised variables had achieved the unidimensionality, validity and reliability of the model. Larger sample size on final survey should be considered for future work.

**Key Words:** Maximum Demand Charge, Willingness to Pay, Public Acceptance, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA)

### **INTRODUCTION**

Commonly, residential customers are paying electricity through a two-part tariff where the revenue is collected using a flat volumetric rate. However, the volumetric rate is unable to inform the customer on the actual cost structure of power supply. This is because the actual cost is a combination of mostly fixed costs, costs dependent on peak electricity demand (kW) and costs dependent on the time and location of energy consumption (kWh). The traditional volumetric charge also creates a barrier in taking advantage of new technology which could be useful to help utilities in allocating costs to consumers more efficiently and fairly based on their consumption patterns. In a world of limited customer-side technology, limited customer option for power supply and steady load growth, the volumetric charge may be sufficient cost recovery vehicle. However, in today's modern technology, the volumetric charge creates a disadvantage mechanism for prosumers by departing loads to bypass the fixed and demand-based costs of being connected to a larger system (Hledik, 2014).

Therefore, the approach of only charging volumetric rate is considered as not being cost-reflective since such tariff structure does not promote economic efficiency or equity in customer bills. This tariff structure also is not able to allocate costs to customers more efficiently and does not encourage customers to adjust their usage patterns in order to avoid highest-cost electricity production (Jacobs, 2010). As the results, utilities may become hesitant to make necessary grid investments. This will cause a delay in infrastructure upgrades and reduce grid reliability for all customers. Hence, a need for cost-reflective tariff has now become pressing with MESI is aiming for their society to pay a cost-reflective electricity price. A new solution that rapidly emerging as an attractive option is an introduction of residential demand-

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based charge (Mohamed and Lee, 2006). Hence, the residential electricity bill will include charges on both electricity use and electricity demand. The demand-based charge is also known as MD charge is used to pay for the costs of operating, maintaining and investing in the electricity grid. The electricity use is measured in kilowatt-hours (kWh) to reflect the consumption of electricity over a given period of time, usually a month (Tenaga Nasional Berhad, 2017). While, the electricity demand charge is based on the peak demand or a maximum rate of electricity consumption in kilowatts (kW) at a particular facility each month over a specific time interval such as 15, 30 or 60 minutes. In Malaysia, demand charge is yet to be imposed on residential customers. Therefore, this implementation can encourage better use of grid capacity, minimising a cross-subsidies between customers and foster an adoption of advanced technology (Faruqui et al., 2016). In introducing a new charge, customer acceptance and understanding on implementation of the new charge are crucial. Using exploratory factor analysis (EFA), confirmatory factor analysis (CFA), discriminant validity, convergent validity and reliability of Cronbach's Alpha, this study attempted to clarify and validate on the dimensionality of the instruments of PAWP on MD charge. Based on the results, this study concludes the instruments of willingness to pay MD charge, understanding of electricity bill, understanding of electricity pricing and awareness on amount electricity consumption can be used to gain the public opinion on cost-reflective electricity price. The paper is organised as follows. In section 2, the related literature review. In section 3, the aim of study is presented. The methodology is presented in section 4. While results are presented in section 5. Section 6 is results discussion and finally, conclusion is being presented in the last section.

## LITERATURE REVIEW

Households' willingness to pay on MD charge may vary significantly (Caves, Christensen, and Herriges, 1984; Stokke, Doorman, and Ericson, 2010; Taylor and Schwarz, 1986; Wedgwood and Sansom, 2003). These variations could be attributed to differences in their understanding on electricity bills, understanding on electricity pricing and awareness on amount electricity consumption. For example, variation in the amount of energy use in individual houses could be attributed to differences in engineering factors, economic factors, energy type and household characteristics (family size, age of household members, race/ethnicity, etc). Apart from these factors, the study also finds that people's behaviour is needed to explain the variation in the amount of energy use in individual houses such as people's norm, beliefs, values etc. People who are fond of environment will be more likely to respond to environmental information than price information.

The focus of MD charge has mainly been on the commercial and industrial sectors for decades and there have been extremely rare case for residential rate offering. One of the reasons is the lack of necessary metering infrastructure. With recent Advanced Metering Infrastructure (AMI) being deployed to 8.5 million customers in Malaysia, this barrier will soon be removed (APPA, 2015 and Taggart, 2003). Thus, utilities are now showing increasing interest on residential demand charge to ensure actual cost of power supply can be recovered. But, there are still some issues that remain to be addressed to ensure the implementation of residential demand charge is successful. These include PAWP on MD charge in Malaysia.

Peak demand is known as the highest demand that can occurred on a utility network over a specified period of time and becoming a major global issue. A critical peak demand usually occurred when the high usage of the end use sectors such as residential, industrial and commercial coincide with each other's. As consequences, there will be high risk of power system failure. Hence, more investment on generation and distribution are in needed to maintain a sufficient reserve margin. This also means there will be an environmental impact since more fossil fuels and pumped storage hydropower plants are needed to supply the peak

load. One of the objectives in MESI Reform is to have the public to pay market reflective energy pricing. One of the possible approach to achieve this is by redesigning the residential rates to better align with the design of the tariff rate with the underlying cost structure (Berg and Tschirhart, 1988; Bonbright, Albert L. and David R., 1961; Hledik, 2014). One of the possible options is by charging residential MD charge. At least 25 utilities had offered demand charges to their customers, sometimes with energy-based dynamic pricing rates, to mitigate cross-subsidies caused by prosumers and by the slowdown in sales growth (Sherwood et al., 2016). The behaviour of these customers in response to a new demand charge are they seem to reduce their consumption, they seem to practice energy saving habits and larger and wealthier households are more likely to enrol in the MD charge programme.

With introduction of this new charge, all customers will have an opportunity to reduce their electricity bill by reducing peaks in their demand. In the case of residential customers, the peaks can be caused by starting on large motors, turning in induction furnaces or the use of compressors or ovens. In redesigning the residential rate structure, several steps need to be follow to ensure its success. The first step begins by detailed review on the state of the art of the rate structure. This includes a survey of the literature on MD charge and interviews with stakeholders who have experience with the design.

Secondly, a set of objectives need to be established and incorporated into the new rate structure. Lastly, the impacts of these rates on customer bills and consumption patterns need to be modelled to understand the extent of MD charge implementation to the public. Once the design of the rates has been finalized, a careful designed pilot study should be offered to a subset of customer which is important to determine the success of the full-scale rollout in the future. Hence, this study has conducted a pilot survey as a precedence survey focusing on the PAWP on MD charge. However, it is the purpose of this study to clarify and validate on the dimensionality of the instruments of PAWP on MD charge using validation study.

## **AIM OF STUDY**

Although MD charge has already been well established for commercial and industrial customers, is still less common for residential customers. A traditional two-part retail tariffs that currently being charged on residential customers will not be able to sustain in providing revenues needed by utilities to cover their fixed and capital costs. Therefore, MD charge can potentially be an attractive approach to better reflect the true investment costs of maintaining a reliable system and meeting peak demand. This is because MD charge is able to align prices and costs, incentivize smarter load management, improve utility cost recovery and reduce intra-class cross-subsidies. Hence, it is the purpose of this paper to clarify and validate on the dimensionality of the instruments of PAWP on MD charge that include willingness to pay MD charge, understanding on electricity bills, understanding on electricity pricing and awareness on amount electricity consumption using validation study (Kimberlin and Winterstein, 2008). This study conducted exploratory factor analysis (EFA), confirmatory factor analysis (CFA), discriminant validity, convergent validity and reliability of Cronbach's Alpha to achieve the research objectives. The result from the validation study is important to ensure the instruments of PAWP on MD charge are reliable and valid measurements among Malaysian electricity customers. Therefore, this study hopes to be as an input needed to refine the rate design in the future.

## **METHODOLOGY**

Using a survey of 154 Malaysian electricity users, the factor structure of the instruments of PAWP on MD charge are being assessed using EFA, unidimensionality of measurement model was tested using CFA, items' discriminant and convergence were tested using correlation and internal consistency of reliability between items were established using item-total correlations Cronbach's Alpha.

## Data Collection

The main purpose of this study is to evaluate public acceptance level towards MD charge in the electricity bills. The data was collected from the social networks, i.e. random email and random social media from random public in Peninsular Malaysia. This study was conducted by acquiring the basic information and email address of workers in private and government sectors in Peninsular Malaysia. Systematic random sampling method was used to ensure certain degree of generalization can be acquired to the population (Abdullah, Aziz and Shukor, 2014). Researcher will select the first item from 1500 population frame and for this study, 5<sup>th</sup> item was picked as the first item. Thus, 300 prospectus respondents were collected from the list.

## Sample Size Considerations

The sample size calculation was based on a stable factor structure model, which requires a minimum of 100 and 200 respondents and a respondent variable ratio of at least 2:1 to reduce the standards error (SE) of the correlations to negligible proportions (Field, 2013). Accordingly, the number of respondents in this study was 154 for the 4 variables to meet the EFA requirement with  $\alpha = 0.05$ .

## Data Analysis

Data analysis was performed by using the SPSS 20.0 for Windows statistical software package. A descriptive analysis was used to summarize sample characteristics. An EFA was used to determine the construct validity of PAWP on MD charge (Hair et al., 2010). A content validity was also performed to determine the instrument. A Cronbach's alpha coefficient and item analysis were used to verify the reliability of the instrument. Next, to determine model unidimensionality, confirmatory factor analysis (CFA) was performed followed by discriminant and convergent validity and reliability testing.

## RESULTS

### Sample Characteristics

From the whole of 300 respondents, about 154 respondents had participated in this study. All respondents had completed the survey with 51.33% response rate. Majority of respondents were female (68.2%), aged between 20 to 24 years old (61%), students (40.3%) and households with an income below RM2000 (45.5%). In terms of marital status, 68.2% were single while the rest were married. Majority of the respondent live in urban area (47.4%) and the household size varies between 1 to 3 people (64.3%).

### Exploratory Factor Analysis (EFA)

EFA method was performed whereby all items under instrument were run simultaneously. The Kaiser-Meyer-Olkin (KMO) value exceeded the rule of thumb of .60, while Bartlett Test result for all variables were significant ( $p < .05$ ) Hence, all items seem to be suitable for factor analysis. Under factor extraction, two techniques were employed. They were Kaiser's Criterion (eigenvalue  $> 1$ ) and Scree Plot (Rule of thumb – elbow for turning point). With four variables involved, factor extraction limit was set to be four components. Items with loading that above .30 with the factor question were used to characterize the factor solution (Field, 2013 and Hledik, 2014). Results from factor extraction, i.e. eigenvalues and Scree Plot produced four groups of variables that were in line with original instrument, i.e. (1) understanding of electricity bill, (2) understanding of electricity pricing, (3) awareness on amount electricity consumption, and (4) willingness to pay maximum demand charge (MD) and these four variables. To identify which item belongs to which variable, factor rotation using Direct

Oblimin method was conducted. Result from pattern matrix has disclosed the specific item for particular variable. (See Table 1).

**Table 1:** Factor Structure of Public Acceptance of Willingness to Pay (PAWP)

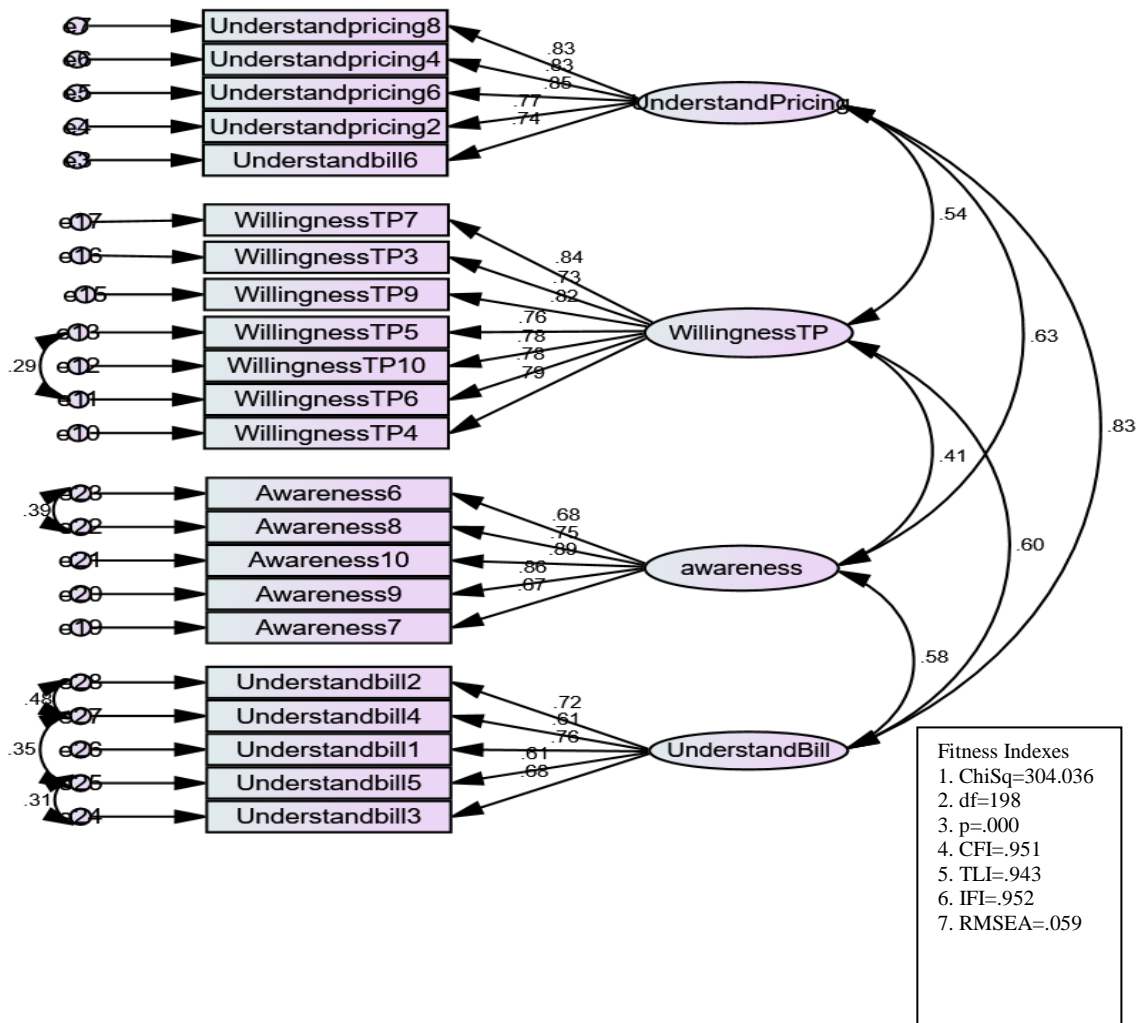
Variable	Willingness to pay MD charge	Understanding Electricity Bills	Understanding Electricity Pricing	Awareness of Electricity Consumption
<b>Willingness to Pay MD charge</b> To facilitate the development and adoption of MD charge in new demand management technologies. To ensure that utilities recover their cost of service from the MD charge paid by all consumers. To encourage consumers to reduce peak-coincident demand that causes high MD charge. To maintain sufficient generating and transmission capacity to supply the MD. To produce a better alignment between price that consumers pay with the cost of MD in the system. To reduce the need for new infrastructure investment to meet MD. To promote fairer cost allocation in paying the MD charge among ratepayers. To reduce/eliminate intra-class cross subsidies that are currently being used to pay for the MD charge. To provide consumers with the opportunity to reduce their electricity bills by managing their MD. To upgrade transmission system that supplies MD in response to recent reliability concern on Malaysian Electricity Supply Industry (MESI).	.850 .829 .828 .810 .791 .786 .777 .777 .765 .527			
<b>Understanding Electricity Bills</b> I know the appliances in my home that contribute the most towards my electricity bill. I am concerned about the expected future price in energy. I found that the current electricity bill is more user friendly and easier to read/understand. I like the current format of my electricity bill. I understand the use of the electricity consumption in my electricity bill. The information obtained from my electricity bill will help me to manage my energy usage/bills. I found that more information in my electricity bill will increase my understanding.		.770 .736 .619 .561 .478 .429 .424		

<b>Understanding Electricity Pricing</b> I know how to calculate my electricity bill amount in RM from the total electricity consumption that I used monthly. I know electricity usage price in m.u., per kilowatt hour, kWh. I know that total cost of generating and delivering electricity to consumers are separated into customer service, distribution service, transmission services and generation service. I know how the electricity prices are being set and determined. I understand the component in the electricity pricing. I know that current electricity bills use a flat rate tariff which is the same rate charged for electricity consumed at any time of the day and night. I know consumers that use electricity worth RM20 and below per month received the highest electricity subsidy.			.841 .724 .709 .644 .538 .493 .375	
<b>Awareness of Electricity Consumption</b> I need guidance, a service advisor, or campaign to understand about my electricity consumption. I always comparing my electricity consumption with other people. I can participate in electricity pricing discussions. I need a detail feedback and supports on energy-saving lifestyles to raise my awareness on consumption. I know that energy saving is important. I understand an energy efficiency concept.				.815 .805 .788 .768 .765 .472

### Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis is a special form of factor analysis. It is employed to test whether the measure of construct are consistent with the nature of the construct (Hair et al., 2010). The unidimensionality of the four constructs were tested using CFA, and all items were examined simultaneously using AMOS. The model fit had been achieved based on certain fitness indexes. In addition, results of the CFA operation (see Figure 1) on measurement model which consists of four variables shows that all items had factor loadings exceed .60 (Zainuddin, 2014).

**Figure 1:** Measurement Model of Public Acceptance of Willingness to Pay (PAWP)



### Convergence Validity

Convergent validity is the degree to which multiple items measure the same concept. Factor loadings, CR and AVE, can be used to measure the convergent validity (Hair et al., 2010). In terms of convergence validity of the constructs, it was tested and confirmed using Average Variance Extracted (AVE). Convergent validity is achieved when the scores yielded two different instruments measuring the same concept are highly correlated and also when all items in a measurement model are statistically significant (Sekaran, 2003). The value of AVE should be 0.5 or higher to achieve the Convergent Validity (Fornell and Larcker, 1981; Hair et al., 2010; Zainuddin, 2014). Result from Table 2 shows that all variables have AVE values exceeding .50.

**Table 2:** CFA Results of Measurement model of Public Acceptance of Willingness to Pay (PAWP) Instrument

Construct	Item	Factor Loading	Cronbach' Alpha (Above 0.70)	Composite Reliability (Above 0.6)	Average Variance Extracted (Above 0.50)
Understanding of electricity bill	Understandpricing1	Deleted due to low factor loading & to achieve model fitness			
	Understandpricing3	Deleted due to low factor loading & to achieve model fitness			
	Understandbill2	.72			
	Understandbill4	.61			
	Understandbill1	.76			
	Understandbill5	.61			
	Understandbill3	.68	.836	.902	.648
Understanding of electricity pricing	Understandpricing8	.83			
	Understandpricing4	.83			
	Understandpricing6	.85			
	Understandpricing2	.77			
	Understandbill6	.74	.901	.902	.648
	Understandpricing5	Deleted due to low factor loading & to achieve model fitness			
	Understandpricing7	Deleted due to low factor loading & to achieve model fitness			
Awareness on amount electricity consumption amount electricity consumption	Awareness6	.68			
	Awareness8	.75			
	Awareness10	.89			
	Awareness9	.86			
	Awareness7	.67	.888	.882	.602
	Awareness5	Deleted due to low factor loading & to achieve model fitness			
Willingness to pay maximum demand charge (MD)	WillingnessTP7	.84			
	WillingnessTP3	.73			
	WillingnessTP9	.82			
	WillingnessTP8	Deleted due to low factor loading & to achieve model fitness			

	WillingnessTP5	.76			
	WillingnessTP10	.78			
	WillingnessTP6	.78			
	WillingnessTP4	.79	.919	.918	.616
	WillingnessTP2	Deleted due to low factor loading & to achieve model fitness			
	WillingnessTP1	Deleted due to low factor loading & to achieve model fitness			

Note: Formula of Composite Reliability  $CR = (\sum \lambda)^2 / [\sum (\lambda)^2 + (\sum 1 - \lambda^2)]$  (Where,  $\lambda$  is factor loading), while, formula for Average Variance Extracted (AVE)  $= \sum (\lambda)^2 / n$  (Where,  $\lambda$  is factor loading,  $n$  = number of items in a model).

### Discriminant validity

Discriminant validity is the degree to which items differentiate among constructs and this was conducted by calculating the associations among the measures of overlapping variables (Tabachnick and Fidell, 2014). The inter-correlation of each item under four constructs were high ranging from .61 to .89. Thus, discriminant validity of the constructs should be checked in order to ensure that all latent variables, i.e (1) understanding of electricity bill, (2) understanding of electricity pricing, (3) awareness on amount electricity consumption, and (4) willingness to pay maximum demand charge (MD) in the measurement model is different and can be discriminated with each other. To achieve the discriminant validity, Average Variance Extracted (AVE) should exceeded the shared variance estimate (square of correlation) (Fitch et al., 2005). However, results of AVE show that variables of understanding of electricity bill and understanding of electricity pricing are both below shared variance, while AVE results for other combination of variables were greater than shared variance.

**Table 3:** The Discriminant Validity Index Summary

Construct	Understanding of electricity bill	Understanding of electricity pricing	Awareness on amount electricity consumption	Willingness to pay maximum demand charge (MD)
Understanding of electricity bill	<b>0.80</b>			
Understanding of electricity pricing	0.83	<b>0.80</b>		
Awareness on amount electricity consumption	0.58	0.63	<b>0.78</b>	
Willingness to pay maximum demand charge (MD)	0.60	0.54	0.41	<b>0.78</b>

Note: Diagonal value represents the square root of the AVE, while the off-diagonals represent the correlations among the variables.

### DISCUSSION

The purpose of this study is to clarify and validate the dimensionality of the instrument of PAWP on MD charge in electricity bill. To the best of the authors' knowledge, this is a first validation study of PAWP on MD charge in Malaysia. The four extracted components from EFA found in this study are similar to those of several adapted literatures (A Rahman, et al.,

2016; Abt SRBI, 2014; Department of Environment, 2017; Hledik, 2014; Kamilaris, Taliadoros and Pitsillides, 2014; Reid, 2015) except for independent variables, i.e. understanding electricity pricing and understanding electricity bill. Two items from understanding electricity pricing were moved to understanding electricity bill (denoted as pricing1 and pricing3), while one item from understanding electricity bill was moved to understanding electricity pricing (denoted as Bill6). Thus, all variables after EFA testing are as follows, i.e. dependent variable – (1) Willingness to pay (items - WTP1, WTP2, WTP3, WTP4, WTP5, WTP6, WTP7, WTP8, WTP9, and WTP10), and independent variables – (2) understanding electricity bill (items - Bill1, Bill2, Bill3, Bill4, and Bill5; pricing1 and pricing3), (3) understanding electricity pricing (items – pricing2, pricing4, pricing5, pricing6, pricing7, and pricing8; Bill6), (4) awareness on electricity consumption (items – awareness5, awareness6, awareness7, awareness8, awareness9, and awareness10).

Results from EFA testing were further tested using CFA and the results show that the underlying factor structure of PWAP is equivalent to the original instrument. In Table 2, all factor loadings for each item are shown to be above .60 and appropriate level of fitness indexes are achieved. Another purpose of this study is to investigate the discriminant validity, convergent validity and internal consistency measured by Cronbach's Alpha. Based on results in Table 2 and Table 3, the four variables show good convergent validity as their AVE values are greater than .50. The internal consistency of four variables show acceptable value above .70 for the PAWP instrument among the sample of residential electricity users in Malaysia. Discriminant validity results show that AVE value were greater than shared variance (square of correlation) between two constructs except for two variables, i.e. understanding electricity pricing and understanding electricity bill. These results are as expected since the measurement of public perception is used to gain the understanding from two different angles, i.e. pricing and billing. Based on literatures and knowledge from industry's experts, the pricing and billing are suggested to be measured separately. Hence, those particular items have been reword to suit the variables. The findings obtained from this study provides sufficient evidence that the instrument of PAWP can be used to measure the public opinion on their willingness to pay for MD charge in Malaysia. It could potentially be used to measure their willingness to improve future outlook on MESI. However, due to limited sample size, future study can be conducted in the larger sample size. In determining the sample size, there are many opinions and several rules of thumbs need to be considered. In addition, several angles can be further explored, such as psychometric evaluation, or other validity constructs as development of technology in electricity industry.

## CONCLUSION

In summary, this study has provided sufficient preliminary conclusions on the instruments that are useful to measure the public acceptance on the implementation of MD charge for residential electricity customers. It can be concluded that the validated instruments of PAWP on MD charge that are willingness to pay MD charge, understanding of electricity bill, understanding of electricity pricing and awareness on amount electricity consumption are reliable and valid measurements among residential electricity users in Malaysia. However, more studies on the impact of residential MD charge on customer behaviour are needed to give better insight of the customer acceptance on MD charge and to ensure the implementation of residential MD charge is successful.

## ACKNOWLEDGMENTS

This work was supported in part by Ministry of Higher Education, Malaysia (KPT) under Grant Nos. FRGS/1/2015/SS08/USIM/02/2 and RAGS/1/2015/SS0/USIM/02/1.

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25-BF15-5690

## **A PROPOSED MODEL TO IMPROVE PUBLIC PARTICIPATION TOWARDS RENEWABLE ENERGY DEVELOPMENT (PPRED) IN MALAYSIA THROUGH VALIDATION STUDY**

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### **ABSTRACT**

The purpose of this study is to validate on the dimensionality of the instruments of Public Participation towards Renewable Energy Development (PPRED) using validation study. These instruments include willingness to pay on energy generated from RE, public awareness on RE, degree of knowledge on RE, willingness to adopt RE technology, environmental concern and attitude towards RE usage. Using a survey of 172 respondents, an exploratory factor analysis (EFA) was used to assess the factor structure, confirmatory factor analysis (CFA) was used to test unidimensionality of measurement model, the items' discriminant and convergence was measured using correlation and Cronbach's Alpha was applied to establish the internal consistency of reliability between items. EFA extracted six variables as proposed by literatures, while under CFA, model unidimensionality, discriminant and convergence validity and internal consistency of reliability were achieved. However, validated instruments may vary depending on development and acceptance of RE in a particular country.

**KEY WORDS:** Renewable Energy, Willingness To Pay, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA).

### **INTRODUCTION**

Energy demand in Malaysia has been increasing with consistent rate of over seven per cent a year, with forty per cent of the energy is being supplied from the conventional source of fossil fuel (Alam et al., 2014). The growth in energy demand shows energy is an important resource for human development and economic growth. Globally, the energy demand has increased in tandem with rapid economic, especially in developing countries. To supply this rapid economic development, 82 percent of the world's demand for energy is based on fossil fuel, also known as non-renewable energy (NRE) such as oil, coal and gas. Hence, both energy choices in Malaysia and globally will have an influence on the climate of tomorrow since the fossil fuel had been identified as the largest single contributor to increased carbon dioxide gas (Intergovernmental Panel on Climate Change (IPCC, 2007). Therefore, one of the possible solutions on this issue is by focusing on alternative energy source, particularly renewable energy (RE), such as solar, hydropower, biomass, wind and geothermal.

These alternative energy choices come in the form of energy that will not be exhausted over time, can be regenerated efficiently and is friendly to the environment. Although Malaysia is known to have a relatively high carbon dioxide emission compared to other Southeast Asian countries, it has made a positive start to reduce its carbon footprint by establishing carbon-mitigating projects, adopting several RE and implementing energy efficiency initiatives. In year 2000, the Government of Malaysia has declared in the Eighth Malaysia Plan that RE resources as the fifth fuel of the nation after petroleum, natural gas, coal and hydro.

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Then, in year 2005, this commitment was further reinforced in the Ninth Malaysian Plan with the formation of the Ministry of Energy, Green Technology and Water Malaysia. Malaysia also further reinforce their commitment in reducing carbon dioxide emission and other green gasses by being one of the signatory to Kyoto Protocol and agreed to reduce its carbon emissions up to 40% by the year 2020 in the Copenhagen Climate Change Conference. In the latest development, the Government of Malaysia in the Tenth Malaysia Plan has embarked on various strategies to reduce carbon footprint to reaffirm their commitment to address the climate change issue. Therefore, the nation has no option but to encourage the society to accept the RE as part of the diversification of fuel sources. This is also important to ensure nation's energy security and environmental sustainability. As part of the implementation process, households is identify as important target group to participate in RE development since they found to consume about 16-50% of the total energy worldwide (Saidur, Masjuki and Jamaluddin, 2007). This participation can be considered as the major invention to motivate the users towards RE technologies. Common studies in this issues investigate on users' attitude towards RE in order to understand the barriers related in the socialization of RE (Alam et al., 2014; Mallett, 2007; Richards, Noble and Belcher, 2012; Stephenson and Ioannou, 2010; Zografakis et al., 2010). The acceptance of RE by the society is known to be a challenging issue due to availability of less expensive energy alternatives that commonly come from fossil fuels. In addition, households' tendency towards RE development is highly process oriented and a long-term dispute since investment in RE is expensive (Jacobsson and Johnson, 2000; Rogers, 1995; Straub, 2009). This is evident in many developed countries where new users increase their energy budget less than 5 per cent (Dalton, Lockington and Baldock, 2008; Zografakis et al., 2010). However, some of factors that seem to influence rapid acceptance on RE are users lifestyle, level of awareness and ease of technology use (Faiers and Neame, 2006). Most of the studies on RE in Malaysia focuses on technical and regulatory advancements of new technology for mass (Chua and Oh, 2012; Dalimin, 1995; Kong, 1999; Mekhilef et al., 2012; Mohammed et al., 2011; Ong, Mahlia and Masjuki, 2012; Poh and Kong, 2002; Sovacool and Bulan, 2012; Sovacool and Drupady, 2011; Tye, Lee, Wan Abdullah, and Leh, 2011). Therefore, a study on public participation towards RE development (PPRED) in Malaysia is yet to be rightly explored.

Using exploratory factor analysis (EFA), confirmatory factor analysis (CFA), discriminant validity, convergent validity and reliability of Cronbach's Alpha, this study attempted to clarify and validate on the dimensionality of the instruments of PPRED. Based on extensive literature reviews, this paper has selected five instruments of PPRED that are willingness to pay on energy generated from RE, public awareness on RE, degree of knowledge on RE, willingness to adopt RE technology, environmental concern and attitude towards RE usage. This paper is organized as follows. Section 2 is regarding literature review. In section 3, materials and method of the study are presented. Meanwhile, results of the study are presented in section 4. Section 5 is discussion and finally conclusion in section 6.

## LITERATURE REVIEW

National Renewable Energy Policy and Action Plan have developed by government of Malaysia in 2009. This is a part of their commitment to accelerate the growth of RE in the future. Currently, the portion of RE sources used to produce electricity had increased. To maintain this growth, the government needs to consider increasing the electricity price, for instance, by two to five percent hike in electricity price. However, any increment in price will normally caused public objection. Therefore, the public including household and business are accountable to share the RE cost burden together. Currently, 1.6% surcharges are imposed to domestic consumers who consume more that 300kWh of electricity per month. The revenues from this 1.6% price increase will be used to finance the tariff payment for RE producers under

the national Feed in Tariff (FiT) (David Jacobs, 2010). Alternatively, there also exist tremendous tensions on any retail and distribution market player as they need to meet key performance indicators (KPI) set under government link company (GLC) Transformation programme. If the cost burden is placed on the RE producers alone, they will not have any incentive to enter the RE market. Therefore, one of ways for the cost to be shared is using consumption-based burden method. In this method, the one who consume more electricity need to contribute higher into the RE funds. The goal of RE development is hard to achieve with a low level of social acceptance(Wüstenhagen, Wolsink and Bürer, 2007).

In terms of instrument used in the measurement of public awareness of renewable energy, various instruments have been developed to measure public awareness in the energy industry, but so far there is no specific instrument has been developed to obtain public opinion regarding public participation in renewable energy development in Malaysia. Thus, for the purpose of this study, several previous studies have been sighted in order to construct the questionnaire (Aini and Goh Mang ling, 2013; Bang et al., 2000; Curry, 2004; Kardooni, Yusoff and Kari, 2015; Morgil et al., 2006; Salleh, 2015; Scottish Executive, 2003). There are 60 items under six variables has been constructed to complete the questionnaire. Thus, the instruments of Public Participation towards Renewable Energy Development (PPRED) consists of following variables, i.e. (1) awareness on RE (2) knowledge on RE, (3) willingness to adopt RE technology, (4) environmental concern, (5) attitude towards RE usage, and (6) willingness to pay. Hence, the study aims to validate the instrument of public participation towards development of RE by measuring their willingness to pay for energy generated from RE sources and the factors that influenced the public willingness to pay which included the awareness on RE, degree of knowledge on RE, willingness to adopt RE technology, environmental concern and attitude towards RE usage

## **MATERIALS AND METHOD**

### **Participants**

The sample was comprised of 172 prospective respondents. From 300 selected respondents, the return rate was more than 50%. Hence, 172 samples selected for present study is sufficient to generalize the findings to the population and appropriate for the application of explanatory factor analysis (EFA) (Field, 2013). An urban residential area for population frame in this study was chosen from the respondents who are residing in Klang Valley, Peninsular Malaysia (Kuala Lumpur, Selangor and Negeri Sembilan). This is due to easy accessibility on the population target.

### **Data Collection**

The study utilized a cross-sectional research design and systematic sampling method was adapted as it could be an appropriate technique that produces a random sample. This is because it could eliminate sample selections that create bias. Two steps were conducted in this research. First, continuous lists containing 1500 emails have been selected from random organizations such as universities, government companies and private companies that located around Klang Valley, Peninsular Malaysia. Secondly, by using the systematic sampling method, the questionnaires systematically sampled to the 300 respondents by distributing the link of the survey form through the email and face to face distribution.

### **Data Analyses**

The factor analysis process is conducted in three stages: pre-analysis checks, extraction and rotation. The purpose of the pre analysis check is to ensure that the data set is appropriate for the application of EFA. In this study, a minimum sample size of 172 ( $N = 100$ ) might be acceptable (Hair et al., 2010). While, the purpose of extraction is to identify and retain those

factors which are necessary to reproduce adequately the initial correlation matrix. Lastly, the rotation process is conducted to simplify factor structure. For small sample sizes, the rule of  $\geq .60$  was utilized to determine which items loaded onto the factors. In extraction stage, Eigenvalue23 of 1 and Scree Plot test were used as the factor extraction criteria to determine the number of factors retain. If the factors are assumed to be largely uncorrelated, an orthogonal rotation should be use. Meanwhile, if the factors are assumed to be correlated, an Oblique Rotation should be used. Only factor loading with value above .40 should be retained for further analysis (Field, 2013) and the minimum item for each component should be at least 4 item left (Zainuddin, 2014) to be tested in further data analysis. All analyses were conducted in the Statistical Package for Social Sciences (SPSS), version 20.0.

## RESULTS

### Demographic Characteristics of the Sample

The study aims to clarify and validate on the dimensionality of the instruments of PPRED using validation study. In order to ensure that the study sample are acquainted with the purpose of study, 1500 respondents from random organizations such as universities, government companies and private companies located around Klang Valley, Peninsular Malaysia are used. A total of 172 respondents participated in the study. Approximately 76.7% of female had participated in the study. Respondent participating in the study are mostly married and have the average age between 20 to 24 years old with the percentage 52.3% and 33.1% respectively. In addition, 62.8% of them obtained an education up to Bachelor Degree. Moreover, majority of the respondent have an occupation in education (52%) and lives in a house with the household income between RM2, 000 to RM5, 000 (30.8%).

### Exploratory Factor Analysis (EFA)

Firstly, data suitability of the study are checked using two testing i.e. Kaiser-Mayer-Olkin (KMO) and Bartlett Test before EFA being conducted. Results from both tests show that the Kaiser-Mayer-Olkin (KMO) above .60 for all variables and Bartlett Test is significant (with  $p < .000$ ). Secondly, to test factor extraction, two techniques were employed: Kaiser's Criterion (eigenvalue  $> 1$ ) and Scree Plot (Rule of thumb – elbow for turning point). Eigen test and Scree Plot produced six components from 33 items that were being tested. Finally, in the last stage, 33 items were rotated using Direct Oblimin, and the result from Pattern Matrix has clarified 33 items under six groups. The items under six groups obtained from pattern matrix table were similar with original instrument adapted from literatures and factor loading for all items under six variables were greater than .30. Those six variables (groups) are as follows, i.e. (1) awareness on RE (2) knowledge on RE, (3) willingness to adopt RE technology, (4) environmental concern, (5) attitude towards RE usage, and (6) willingness to pay. (see Table 1).

**Table 1:** Factor Structure of Public Participation towards Renewable Energy Development (PPRED)

Variable	Awareness on RE	Knowledge on RE	Willingness to Adopt RE Technology	Environmental Concern	Attitude Towards RE Usage	Willingness to Pay
<b>Awareness on Renewable Energy</b>						
I strongly support the use of renewable energy resources.	.877					
I believe that media has a great responsibility in emphasizing the importance of using renewable energy resources.	.827					
I believe that it is necessary to focus and create awareness on the importance of energy resources and energy saving within educational programs.	.803					
The expression of renewable energy makes me nervous because I am not used to it.	.773					
Using renewable energy resources would remove the negative effects of the greenhouse gasses.	.744					
I am not interested in whether the energy resources are renewable or not.	.719					
Renewable energy and its resources are subjects that I have no idea about.	.697					
<b>Knowledge on Renewable Energy</b>						
I think that I know about hydro electric and the way it is used to produce electricity.		.849				
I think that I know about natural gas and the way it is used to produce electricity.		.818				
I think that I know about biomass and the way it is used to produce electricity.		.781				
I think that I know about solar power and the way it is used to produce electricity.		.748				
I think that I know about fossil fuel and the way it is used to produce electricity.		.717				
<b>Willingness to Adopt RE Technology</b>						
Energy efficient (EE) appliances: Producing appliances that use less energy to accomplish the same tasks.			.853			
Solar energy: Using the energy from the sun for heating or electricity production. E.g: Solar Panel.			.835			
Energy efficient cars: Producing cars that use less energy to drive the same distance. E.g: Hybrid and solar car.			.781			
			.771			

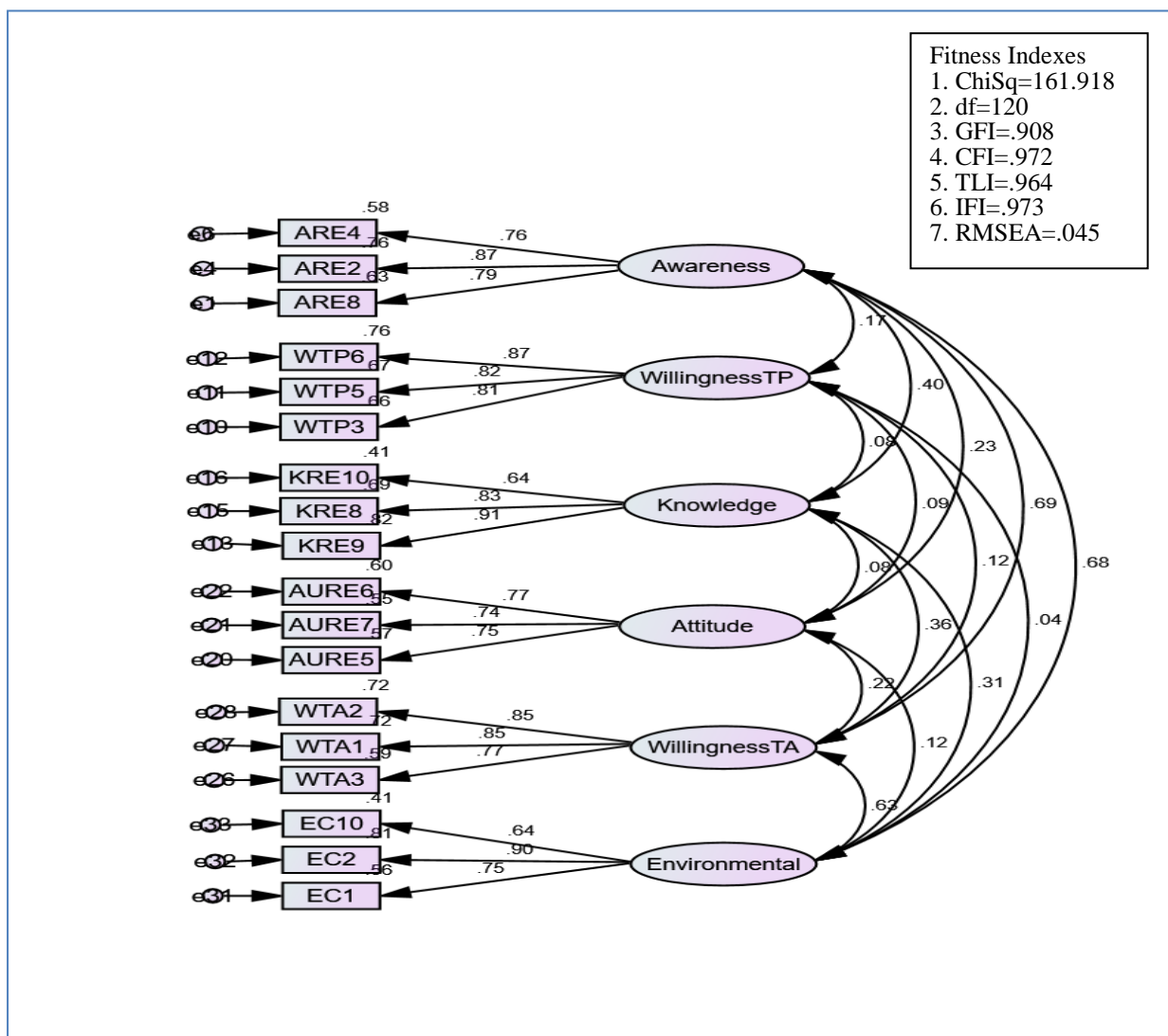
Carbon sequestration: Using trees to absorb carbon dioxide from the atmosphere. Wind energy: Producing electricity from the wind, traditionally in a windmill. Bio-energy/biomass: Producing energy from trees or agricultural wastes such as paddy and palm trees residue.			.718 .716			
<b>Environmental Concern</b> If things continue on their current situation, we will soon experience a major environmental disaster. By choosing environmentally friendly products, I signal to manufacturers the types of products they should be producing. When it comes to purchasing products, I consider how my use of them will affect the environment. The most effective way to overcome global climate change is reduce energy consumption. We are consuming energy much more than what we really need.				.631 .589 .584 .575 .573		
<b>Attitude towards RE Usage</b> Appearance of renewable energy products such as solar panel is acceptable. Installation of renewable energy product such as solar panel is added value to the house. Installation of renewable energy such as solar panel is compatible with modern living style. Renewable energy products are safer than existing energy system. Renewable energy can contribute to conservation of energy.					.801 .790 .783 .755 .615	
<b>Willingness to Pay</b> To pay 10% more in your monthly electric bill for renewable. To pay more now in exchange for possibly lower electric rates in the future. To pay more for your electric bill if you knew the cost paid for environmentally safe electricity. To support a fuel adjustment clause in your electric bill to subsidize the cost of developing RE-powered energy. To support the government's policy if the government makes a policy to generate 10% of your electricity supply from renewable energy.						.857 .854 .846 .810 .762

## Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) is a multivariate statistical technique used to measure the factor structure of a set of observed variables. The purpose is to test the hypothesized relationship between observed variables and their underlying latent constructs exists.

The unidimensionality of the six constructs were tested using CFA and all items were examined simultaneously using AMOS 25. The six variables extracted from EFA were tested and each item was designed to load on its corresponding factor. The model fit had been achieved based on certain fitness indexes. All the fit indices imply that the model is consistent with the data. The results of the CFA operation (see Figure 1) on measurement model which consists of six variables shows that all items had factor loadings exceed .60 (Zainuddin, 2014).

**Figure 1:** CFA Result of Measurement Model on Public Participation towards Renewable Energy Development (PPRED)



## Convergence validity

Convergent validity is achieved when all items in a measurement model are statistically significant (Zainuddin, 2014). Convergent validity was tested and confirmed by obtaining Average Variance Extracted (AVE) which is highly correlated between two instruments and statistically significant (Hair et al., 2010). The value of AVE should be 0.5 or higher to achieve

the Convergent Validity (Zainuddin, 2014). The value of AVE less than 0.50 indicate that variance explained by construct is smaller than variance explained by measurement error. Result from Table 2 shows that all variables have AVE value exceeded .50. (see Table 2)

**Table 2:** Summary Result of CFA of Measurement Model on PPRED

Construct	Item	Factor Loading	Cronbach' Alpha (Above 0.70)	Composite Reliability (Above 0.6)	Average Variance Extracted (Above 0.50)	Square-root of Average Variance Extracted
Awareness on RE	ARE4	.76				
	ARE2	.87				
	ARE8	.79	.92	.85	.65	.80
Knowledge on RE	KRE10	.64				
	KRE8	.83				
	KRE9	.91	.85	.84	.64	.80
Willingness to Adopt RE Technology	WTA2	.85				
	WTA1	.85				
	WTA3	.77	.90	.86	.68	.82
Environmental Concern	EC10	.64				
	EC2	.90				
	EC1	.75	.83	.81	.59	.77
Attitude towards RE Usage	AURE6	.77				
	AURE7	.74				
	AURE5	.75	.81	.80	.57	.76
Willingness to Pay	WTP6	.87				
	WTP5	.82				
	WTP3	.81	.90	.87	.70	.83

Note: Formula of Composite Reliability  $CR = (\Sigma\lambda)^2 / [\Sigma(\lambda)^2 + (\Sigma 1 - \lambda^2)]$  (Where,  $\lambda$  is factor loading), while, formula for Average Variance Extracted (AVE)  $= \Sigma(\lambda)^2/n$  (Where,  $\lambda$  is factor loading,  $n$  = number of items in a model).

### Discriminant validity

Discriminant is achieved when the measurement model is free from redundant items (Hair et al., 2010). AMOS will identify which of the pair item is redundant in the system in terms of high Modification Indices (MI). Discriminant validity can be achieved when Average Variance Extracted (AVE) exceeded the shared variance estimate (square of correlation). The findings of this study shows that all variables have achieved the discriminant validity where the square root of AVE (diagonal value in bold) is higher than the value in the row and column (see Table 3). Thus, those results have shown that all latent variables, i.e. (1) awareness on RE, (2) knowledge on RE, (3) willingness to adopt RE technology, (4) environmental concern, (5) attitude towards RE usage, and (6) willingness to pay in the measurement model are different and can be discriminated with each other.

**Table 3:** The Discriminant Validity Index Summary of Public Participation towards Renewable Energy Development (PPRED)

Construct	Awareness on RE	Knowledge on RE	Willingness to Adopt RE Technology	Environmental Concern	Attitude towards RE Usage	Willingness to Pay
Awareness on RE	<b>0.80</b>					
Knowledge on RE	<i>0.40</i>	<b>0.80</b>				
Willingness to Adopt RE Technology	<i>0.69</i>	<i>0.36</i>	<b>0.82</b>			
Environmental Concern	<i>0.68</i>	<i>0.31</i>	<i>0.63</i>	<b>0.77</b>		
Attitude towards RE Usage	<i>.23</i>	<i>.08</i>	<i>.22</i>	<i>.12</i>	<b>0.75</b>	
Willingness to Pay	<i>.17</i>	<i>.08</i>	<i>.12</i>	<i>.04</i>	<i>.09</i>	<b>.84</b>

Note: Diagonal value represents the square root of the AVE, while the off-diagonals represent the correlations among the variables.

## DISCUSSION

The aim of this study is to clarify and validate the factor structure and dimensionality of the instrument of PPRED. Hence, the development of instrument has follow standard procedures including extensive literature review of existing questionnaires, input from experts and using available statistical tool. As far as the authors' knowledge, this is the first study of its kind which specifically trying to gauge PPRED in Malaysia. The six components obtained from EFA, were equivalent to those of several adapted literatures, i.e. (1) awareness on RE (item-ARE4, ARE2 and ARE8), (2) knowledge on RE (item-KRE10, KRE8, and KRE9), (3) willingness to adopt RE technology (item-WTA2, WTA1, and WTA3), (4) environmental concern (item-EC10, EC2, and EC1), (5) attitude towards RE usage (item-AURE6, AURE7, and AURE5), and (6) willingness to pay (item- WTP6, WTP5, and WTP3). Then, using CFA the result shows that the underlying factor structure of PPRED is equivalent to the original instrument. All factor loadings for each item are above .60 and appropriate level of fitness indexes were achieved (see Figure 1). The other purpose of this study is to determine the discriminant, convergent validity and internal consistency (Cronbach's Alpha) of the factor structure of questionnaire. Result shows that six constructs has greater AVE value than 0.50, which indicates a good convergent validity. Meanwhile, for discriminant validity, results from this study show square root of AVE for all six constructs of (1) awareness on RE, (2) knowledge on RE, (3) willingness to adopt RE technology, (4) environmental concern, (5) attitude towards RE usage, and (6) willingness to pay, AVE value were greater than shared variance (square of correlation) between any two constructs. This result shows that there is a significant different between each latent variable in the model. Finally, the study checked on the internal consistency of four variables. The result shows that all variables have acceptable value which is above .70. In summary, this information provides preliminary evidence that the public

participation towards RE instruments is a reliable and valid measure to obtain the data regarding RE development in Malaysia.

However, in terms of sample size, future study can be conducted in the larger sample size to sufficiently represent the population.

## CONCLUSION

The RE policy in Malaysia was initiated in 2001 and still in its infancy stage. Although several initiatives and action plan have been developed to improve RE development, in general they are not directly linked with the public per se. Hence, it is the purpose of this paper to clarify and validate on the dimensionality of the instruments on PPRED using validation study. The results show validated instruments of PPRED that are willingness to pay on energy generated from RE, public awareness on RE, degree of knowledge on RE, willingness to adopt RE technology, environmental concern and attitude towards RE usage are reliable and valid measurements among Malaysian respondents. The awareness and knowledge of Malaysians on RE can further be improved through public education formulation and well-targeted campaign that focuses on educating the young generation who seem to be receptive towards RE development. Other mass media channels, such as newspaper, television and radio can be useful to disseminate information on RE. The other factors that will be a great influence on rapid improvement in RE development are appropriate legislations and incentives. These include incentives for purchasing of RE products such as exemption of tax on hybrid cars which has been adopted by government of Malaysia.

## ACKNOWLEDGMENTS

This work was supported in part by Ministry of Higher Education, Malaysia (KPT) under Grant Nos. FRGS/1/2015/SS08/USIM/02/2 and RAGS/1/2015/SS0/USIM/02/1.

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26-BF18-5710

# COMPETITIVE PRODUCT PRICING, EXTENDED PRODUCER RESPONSIBILITY, SUSTAINABILITY AND THE CIRCULAR ECONOMY

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## ABSTRACT

In an increasingly competitive marketplace selling products at the most competitive price is the norm, however emerging trends towards extended producer responsibility (EPR), sustainability and the circular economy have augmented the traditional pricing model. This paper contributes to literature by identifying a research gap relating to product pricing models, EPR and the needs of sustainability and the circular economy. The research reported was designed to address how theoretical and real-world models could potentially work to address the research gap.

**Keywords:** competitive pricing model, extended producer responsibility, circular economy, sustainability.

## INTRODUCTION

Diminishing natural resources, increasing raw material prices, increased automation and heightened consumer / political awareness of environmental impacts of manufactured goods, has led to the increased need to adopt sustainable manufacturing methods. The methodology employed is then described. The literature review then describes literature on (1) classical pricing models; (2) globalisation of trade and industry affecting price; (3) evolution of accounting cost models; (4) extended producer responsibility (EPR); (5) cost impact of chemical regulations; (6) sustainability and the circular economy; (7) industry 4.0. This is then followed by the propositions arising from the study. The paper is then concluded with a discussion, assessing implications, limitations and potential further research.

## METHODOLOGY

A three-step methodology approach was used based on (1) literature review; (2) expert interviews with different manufacturing companies; (3) Online questionnaire posted on LinkedIn during November 2017 (Takhar, 2017).

## FINDINGS

### Classical pricing models

Classical economists (Smith and Skinner, 1982) argued pricing emerged from the process of bartering, exchanging one article for another, to achieve some form of gain. The economic pricing model (Smith and Skinner, 1982) is based on market supply versus market demand, against the level of competitors within a market place determines the natural product pricing. The 20<sup>th</sup> century saw the emergence of mass production at the lowest possible cost, selling at most acceptable market price. Additional wholesale and retail distribution layers evolved, which in turn affected pricing models. (Henderson, 1989; Porter, 1980; Skinner, 1978; Johnson and Scholes, 1988; Chandrasekaran et al, 2013) Identified the need to change pricing strategies to include: (1) cross-functional inputs; (2) assess the state of competition (market forces); (3)

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consider supply chain impacts (value chain); (4) level of technology; (5) adjust according to the state of product life cycle state (introduction, growth, maturity, decline). (Table 1) Identifies pricing models and strategies to gain consumer adoption, satisfaction and loyalty (Papi, 2017; Chana, Narasimhana, Yoonb, 2017).

Table 1. Pricing models / strategies

<b>Pricing Model</b>	<b>Description</b>	<b>Methodology / Comments</b>	<b>Source(s)</b>
Raw material price.	Raw materials = materials converted in manufacturing.	(direct material cost + direct labour + in-direct costs) x2	(Merriam-Webster, 2017)
Manufacturing price.	Manufacturing cost of a product.	(raw material price + direct labour + in-direct costs) x2	(Manufacturing Costs wiki, 2017)
Wholesale price.	Price of products sold by a wholesaler.	(manufacturing price + direct labour + in-direct costs) x2	(Business Dictionary, 2017)
Retail price.	Seen as the price charged to end consumers.	(wholesale price) x 2 Price model can be affected market supply and demand reaching natural product price.	(Collins Dictionary, 2017)
Cost-plus (full-cost) pricing.	Production costs calculated with a profit margin applied.	(production costs / 100) (100 + mark-up) Assume production costs and % mark-up. Does not factor competitor pricing or market acceptance of natural product price.	(Cost-Plus Pricing wiki, 2017)
Penetration pricing.	Products are sold at cost or a loss, to gain a strong market share.	Sell product at less than cost price. Once market share gained, product prices will increase to generate a profit.	(Spann, Fischer, Tellis (2015))
Skimming / Premium Pricing.	The direct opposite of penetration prices.	Apply premium to product. Works if strong consumer loyalty to a brand. A premium price is applied to a product to induce notion of superior product.	(Spann, Fischer, Tellis, 2015)
Competition pricing.	Pricing is based the price of competitor products.	Same as similar products on market place.	
Promotional price.	Established products price reductions to gain market share.	Temporary price reduction. Reduced profit margins because of lower product prices. Attracts consumers to products which are either at maturity or declining growth state.	

Pricing Model	Description	Methodology / Comments	Source(s)
Marketing price competition.	Two companies with similar costs and product.	Set aspirational price Use marketing to create consumer towards aspirational price.	(Papi, 2017)

### Globalisation

Globalisation is defined as the mobility of goods, services, commodities, information, people and communications across national frontiers (Hopper, Lassoud and Soobaroyen, 2017). Products today are available from the global marketplace with global low-cost manufacturing supply and distribution networks, leading to flows of cheaper products disrupting the traditional pricing models. Traditional global brands evolved gradually developing brands, market leadership and minimizing risks with strong process controls. Born-Global (BG) companies (Nemkova, 2017) emerged (1) more agile; (2) less formal controls; (3) not averse to taking risks.

### Evolution of cost accounting

Traditional cost accounting is referred to as the bottom line (Cambridge Bottom Line, 2017) where data will show either a profit or a loss. The aim of cost accounting is to ensure costs are identified and managed, to ensure profit between cost of manufacturing and the sales price. (Table 2) identifies different cost accounting methods. (Ponisciakova, Gogolova and Ivankova, 2015) Identified additional factors which need to be considered (1) increased automation; (2) continual performance improvements; (3) technological innovations; (4) shorter product life cycles; (5) support activities which augment traditional costing models. Triple bottom line accounting (Triple bottom line wiki, 2017) is based on 3 elements (1) traditional financial cost; (2) socially beneficial practices towards people and society; (3) environmentally sustainability. Cost accounting has adapted to changing market conditions observing a wider range of cost types.

Table I. Cost accounting models compared

Name	Description	Source(s)
Traditional cost accounting.	Traditional cost accounting focused on valuing inventory (raw materials, work in progress, finished products) and the cost of direct labour only.	(Cooper and Kaplan, 1988; Ponisciakova, Gogolova and Ivankova, 2015)
Activity Based Costs (ABC).	ABC identifies activities and assigns a cost to each activity. ABC assigns more indirect across direct costs, to present an aggregated cost model, compared to traditional cost accounting. ABC assumes resources (physical or process based) are assigned to activities. Activities are then assigned to cost object then assessed based on consumption rates.	(Cooper and Kaplan, 1988; Ponisciakova, Gogolova and Ivankova, 2015)
Absorption Costing (AC).	AC gets confused with FCA, however it does differ slightly. AC treats all costs involved in the production of a product to be product costs	
Full Cost Accounting (FCA).	FCA calculates costs based on all costs, this includes all fixed and variable costs (raw materials; direct labour; in-direct costs; machining costs; energy consumption; etc.). FCA factors in	(Jasinski, Meredith and Kirwan, 2015; Boër, C.R, et al, 2013)

Name	Description	Source(s)
	all costs to generate total cost per product or process	
Environmental Full Cost Accounting (EFCA).	EFCA extends FCA by analyzing environmental, economic and social impacts.	(Jasinski, Meredith and Kirwan, 2015)
Sustainability Assessment Modelling (SAM).	SAM extends FCA using performance indicators in a 4-step process: (a) social progress; (b) environmental quality; (c) economic prosperity and (d) resource availability. Each indicator, requires identification, focus, measurable focus across a project/product lifecycle.	(Jasinski, Meredith and Kirwan, 2015; Boër, C.R, et al, 2013)
Material Flow Cost Accounting (MFCA).	MCFA concerns material and energy costs. MFCA measures materials within a manufacturing system in terms of physical stock and monetary value. Materials are defined as raw materials, WIP, component part and finished products. MFCA cost analysis compares the cost of products against the costs of materials losses.	(Guenther et al, 2015; Prox, 2015; Wagner, 2015; Schmidt, Götze and Sygulla, 2015; Kokubu and Kitadab, 2015; Christ and Burritt, 2015; ISO 14051:2011, 2011)
Life Cycle Assessment (LCA).	LCA looks at the product in terms of costs to the environment via identification of resources consumed and the impacts of those resources.	(Bierer et al, 2015)
Life Cycle Costing (LCC).	LCC examines product life cycle in terms of economic consequences (material costs, energy costs, distribution costs, disposal / recycle costs, revenues) and monetary trade-offs.	(Bierer et al, 2015)

### Cost impact assessment of regulations

Regulations exist to present society with a set of rules to maintain a consistent set of norms. Chemical regulations (Regulation of chemicals wiki, 2017; EC WEEE, 2017; EC ELV, 2017; EC RoHS, 2015; EC Packaging and Waste, 2017; EC Eco-Design Directive, 2005; EC REACH, 2017) look to extend these norms, by ensuring hazardous chemical substance usage is identified, tracked and where applicable controlled, restricted, labelled, packaged and safely disposed. The costs of the regulations may not be known at the time of manufacture or when a new piece of regulation is implemented, producers do need to understand the impacts of these regulations (Table 3).

TABLE II. REGULATIONS WHICH CAN AFFECT COSTS

Name of Regulation	Details	Applicable Industry / Industry	Sources(s)
Batteries.	Directive 2006/66/EC Directive 91/157/EEC	Battery regulations - Europe but affects Global supply.	(EC, DG Environment, 2014)
ECO Design.	Directive 2005/32/EC	Electrical regulations - Europe but affects Global supply.	(EC Eco-Design, 2005)
End of Life Vehicles.	Directive 2000/53/EC	Automotive regulations - Europe but affects Global supply.	(EC, DG Environment, 2014)
EU Restriction on Hazardous Substances.	Directive 2015/863/EC Directive 2011/65/EU Directive 2002/95/EC	Electronics regulations - Europe but affects Global supply.	(EC, DG Environment, 2014; EC, 2015)
REACH.	Regulation (EC) No 1907/2006 Directive 2006/121/EC	Multiple industries - Europe but affects Global supply.	(EC REACH, 2017)
Waste Electronics and Electrical Equipment.	Directive 2012/19/EU	Electronics & electrical regulations - Europe but affects Global supply.	(EC, DG Environment, 2014; EC WEEE, 2017)
Packaging and Packaging Waste.	Directive 2004/12/EC Directive 97/62/EC	Packaging and packaging regulations - Europe but affects Global supply.	(OECD, 2016; EC Packaging and Waste, 2017)
Waste Framework.	Directive 2008/98/EC	Waste regulations - Europe but affects Global supply.	(OECD, 2016; EC Packaging and Waste, 2017)

### Extended producer responsibility (EPR)

The aims of EPR (OECD, 2001; OECD, 2016) are to encourage producers to design products which: (1) last longer in use; (2) reduce the amount of hazardous materials being sent to waste sites; (3) can be recycled more efficiently; (4) develop trade-in or upgrade schemes; (5) recycle products to enable producers to gain access to secondary raw materials, specifically for their own supply chains. EPR makes producers consider both product life cycle and circular economy factors. (Wagner, 2012) Presents using EPR and Product Stewardship (PS) techniques into laws for managing waste: (1) manned collection points; (2) reasonable access to collection points; (3) retail take back; (4) reduction of physical barriers (5) mail back programs. (EPR wiki, 2017; EC, DG Environment, 2014) Examined EPR schemes for EU WEEE and packaging directives, producers worked collaboratively to create industry collection schemes, paying a fee based on the amount of product placed onto the market place. The fee is used to fund collection and recycling processes, (OECD, 2016) identified 400 EPR schemes. (Table 4) shows the impact of EPR by product types globally, recycling rates, and regional distribution. (OECD, 2016; EC, DG Environment, 2014) identified a lack of clear and consistent data in identifying the impact of EPR systems. Future state EPR analysis requires data to more easily identifiable, extractable in formats to allow data aggregation. (OECD, 2016)

identified only 45% of EU packaging waste has been identified by an EPR scheme. There are considerable amounts of waste not covered by an EPR scheme, global EPR implementations are shown in (Agrawal, 2014).

TABLE III. GROWTH IN EPR USAGE BY PRODUCT TYPE GLOBALLY

Product Type	Source	Source	EPR Regional Distribution	Most Effective Recycling Rates
	(Agrawal, 2014)	(OECD, 2016)	(OECD, 2016)	(EC, DG Environment, 2014)
<i>EPR by product type</i>				
Electronics	-	35%	-	-
Tires	-	18%	-	-
Vehicles / Auto batteries	-	12%	-	-
Packaging	-	17%	-	-
Other	-	18%	-	-
<i>EPR by scheme type</i>				
Take-back	70%	-	-	-
Deposit / Refund	11%	-	-	-
Advanced Disposal Fees	17%	-	-	-
Other	2%	-	-	-
<i>EPR by recycling rates</i>				
Overall EPR	-	-	-	Belgium, Germany, Netherlands, Czech Republic, Austria
Battery Recycling	-	-	-	Switzerland, Belgium, Austria, Denmark
ELV	-	-	-	Finland, Netherlands, Austria
Graphic Paper	-	-	-	Finland, Netherlands, Sweden
Oils	-	-	-	Belgium, Italy, Finland, Germany, Portugal
<i>EPR regional distribution</i>				
North America	-	-	48%	
Europe	-	-	42%	
Asia	-	-	4%	
Rest of the world	-	-	6%	

### Sustainability and the Circular Economy

Sustainability can be described as producing products that do not contain scarce resources or incur damage to the environment (Cambridge Sustainability, 2017). UN Sustainable Development Goals (SDG's) (UN Goal 12 targets, 2017) have prompted industry to observe a role in global sustainable development. UN SDG 12 'Responsible Consumption and Production' describes the need for sustainability by a producer to implement a framework of activities to manage waste. Sustainability frameworks (Ahmadi, Kusi-Sarpong and Rezaei,

2017; Dizdaroglu, 2017; Krajnc and Glavic, 2005) provide a basis for analysis: (1) pre-implementation; (2) post-implementation costs (new raw materials, energy consumption, waste) are considered in alignment with benefits of an approach versus the economic gain from a new product versus an old product. Industry needs to produce products that provide environmental and social benefits. The circular economic system extends both traditional linear economic system and sustainability by minimizing waste and maximizing reuse of scarce materials. In a circular economy: (1) producers use new raw materials to produce products, with waste reused as much as possible; (2) new products are then purchased by consumers; (3) consumers return products after use for repair / servicing / disposal; (4) producers either renew / repair the products for extended use; (5) where a product cannot be repaired, a recycling process shall extract materials into secondary raw materials; (6) where products cannot be recycled any further, the waste shall be disposed of in an environmentally friendly manner; (7) secondary raw materials will be used to produce new products in the production cycle. (EASAC, 2016) compared water and energy consumption rates within an initial production cycle in comparison to recycling of materials, use of recycling showed a marked reduction in environmental impacts. The EU (EU Horizon 2020 Project, 2017) has launched its programme of activities to support the UN SDG's, moving towards the circular economy model.

## INDUSTRY 4.0

Industry 4.0 (Industry 4.0 wiki, 2017) will see further advancements due to automated triggers from consumers and systems (automating alerts for repair / replacement of products) generating demand on the manufacturers. With increasing scarcity of raw materials, reducing waste and moving towards sustainable manufacturing, industry 4.0 should bring further enhancements to sustainability and the circular economy.

## Expert Interview Analysis

The same questions were used in the expert interviews and the on-line questionnaire. 8 expert interviews were conducted between July to September 2017. (Table 5) shows the results of the expert interviews. The key findings: (1) lack of awareness relating to product cost and product pricing models; (2) an appreciation of costs elements which should be included with the cost / pricing model; (3) critical materials identified tantalum, lithium, cobalt, gold, silver and tin; (4) the most common level of recycling was seen as 11-30%; (5) the highest values for EPR schemes were seen as trade-in and product ownership schemes; (6) in terms of costs to includes within a new cost model: new raw material prices, trade-in schemes, compliance costs, supply chain costs and ownership schemes scored highly; (7) The top 3 ranked factors for achieving sustainability were seen as: strong leadership, regulatory environment and increasing internal control measures; (8) The respondents came from aerospace and defence, electronics and manufacturing industries; (9) respondents were located in Europe and north America.

## On-Line Questionnaire

The on-line questionnaire (Takhar, 2017), using the same questions was placed on LinkedIn during November 2017, 52 completed responses were received. (Table 5) shows the results of the online questionnaire survey. The on-line questionnaire showed similar results to the expert interviews for (1) awareness of product cost model; (2) awareness of product pricing; (3) levels of recycling. The on-line questionnaire differed in terms of (1) identifying common cost elements; (2) awareness of elements which should be contained within pricing model; (3) a much wider range of critical materials; (4) in terms of EPR trade in schemes, regulations, deposit schemes and ownership were viewed as most important; (5) a greater range of costs were returned, which could be incorporated into a cost model; (6) respondents came from a wider range of industries and (7) locations.

TABLE IV. EXPERT INTERVIEW AND ON-LINE QUESTIONNAIRE SUMMARY

Area	Responses	Expert interview responses	Online responses
Awareness of current product cost model.	Yes	3	24
	No	5	28
Most common costs elements which should be considered in a product cost model.	Raw material prices	6	43
	Direct labour costs to manufacture goods	6	43
	Cost of renewed or recycled materials		27
	Packaging costs.	4	19
	Cost of machinery.		12
	Energy consumption costs.	5	12
	In-direct labour costs.	2	8
	Energy consumption costs.		8
	Depreciation charges for buildings and machinery.		7
	Transportation costs (good to market)		7
	Environmental costs.		3
	Cost of compliance to regulations.		3
	Product research and development costs.		2
	Renewal costs to reprocess waste materials.		2
	Disposal cost of waste removal.		2
	Cost of certifications (if any).		1
Awareness of current product pricing model.	Yes.	3	21
	No.	5	31
Most common costs elements which should be considered in a product pricing model.	Raw material prices (new).	7	40
	Direct labour costs to manufacture goods.	7	40
	Cost of renewed or recycled materials.	3	35
	In-direct labour costs.		29
	Product price should be lower than competition.		26
	Premium product allows for higher price being charged.		22
	Packaging costs.	4	22
	Energy consumption costs.		12
	Cost of manufacturing site(s).	4	11
	Depreciation charges for buildings and machinery.		11
	Wholesaler and retailer profit margins.		11
	Cost of machinery.	5	10
	Product research and development costs.		10
	Environmental costs.		9
	Cost of certifications (if any).		8
	Renewal costs to reprocess waste materials.		8
	Disposal cost of waste removal.		5
	Cost of compliance to regulations.		3
	Tin.	5	29

Area	Responses	Expert interview responses	Online responses
Most commonly identified critical materials.	Gold.	5	27
	Cobalt.		26
	Silver.	6	24
	Copper.	5	22
	Chromium.	4	22
	Rare Earths.		21
	Tantalum.	7	20
	Lead.		18
	Manganese.		17
	Lithium.	7	15
	Magnesium.	6	14
	Tellurium.		14
	Tungsten.	4	12
	Iridium.		12
	Cadmium.	3	12
	Platinum.		11
	Nickel.		11
	Aluminum.	4	10
	Hafnium.		10
	Gallium.		9
	Germanium.		9
	Beryllium.		7
	Molybdenum.		7
	Graphite.		6
	Antimony.		5
	Indium.		5
	Osmium.		5
	Rhodium.		5
	Helium.		4
	Niobium.		4
	Palladium.		3
	Ruthenium.		2
	Zinc.		2
	Arsenic.		1
Most common levels of recycling identified.	51 to 60%.		2
	31 to 50%.	1	6
	11 to 30%.	4	21
	Less than 10%.	2	17
	Unknown.	1	6
Most common EPR actions on manufacturers.	Deposit schemes.	3	28
	Trade in schemes.	6	38
	Ownership - Manufacturer maintains ownership.	5	23
	Regulations.	4	31
	Collection schemes.	2	18
	Land use.	1	8

Area	Responses	Expert interview responses	Online responses
Costs which should be incorporated into a new cost model.	Health and safety costs.		38
	Compliance costs.	5	38
	Supply chain costs.	5	42
	Employee rights.		23
	Human rights.		16
	Raw material prices (new).	6	21
	Renewable and recyclable.	4	21
	Deposit schemes.	3	24
	Trade in schemes.	6	24
	Ownership schemes.	5	21
	Collection schemes.	2	9
	Consumer use.	1	18
	Environmental impact assessment.	2	21
	Consumer education costs.	2	12
	Regulations.	4	16
Ranking of important factors for business to achieve sustainability goals [Answers were on a ranking scale].	Strong leadership desire towards becoming more sustainable.	1	1
	The regulatory environment moving towards increased reuse and recycling (circular economy).	2	3
	Increasing internal control measures produce less waste.	3	5
	Increasing consumer trends towards using environmentally safe products.	4	6
	Financial stability within the business to absorb the development costs to support sustainability.	5	2
	The expertise of key people within the business to support sustainability efforts.	6	4
	Cultural acceptability of using reused/recycled materials.	7	9
	Supply chain buy in to reduced waste and recycling to bring about secondary material usage	8	8
	Diminishing material supply causing the need to reuse and recycle materials.	9	7
Respondent industry question.	Aerospace and Defence.	4	9
	Agriculture and Food.		3
	Chemical and Pharmaceutical.		7
	Computing.		3
	Construction.		4
	Consultancy Services.		2
	Electronics.	2	4
	Energy.		3
	Financial Services.		1
	Information Technology.		2
	Manufacturing.	2	10
	Regulatory Compliance.		2

Area	Responses	Expert interview responses	Online responses
	Telecommunications.		1
Respondent location question.	Europe.	6	23
	North America.	2	18
	South America.		4
	Asia.		6

## CONCLUSIONS

### Summary

Fundamentally business exists to generate economic gain through the sale of goods and/or services. Increasing threats from existing competitors and/or new entrants resulted in the need for competitively priced products which meet market expectations. Mass industrialization resulted in both increased environmental impacts and diminishing critical materials. Globalisation opened markets to new entrants via on-line channel distribution methods has eroded traditional pricing and distribution models. Increasing environmental regulations have imposed stricter controls on industry, which impacts upon the business cost model. Industry must ensure compliance by identification of material usage within a supply chain, then take actions: (1) customer declarations; (2) import notifications; (3) safe use guidance; (4) requesting approval for continued use; (5) look for alternative materials where additional controls are enforced against a given material. EPR has placed additional obligations on producers to act in a responsible manner in both product design and the collection and recovery of materials from end of life products. The aim of sustainability is to produce highly durable products, which require less repair, servicing ultimately eliminating the need for replacement products, moving towards the circular economy. The circular economy will aim to reuse as much as possible, this should result in much larger waste reduction, recycling to return materials back into the production cycle. Thereby minimizing the need to absorb new materials. Moving towards the path of sustainability and the circular economy requires additional investment, for some industries where the use of scarce materials is a given, it will become a necessity. For other industries as material prices rise over time, it will become more attractive over time. Producers must adhere to maintaining the balance between lowering costs, to remain competitive whilst managing the costs meet regulation, recycling and renewal of products.

### Contributions to theory

The purpose of this paper was to examine correlations between competitive pricing and factors such as EPR, sustainability and the circular economy: (1) traditional cost and pricing models may be inaccurate based on the requirements for sustainability, EPR and the circular economy; (2) newer cost accounting models such as EFCA, SAM, MFCA, LCA and LCC offer different options for recording costs. No one model excels above another, the producer needs to develop cost recording systems as most applicable to their business; (3) sustainability frameworks do exist, however they are geared towards the environmental, social benefits, and economic benefits of products, as opposed to developing accurate cost reporting, reflecting accurate product pricing; (4) respondents showed an understanding of costs which should be factored into cost and pricing models; (5) Key factors for sustainability were (a) strong leadership; (b) regulatory environment; (c) financial stability; (6) producers should regularly revalidate cost and pricing models to ensure profitability is maintained.

### Further research extensions

The expert interviews / on-line questionnaire could be extended in future research by examining understanding and awareness of (1) UN SDG implementations geographically and within an industry setting; (2) recycled materials which have been recycled (not product) to build a picture of which materials are readily available as secondary materials; (3) further interrogation of product pricing in relation to chemical regulations. In hindsight reducing the number of questions and size of answers in the questionnaire/survey design may have increased the number of responses. The final research extension would be to create a sustainability framework that factors in product costs, product pricing in relation to analyzing the economic, environmental and social benefits for a producer.

### ACKNOWLEDGMENTS

Many thanks to the organizations and individuals that participated in both the expert interviews and on-line questionnaires.

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32-BD24-5765

## A CONCEPTUAL MODEL FOR DEVELOPMENT NEEDS OF MIDDLE MANAGERS IN HIGHER EDUCATION INSTITUTIONS (HEIS)

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### ABSTRACT

Middle Managers (MM) in Higher Education Institutions (HEIs) are individuals who coordinate team of people to promulgate organisation vision, mission and goals. MM are key players in running day-to-day activities of Higher Education Institutions (HEIs) and act as a leverage between the top and bottom management in the organisation hierarchy. MM play a crucial role in organisational change and balance various inputs, processes and outputs. However, past and current changes and challenges experienced in HEIs sector is exerting enormous pressures for MM to work efficiently and effectively in their roles. Factors influencing such mounting pressures include aspects such as increased student numbers, government and organisation policies, working in bureaucratic structures, immense workloads, accountability and transparency to mention few. Thus, training and development is crucial for MM to toil ingeniously in their respective HEI. Nonetheless, as evident from contemporary literature, the latest development provided by Human Resource (HR) departments in HEIs are too generic to fit the true purpose and needs of MM. Moreover, the development provision for MM by their HEI organisation indicate that a gap exists in HEI management development programmes provision and does not meet MM requirements. Nevertheless, such MM developmental needs can be identified and addressed through structured programmes that can be extended by the HR departments of such institutions which become beneficial for more success of both MMs and HEIs. Hence, this study aims to develop a conceptual model for development needs of Middle managers in Higher Education Institutions (HEIs) subjugated by HR department to advance and support MM's in their roles.

**Key Words:** Middle Managers (MM), Higher Education Institutions (HEIs), Developmental Needs (DN), Human Resources (HR).

### INTRODUCTION

The expeditious transforming landscape of UK Higher Education Institution (HEIs) comes with numerous changes (BIS, 2016) and challenges inducing and pressurising Middle Managers (MM) in their job roles. Basically, MM in HEIs, act as the catalysts of progression and succession and act as the balancing power between the top and junior management in complex HEIs structures. MM assist in implementing organization strategies via senior staff towards operationalization directives to subordinate staff. Reviewing literature on UK HEIs, it emerged that a key factor impelling development and training in HEIs currently was the acumen of bureaucracy (Floyd, 2012) spawning immensely on stress levels for MM. Therefore, behaving professionally and commendably lacked formal development and training for MM in their management roles (Deem, 2000). Relatedly, erstwhile research has documented and recognized that neglected development, training and non-extant job descriptions are off-putting factor especially in the Chartered (pre-1992) universities (Smith, 2002). Moreover, other elements such as vision for a clear strategic direction from senior management and poor communications in HEI have a great effect which requires needful confrontation in form of developments and trainings (Beech and Macintosh, 2012). Modern changes and challenges

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facing MM not only shows mistrust in the profession but diminishing collegiality between staff, immense workloads and loosing self-identity for academic managers are other factors affecting MM in their job roles (Trowler, Ashwin and Saunders, 2014). So far, this phenomenon has been somewhat confirmed from the data analysed during the semi structured interviews, middle management job roles are getting more complex due to the changes and challenges in MM day-to-day activities. Also, in present literature, theories have been proposed to articulate that the changes and challenges in HEIs are getting in the way of academic managers teaching and research work (Hotho, 2013). Moreover, it suggested that current development programmes facilitated by (HR) departments in HEIs are not competent with MM requirements who lament that programmes offered by HR are too general to suit their clear-cut needs and they require tailor made mechanisms for support in their roles to working effectively. Thus, it is fundamental to establish new ways in development and training to counter these changes and challenges in roles aspect of middle managers. Issues arising can be addressed by HR departments in HEIs in a more structured approach with realistic development programmes based on the gaps.

## METHODOLOGY

This project aims to encapsulate true Development Needs (DN) of MM by means of advancing a conceptual model derived from intense qualitative analysis (Miles and Huberman, 1994) and quantitative analysis of rich data. The project is divided in 2 phases. Phase 1 instigated by carrying out 2 pilot interviews with a retired Emeritus professor and HR programmes development coordinator (n=2). Major themes emerged from the pilot and literature review bequeathed into formulation of 22 set of questions (Kvale and Brinkmann, 2009) in form of a questionnaire method for data collection relating to the qualitative part of the study. 12 semi structured interviews (n=12) were conducted lasting approximately an hour each for all participants. The MM interviewees included two deans (n=2), four head of departments (n=4), two subject leaders (n=2), and lastly, four programme leaders (n=4). Participants recruitment was carried out via progressive email correspondence. The data collection and strategy entailed the technique of using purposeful sampling by establishing precise participants for the study. The interviews data was transcribed (verbatim) and managed using Computer Assisted Qualitative Data Analysis (CAQDAS) using (Nvivo ver.11, 2017) software. Approximation of the interview words transcribed were 80,000+. Data was assiduously analyzed using Miles and Huberman inductive approach of positivistic style grounded theory. This method included line by line evaluation, identifying key themes and merging into categories from the rich data collected. The data was precisely coded and classified into case studies (Robert Yin, 2009); with a main case study (New University), sub cases (4 classes of MM) and embedded cases (12 individual MMs).

**Table 1. Research methods table.**

Research Methods	Phase 1 Qualitative	Phase 2 Quantitative
<i>Pilot Study</i>	(n=2)- Formulation of semi structure interview questions.	
<i>Semi Structured Interviews</i>	(n=12) detailed analysis + (n=9) cross comparison and validating Total: 23 semi-structured interviews (approx. an hour each)	
<i>Case study Main + Individual cases</i>	Main case (n=1) Sub cases (n=12) + (n=9) Total: 23 cases	

<i>Pilot Study and fully completed feedback forms</i>		(n=10)
<i>Quantitative (Survey Questionnaire) validation by external HEIs</i>		Target of survey questionnaire forms sent out (n=1500) Expected fully completed forms (n=150)- 10% return rate

## RESULTS AND DISCUSSION

The interviewees' demographics were split between 8 males and 6 females. The transcribed data firstly open coded, axially coded and finally selectively coded. This ensured the data executed to be properly managed and grounded. Dependent on the sense and content of the codes, linking the data with respective codes produced 1,437 individual case nodes for the whole project. This coding process was applied to the 14 rich cases. Furthermore, the nodes were categorised under 268 case nodes expandingly also writing of reflective memos and commentaries for each individual case occurred throughout the analysis process. The codes were then reduced to 66 nodes for development programmes. These case nodes were further grouped into 6 categories. The interview word count for all data was a round figure of 100,000 words with a colossal cumulative total of 24,834 references that were coded using this reoccurring technique and constant comparing the content and analysing the words and phrases. Majority of the interviewees felt that their job was not defined ((Y=4) (N=8)).

**Table 2. Fourteen (14) cases demographic data, coding details and feedback**

Cases – Participants main role	Age group	Gender	Job Defined	Nodes	References coded
MM 13 - Head of Department (HOD)	56-60	F	no	120	1401
MM 14 – Dean-Prof.	51-55	F	yes	117	1259
MM 2 - Principle Lecturer/Programme Leader	51-55	M	no	101	2671
MM 21 - Head of Department (HOD)	60-65	F	yes	143	2021
<i>MM 22 - Development Provider -Pilot</i>	-	M	-	46	333
MM 23 - Subject Head/Leader	51-55	F	no	162	1859
MM 3 - Principle Lecturer/Programme Leader	46-50	F	no	88	2387
MM 4 – Dean-Prof.	51-55	M	yes	91	2242
MM 5 - Principle Lecturer/Programme Leader	46-50	M	no	90	1599
MM 6 - Subject Head/Leader-Prof.	56-60	M	no	113	1625
MM 7 - Head of Department (HOD) – Prof.	51-55	M	yes	90	2566
<i>MM 8 - Emeritus Prof. -Pilot</i>	66-70	M	-	67	1112
MM 9 - Principle Lecturer/Programme Leader	46-50	F	no	137	1796
MM1 - Head of Department (HOD)-Prof.	46-50	M	no	72	1963

**8M- (Y=4)**  
**6F (N=8) 1437 24834**

The research development process entailed on making use of explore diagrams to understand a project item and position the elements for investigation in focus. These vigorous diagrams displayed the linked items relationships around the main object. The itemised connections included elements of sources, nodes, cases or link items. Subsequently, explore diagrams in this project were implemented greatly and assisted to focus and refocus on explicit

project items. This style of exploration gave a better feel and understanding of the links between objects and significance.

Moreover, framework matrices were instigated to summarize and comprehend source materials from interviews protocols in a grid with x and y intersections. The table features identifiably related the rows for interviewee case nodes against the columns consisting of 268 theme nodes and were linked. This creative approach provided summaries at a glance of the source materials text linked to individual cases and coded themes all together.

Cross-tabulating the project content was detailed coded for each individual interviewee and collectively as a corresponding group. Additionally, matrix coding queries prompted to investigate related questions and display patterns in all the rich cases from interview data. This exercise gave rise to identify the contents which displayed patterns among their sources. A typical example of matrix coding queries compared different demographic gender groups of males and females against their experiences, attitudes and related issues. The matrix coding sample result demonstrated that in a hypothetic comparison, in conclusion MM interviewed were merely satisfied with having a positive attitude with development programmes at HEIs. However, development programmes, skills and attributes at HEIs were also a major concern for MM managers with 1396 coded references. On the contrary, education backgrounds were less interesting for MM with the least coded references at 150.

Furthermore, demographics data linked to education displayed that majority of the Middle Managers (MM) possessed very good educational background of having a PhD qualification (10 out 14) with only 6 out of 14 MMs undertaking their education on part time basis. Only 2 out of 14 participants did not undertake any further education.

In career progression, 8 out of 14 participants came from industry in contrast to a career path in education. All MMs were in permanent employment apart from the one pilot study participant who is an emeritus professor and worked on contract basis. Only 3 out of 14 participants held a research assistant post. 12 participants went under being lecturer/senior lecturers and programme leader phase. 9 out of 14 participants became subject leaders and 6 out of 14 were professors. The average years of experience in HEIs for all MMs was 24.92 years.

In relation to HEIs effectiveness and outlook all was dependant on the job working terms and definitions offered by the respective HEI. Not only is University perception and image important for student recruitment it was found that change management, processes and procedures in HEIs greatly affected the MMs in their job roles in dealing with internal and external engagement. To tackle on these issues proper strategy and planning was required as mentioned by the participants. This called for MMs to adopt professional behaviour and attitude towards their role and understanding university culture and structures. On the part of HEIs support for MMs, personal development and performance review (PDPRs) processes were in place to help in identify MMs development needs. However, it was crucial to have role models guiding MMs in their job roles and offering them the correct mentorship and coaching. HEIs effectiveness and outlook was also reliant and concomitant with the changes and challenges among other outcomes of the conceptual model encountered by the HEI and MMs altogether.

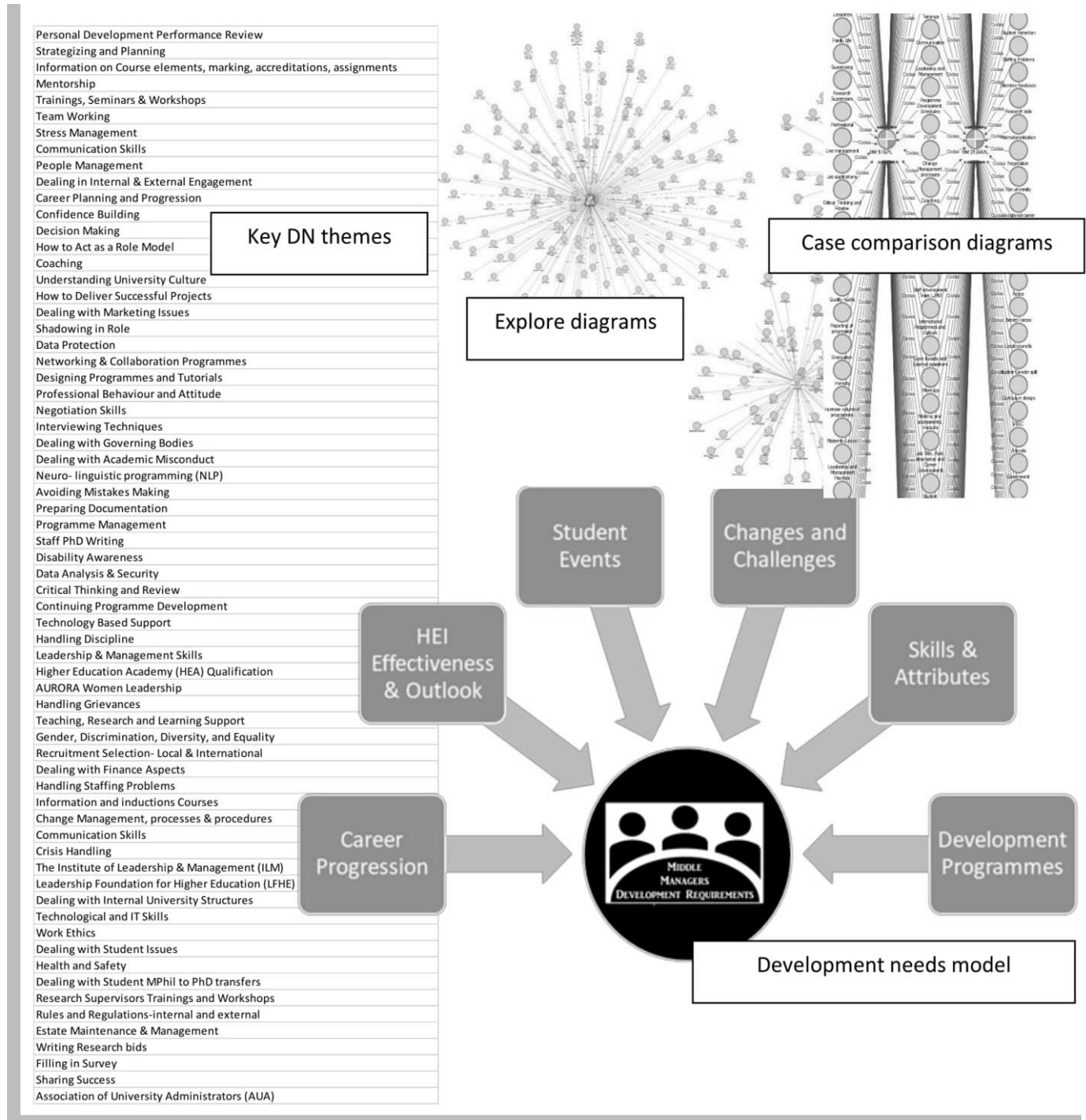
On the part of student events/issues it was crucial for institutions to facilitate high calibre student teaching and learning concurrent to handling the increasing student numbers, requirements, admissions and programmes. Student experiences such as support, progression, engagement, attendance and monitoring, examinations, results, welfare, classes and facilities was fundamental in dealing appropriately with student issues. Other imperative factors were staff to student ratios and student retention rates.

Changes and challenges were linked to working environment of MMs, external challenges, internal challenges, management challenges and external indicators such as National Student Survey (NSS), Teaching Excellence Framework (TEF), league tables, Research Excellence Framework (REF) government bodies and external policies, rules, and regulations.

The most important relevant finding linked to qualities of the institution and MMs was that both were incumbent and linked to excellent leadership, management and communication skills fortified with attributes such as responsibility and decision making to effectively work in their role of balancing workloads and work life and have full job satisfaction for success of both entities.

Also, the current study found that major areas for development programmes were related to key performance indicators (KPIs) associated with changes and challenges, management of people, management of research, student issues and self-assessment of MMs in terms of their skills building and career progression.

The findings can be correlated to the viewpoints discussed in the introduction part of this paper. Visually, the key findings are summarised in a nascent conceptual model (Figure 1) emerged from analysing the qualitative data with principle concepts including; career progression, HEI effectiveness and outlook, student events, changes and challenges, skills and attributes and lastly development programmes.



**Figure 1.** Middle managers (MM) development needs model after qualitative stage. Sample of key themes (left of figure) categorised into 6 different areas for MM development.

In succinct summary, the qualitative data from all the rich interviews were meticulously evolved and aptly grounded using the inductive approach in where the research question retorted from the observing the empirical data, pattern matching, generating hypothesis and finally theory building.

## CONCLUSION

In this paper, we conclude that HEIs need to rethink their approach to developing MM in the concepts identified. In a study reported in Chartered Management Institution (CMI), it was

found that only 3/17 (17.64%) MM at one University had received development training before taking on management roles (CMI, 2016). To overcome example of issues such as increase in government pressures, student numbers, unsuitable development programmes, complex bureaucratic structures, transparency and accountability, organization policies, skills sets... can only be confronted by systematic and valuable development programmes designed by HR that are individually suited and not generically distributed.

## FUTURE WORK

The next step for the project is to listen to 9 audio files of the semi structured interviews (n=9). Analyse and compare its sequels with 14 rich cases for verification and validation. Phase 2 (Quantitative method) of the project is expected to validate the interim conceptual model externally for reliability through fully completed online survey questionnaire (Bram Oppenheim) and possibly to explore via open question on individual development needs of MMs working in this HEIs. The external HEIs target is desired at receiving (n=150) completed responses. The total sample numbers to be approached in quantitative stage is estimated to be 1500 MM working in HEIs across UK. Author contribution efforts relies on augmenting management theory and to identify (DN) drawbacks and narrow the gap existing between by HR and MM development programme delivery.

## ACKNOWLEDGEMENTS

I thank my executives for all their guidance and support extended in this exciting study. Special acknowledgment to my director of studies Professor Andrew Ross and Dr. Damian for offering all the positive criticism and being the driving force behind my successful academic endeavours. I am grateful to my family for providing me the educational loan in continuing with my Higher Education.

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33-BD23-5790

## BETWEEN ‘BECOMING LIKE-NATIVES’ AND ‘MULTILINGUALS’: A POSTSTRUCTURALIST ORIENTATION TO IMAGINED IDENTITY AND AGENCY

SOUAD SMAILI<sup>1</sup>

### ABSTRACT

Do learners of English as a foreign language (EFL) develop imagined identities that determine their roles in the target community? Are these imagined identities different from their other identities they assert as multilinguals within the social context? How do relations of power foster the complexity and multiplicity of the new identities? To explore these questions, a forum theatre course was carried out at the University of Bejaia, Algeria. The students involved in this course were undergraduates aged between 19 and 31 years old. These participants possess a rich linguistic repertoire thanks to their language status, that is; being multilinguals with multiple language roles who make use of Berber as their mother tongue; Arabic as their first language; French and English as foreign languages. The course also aims at promoting change in the way students learn English through integrating such innovative drama techniques. This study follows a poststructuralist framework, which is highly grounded in Norton's perspective on identity (Norton, 2000) and Bourdieu's understanding of power relations in language use (Bourdieu, 1991). I have adopted interpretive phenomenology as a research design in which in-depth interviews were conducted with the participants. Their scripts written in the three languages: English, French, and Arabic were considered in the analysis. The findings will be discussed and explored further in this paper.

**Key words:** Imagined identities, multilingualism, power relations, poststructuralism.

### INTRODUCTION

The spread of English worldwide, and the need for a global communication, created a shift in the approaches and system to English language teaching in Algeria (Bouazid, 2014). In her thesis Bourouba (2012) believes that new approaches are used in teaching English to fill in the gap created by traditional methods of teaching. This latter aimed at realizing language mastery through teaching the students to fully learn the norms of English. These include the ‘grammar-translation method’, ‘audio-lingual method’, and ‘structural situational approach’. However, the new teaching approaches that replaced such traditional methods in the English language reforms in Algeria encompassed the communicative language teaching (CLT) and Competency-based approach (CBA). The former focused on communicative competence, discourse, and grammar (Morandi, 2002). The latter, which is called CBA, is a continuous approach for the former (Bourouba, 2012). CBA's aims at further enhancing communicative competence among EFL/ESL students, but what makes it distinctive from the communicative approach is that it focuses on functional and interactional aspects of language learning rather than emphasizing interaction only. CBA allows students to interact with others to express themselves, discuss their culture and interpret their opinions using the four skills (speaking, listening, reading, and writing) more accurately (Bourouba, 2012).

In fact, my observation in the context, including teachers' way of instruction and learners' status in the EFL classroom, show that the reality is different from what the English curriculum purposes about the new approaches. My experience as an EFL student at the

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University of Bejaia, and my background knowledge that I gained from my experience as a teacher-trainee, provided me with a general view on how English is taught, and on the gap which might result in students who are not aware of their identities, their voices, and their roles in the classroom. According to my observation, teachers of English dominate their classrooms, and the students still attend their classes to consume information in order to repeat it in the exams. Therefore, traces of traditional approaches are still present in the teaching and learning processes. However, bringing authenticity to the EFL classroom and making learning more social than structural may let students be more aware of the power they can achieve in learning English. Fielding and Rudduck (2006) suggest that students who impose their voices in the classroom can promote change and empower themselves in terms of becoming decision makers, responsible, reflective, and more interactive, and build their character. These features give them self-empowerment and foster their identity in learning (Fielding and Rudduck, 2006).

Taking this further, this article, which adopted the poststructuralist understanding of language learning and identity, sets out to explore whether forum theatre can be a good opportunity for Algerian EFL learners to bring their social experiences and dreams into the classroom. Also, it explores whether it allows them to gain a self-positioning and agency to master English like native speakers. However, being in the context of this study and paying attention towards the participants' use of different languages made me reflect on the identities they construct in each language they use. In other words, I will explore whether the new identities that might emerge from this course are different from their identities they formed in other languages they are using. Therefore, I have included theatrical tasks where French and Arabic were used in both writing and performance to further explore this aspect of identity construction in a multilingual classroom.

## **THEORITICAL FRAMEWORK**

### **Theatre in language learning**

Theatre promotes social interaction and communication between individuals, which may not be enhanced through reading and writing only (Pinkert, 2005). My study adopts an interactive theatre technique known as 'forum theatre'. I am using this theatrical method because it allows the use of imagination, critical thinking, and problem-solving capacities. It serves as a space where individuals can perform multiple roles such as being the narrator of the story/scenario, the audience who interacts with the characters, and the actor. This drama technique is designed for achieving various needs including change in organizations, creativity, and other needs in educational settings. It gives the chance for non-heard voices to become observed by others. It lets them make decisions on what they dream to become or plan to be in their future career. It is also an opportunity to master the target language through the interactive space it provides. Applying this in EFL learning may help the students to enhance the plurality of EFL students' voices/identities in the educational context (Kore, 2014, p4-5).

The scenarios designed by the participants in this study are reflections on their experiences they lived in the past, present, or stories they formed as their future dreams/desires. These personal stories may result in identity development. As Somers (2008) notes, personal writing can drive the person into two basic dimensions: organising recent experiences into a set of memories; being able to forecast future events, and here I refer to the concept of imagined community and the notion of becoming.

Furthermore, dramatic activities such as theatrical plays afford students with the chance to bring their voice and self-empowerment into the classroom. Hence, they can make of themselves visible to others, as Thompson states: "I believe that the writing of a play is the

writing of the self, and the acting of the role is the acting of a deeper and invisible part of the self.” (Thompson, 2003, p31).

### **Identity and self-positioning**

Ivanic and Camps (2001) state the features of speech a person uses can all be considered as signs of building the notion of ‘who I am’ in the context of English language use. They also claim that all genres of writing contain features of self-representation and self-positioning which indicate the voice of the writer and his agentive self in his social group (Ivanic and Camps, 2001). Thus, revealing our voice in writing does not end only in the notion of self-representation and providing a self-positioning to our self, and other selves we construct, but it has also to deal with the negotiation of our identities as they are socially and discursively formed (Matsuda, 2001). Matsuda (2001) also claims that voice and identity are not constructed in a unique language only, but every language, being the person’s mother tongue, his second or foreign language, all give the person various possibilities of shaping his/her own voice and identity. This is because the linguistic elements that may exist in a language might not exist in another language.

### **Language and power in the poststructuralist approach**

Individuals put their agency into practice when they decide what accent, genre, language codes to use in their speech, and being a multilingual or bilingual offers the speakers a range of identities that they can use according to their social context and self-representation. It is in this social context that the individuals possess a range of social roles and gain different characteristics depending on the social groups they interact with, their duties and the languages used in their interactions (Vasilopoulos, 2015). Selecting the appropriate language to interact with people in the context is one aspect that allows identity construction. As people use language to access the social group they desire to be part of (Norton, 2000). Interaction in the target language community is a sign of language learning, but also a sign of forming one’s linguistic capital (Bourdieu, 1991; Norton, 2000). Norton (2000) in most of her works on identity recommended that language teachers should encourage their students to be aware of their right to interact with each other as this fosters their role, identities, and positioning. This can be achieved through classroom tasks that the teacher designs and get the students engaged in.

Concerning identity and capital, poststructuralists (Norton, 2000; Pavlenko & Blackledge, 2004; Weedon, 1997) believe that people possess a range of identities and multiple selves that change according to time and space. When constructing these identities, or demonstrating self-empowerment in the social group, the individual uses ‘agency’ to control these tasks and invest in the language they desire to learn or access (Norton, 2000; see also Bourdieu, 1991). Duff (2015) states that this notion of ‘agency’ is crucial in EFL settings because they allow the learner to imagine, accept or refuse other roles or identities. This can be viewed in their use of language, contribution to the social group and any type of resistance during their interaction (Duff, 2015). Additionally, imagination underpins the construction of different types of identity (Pavlenko and Blackledge, 2004). Norton (2001) used the term ‘Imagined communities’ and ‘imagined identities’ as key concepts in her work to support students’ awareness on their right of using the foreign language in the classroom dynamically. According to Norton (2001) imagination is all a “creative process of producing new images of possibility and new ways of understanding one’s relation to the world that transcend more immediate acts of engagement” (Norton 2001 p. 163-164). However, poststructuralists (Norton, 2000; Norton, 2001; Pavlenko & Blackledge, 2004) perceive language as symbolic features that are used by individuals to empower themselves and impose their agentive selves in the society, which are, in turn, elements that embody identity construction (Zhao, 2011).

Bourdieu (1991) states that all types of linguistic interactions convey relations of power, and every single word or intonation the individuals, that he considers as ‘agents’, use in their daily communication can promote authority and power. This latter also differs depending on the group where this interaction takes place and the language being used. For Bourdieu (1991) not all words express the same power relations as there are words that might exist in a language but not in other ones. Thus, the power relations they convey are distinctive. These relations of power occur only in the social spaces because language is an essential component of social life. Bourdieu’s approach in linguistics is defined by the concepts of ‘habitus’, ‘field’ and ‘capital’. Each term has a role in shaping ones’ identity (Bourdieu, 1991). In language learning, every student develops a certain ‘habitus’ in interaction (speaking) and in writing, which is not necessarily marking his linguistic competence, but a ‘linguistic habitus’ that determines his social identity and future desires (Bourdieu, 1991). By ‘field’, he refers to the space where different actions, knowledge and other resources occur. These resources are what he calls ‘capital’. Capital can be presented in several types listed by Bourdieu as follows: ‘symbolic capital’ which refers to the vocabulary the individual uses in a given community to access their linguistic resources; ‘linguistic capital’ which indicates the ability of the individual to use expressions to interact in a particular social group (Bourdieu, 1991); ‘cultural capital’ which, as mentioned by Zhao (2011), refers to knowledge and thoughts that feature distinctive groups and classes within a given society; and economic capital related to money wealth, and other properties the individuals own (Bourdieu, 1991). These capitals and the individuals’ habitus all form relations of power in linguistic interactions, where identities are negotiated, within the social community (Bourdieu, 1991).

EFL students in this study use English, French and Arabic in their narratives and theatrical performances onstage. These practices happening in the created ‘social field’, that is the theatrical classroom community created by these students, include linguistic interactions that may unravel their habitus, and capitals. These aspects may grant them creativity, imagination, and authority to empower and position themselves in the imagined community they formed.

## METHODOLOGY

### Context and procedures

This study was conducted at the Department of English at Bejaia University, Algeria. 23 EFL students from both Bachelors and Masters Degrees participated. I designed an exploratory course which lasted for two months comprising ten sessions of reflective writing and theatrical performance. I adopted interpretive phenomenology as an approach for both data collection and analysis (see Frost, 2011; Smith, 2008).

I conducted in-depth interviews with the participants to support the research findings. I also designed drama and narrative tasks in each session to allow the students to write about their experiences, to write theatrical scripts collectively, and to perform them onstage. These scripts and stories were collected to enhance the findings of this study.

### Analysis and initial findings

In this paper, I have selected the interview transcripts of three participants that I named cases, and excerpts from their scripts. One of these scripts included some French sentences, while; the other ones were written just in English. I gave to each case a pseudonym to ensure anonymity and confidentiality. To analyse the data gathered from these three cases, I adopted Kleiman’s (2004) phenomenological strategy of data analysis. Kleiman (2004) states that phenomenological analysis goes through global reading of the data to achieve a general meaning about the transcripts. Then, the researcher should do secondary reading and extract

units of meaning. Each unit of meaning should be clustered with those that convey similar sense. However, units of meaning that seems useless to the research should be deleted. Once clusters of meaning are formed, the researcher should start a description making a link to his study, and this is called ‘imaginative variation’. The researcher will then create essential units of meaning and start reciprocity, or reflection on his participants speech, behaviour and any point that was mentioned in his data. The final step is going back to the raw data and make a general structure which will be then an interpretation for the final results.

The table below provides a description for the three cases’ in-depth interviews:

**Figure 1: Description of passages from the in-depth interviews**

Cases	Description
Sali	<p>Sali is a 24 years old student of English at Bejaia University, based in the school of education. She grew up in a small Berber region at Bejaia. Her native language is Kabyle. However, she speaks French fluently since her childhood as her mother was an Algerian migrant in France for 17 years. She also speaks Arabic, which she acquired at school. My interview with Sali, which lasted for an hour, revealed several issues in relation to her experiences and dreams as an EFL student and other elements that are tied to her participation in the theatrical sessions. Sali reported that using English fluently became one of her objectives since she studied English. Her desire is to achieve native-like-accent in learning. As she reported:</p> <p style="padding-left: 40px;">I can say that being a student of English means a lot for me, it means dreams and objectives in life that I started to realise one by one. Before I study English at University I used to listen to my cousins who live in America when they visit us at home I just say to their English wow and I dream to speak like them. Now I am a student of English <u>so I am trying my best to achieve this dream of speaking like native speakers. I want to speak English fluently but I find difficulties, so I just switch to French or Kabyle...but when I came to theatre play on stage and sharing my thoughts with others and learning from them I even developed my accent from some students who speak very well. It let me play roles I never played in society such as being a man, being a mother, a teacher...</u></p> <p>This transcript revealed a challenge that Sali experienced in the EFL setting to reach language mastery. It shows how Sali enhanced her English accent compared to how it was before attending the sessions. It also shows that she developed new identities she did not experience before, but the theatrical course fostered their emergence.</p>

Loundja	<p>Loundja is a 23 ELF student at Bejaia University, based in the School of Literature and British Civilization. She spent her life in a Kabyle speaking city, while she was speaking mostly Arabic because of her parents who were originally from an Arabic region. Similarly, she claims that English is used just inside the academic setting, while she does not use it in the society, and this hindered her from achieving language mastery. She reported in her interview the following:</p> <p style="padding-left: 40px;">I sometimes wish and try <u>to use English as often as possible</u> because we do not use it outside this academic context which then hinders us from improving our speaking though we try that but <u>the context where we live pushes us to use Kabyle or Arabic...</u></p> <p>She also added:</p> <p style="padding-left: 40px;"><u>I feel I did develop myself and my speaking skill in those sessions</u> like last time when we did the play of somebody in the bus reading a novel and others mocking at him... <u>I said oh my god if I am like this in reality I felt I am ugly, exactly I could see myself in reality and out of my comfort zone looking being a different person.</u></p> <p>Loundja wanted to develop her speaking ability and to become able to use English fluently inside and outside the classroom. The theatrical course helped her to achieve this desire up to a point. Most importantly, the plays she wrote and performed onstage with other participants let her discover new characters in herself as it made her experience other characters that she did not expect to live. This may have developed in her an awareness of new identities she can develop in language learning.</p>
Bilal	<p>Bilal, who is 22 years old, is a first year Master student of English at Bejaia University, based in the Linguistic school. He has a mixed ethnicity. His father is Palestinian, while; his mother is Algerian. Both of his parents speak Arabic, but Bilal lived for 15 years in Bejaia city where he learned Kabyle. Being an English student let him have the desire to master English, and he reported in the interview the following:</p> <p style="padding-left: 40px;">... um English, I use it at university and outside as well with few friends because <u>I want to master English especially British one...</u> so I watch TV in English, I listen to radio in English I write in English all what I do at home I try to do it in English to be able <u>to become a linguist</u> ...</p> <p>He added:</p> <p style="padding-left: 40px;">I had some fear to act onstage, but it was helpful that <u>I could develop myself</u> and to express my ideas and <u>my personality</u> to the spectators watching me. This let them know me <u>who I am and my personality. I played many roles: sometimes a worker in supermarket, sometimes a father and sometimes a son.</u> It let me be <u>different person each time. I also practiced my English like</u> when I wrote and perform <u>in English I felt I was adapting myself to British culture I was forcing myself to be an English person.</u> But <u>when I wrote in Arabic it was totally different why because in Arabic does not change me I am always same person exploring the experience in the same language</u> like repetition of what I did but no development in my personality compared to performance in English.</p>

	<p>Even last year I got a scholarship to study for six months in France, and I went there with two other students so it was really difficult when I arrived to the residence I was like found that <u>I should speak in French everywhere even outside but at that time I only want to tell people there I want to speak English and I used to ask them in English like when I look for streets and shops...</u> I really I really wished that time if France speaks English and <u>I just felt that English is my native language or second not French...</u> so I mean that that I speak more freely in <u>English I am not productive in French compared to English.</u> Even you know what I cannot write a sentence in Arabic this will take me hours <u>I now just become attracted by English...</u></p> <p>Bilal discussed his objective, which is achieving fluency in English learning. Thus, he took the challenge of learning English inside and outside the academic setting. In the course, he could develop his speaking skill through the practice of the language during performances onstage. He also could develop his character and experienced new ones. However, his talk on comparing his performance in English and Arabic/French revealed that he developed new identities in English. while he felt that when he writes and performs in Arabic/French, he does not increase chances of building a new identity. English influenced his linguistic competence. In other words, he feels less productive in other languages while he can freely use English. His last sentences on the experience he lived in France made him realise his need to speak in English. Additionally, a linguistic struggle emerged in his story. He found himself obliged to use French to communicate with others, while; he had no desire to use it and he switches to English all the time. This complexity and struggle can be the result of becoming aware of his new identity as an EFL student.</p>
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Further to the interviews, the following excerpts were taken from the theatrical scripts that the above three participants wrote in the course:

**Excerpt 1: ‘The last summer holiday’**

Loundja: ah, before I Forget, I brought you with some clothes and books but the most thing is that I had brought you with the mobile that I promised last year.

Saliha: Really, thank you so much dear, really, I have neither words nor expressions to express my joy full

Sali: aha me too I have brought a souvenir from champ Elise for the sweetest girl which is my cousin

**Excerpt 2: ‘I lost my soul’**

Sali: Hi Lynda [sadness on her face] ...

Lynda: oh! hello my friend, I think you are not fine! What’s happening with you?

Sali: oh dear, I still cannot forget my grandmother. She died two years ago. That was a sudden change for me. Her loss was huge because I did not loose just a grandma but a real mother and friend. She always encouraged me in my studies. When I told her I will become a teacher of English she hugged me and said ‘I am proud of you’. Now she left and the only thing that keeps me strong is my studies and my dream that I want to achieve to make her happy. I will teach English soon and talk about her for my students...

**Excerpts 3: ‘France but I want English’**

Bilal: Oh! Look Yacine, the ‘Eiffel Tower’, let’s have some pictures.

Yacine: Oh! J’adore ce monument. Ci tres jolie. [French vocabulary]

Bilal: Hey man common! We are not French students why are you using French and not English?

Yacine: but we are in France and French people speak French not English. Lets lets ask this lady to take a picture for us next to the Eiffel Tower.

Bilal: [Asking the lady], Bounjour Madam, Vous Vous [thinking about what to say] I mean pictures please.

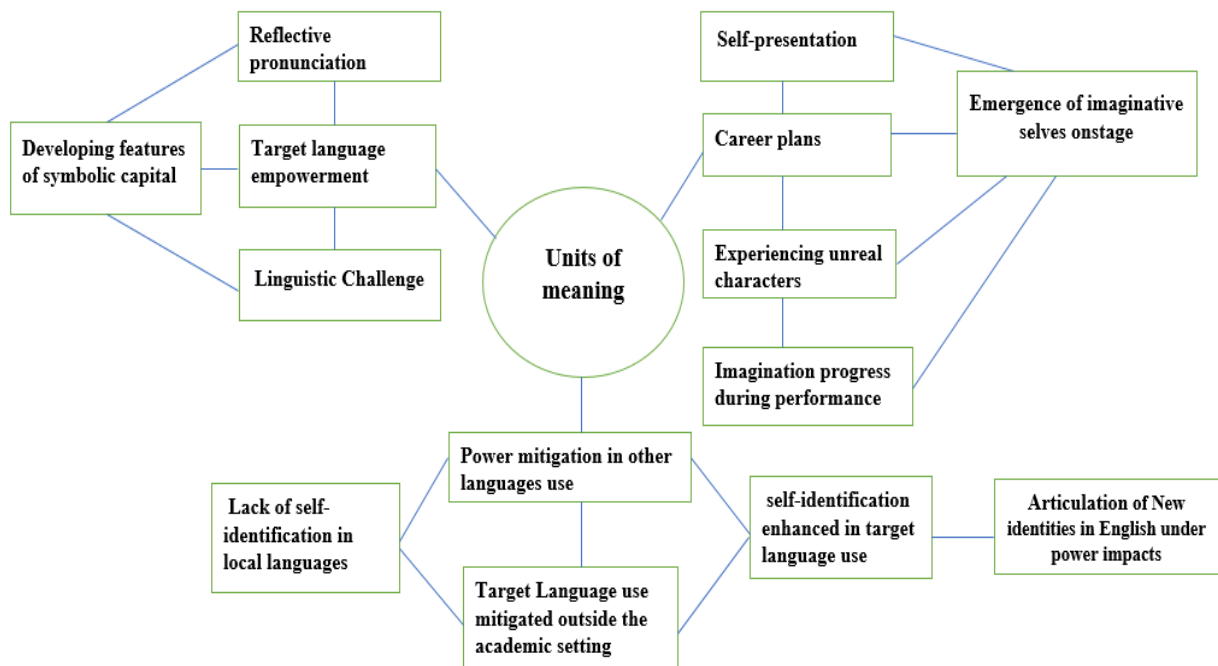
Yacine: What happened with you Bilal. That's easy why you couldn't speak French?

Bilal: I am confused my friend. I lost my French vocabulary. My brain turns back to English unconsciously. It becomes difficult for me to use French because I am more competent in English...

## COMPARING AND DISCUSSING THE FINDINGS

The sentences highlighted and underlined in blue in the above data were analyzed and interpreted into units of meaning. The main units that emerged include Sali's and Bilal's challenges to access the resources of English, pronunciation, self-representation, and emergence of new identities. A career identity emerged from the data, and this can be seen in Bilal's phrase: 'to be able to become a linguist'. This career identity, which I referred to as professional identity' also emerged in Sali's transcript. Sali mentioned her dream to become a teacher of English, which is driven by a contextual dimension or the impact of her grandmother (see Abes, Jons & McEwens, 2007). However, a language struggle is revealed in Bilal's story in France, and Loundja's claim on the social barriers she faces in English language use. These participants gained agency and power in using English within the academic space, while; they show some refusal to use French instead of English outside this space. A resistance in using English and other languages such as French is demonstrated in the data. This is what Duff (2015) has referred to in his definition of agency (explained above). The findings of this phenomenological analysis showed how the theatrical course helped the participants to improve their pronunciation and interactive competence as and gave them agency as legitimate users of English. It allowed them to create a self-presentation where they imagined themselves as native speakers achieving different professional, and social roles that empowered their linguistic and cultural capitals in language learning. These roles controlled by their agency, positioning, and challenge to learn English are all elements that enhanced imagined and multiple identity development. This latter is distinctive and changeable in the multilingual circle. The participants identities are strongly produced in the target language (English), while they change and sometimes are less articulated within French and Arabic uses.

**Figure 2: A summary of the phenomenological analysis**



## CONCLUSION AND IMPLICATIONS

To sum up, this study aims at exploring imagined identities amongst learners of English as a foreign language within multilingual classrooms, and how power relations affect these identities across languages use: English, French, Arabic. It also seeks to find out the images that these learners provide for themselves, and their language positioning. Furthermore, this study has a pedagogical aim which consists of raising awareness among the students towards their identities as EFL learners and the need to promote change in the way they learn English. The findings I reached through analysing the data gathered from three cases showed that learning a foreign language enhances students' desires to use the resources of that language in their academic and social settings. Linguistic challenge, collaborative learning, contextual influence, and imagination control their power relations in the target language. The theatrical course developed their imaginative capacities, agency, and their resistance towards other languages they acquired. The more linguistic capital they achieve, the more power they reveal in the target language. Their identity develops each time they identify themselves as the legitimate speakers of English. The results demonstrated the effectiveness of drama courses in enhancing their communicative competence and their identity development. The study, then, suggests theatrical courses in the Algerian EFL contexts to further develop identity aspects and foster both teachers and students' awareness towards this issue.

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34-BD16-5749

## A SYSTEMATIC REVIEW OF RESEARCH UNDERTAKEN INTO THE USE OF DIGITAL STORYTELLING AS A PEDAGOGICAL TOOL IN THE LANGUAGE CLASSROOM

LIZZIE ABDERRAHIM<sup>1</sup> AND FATIH MEHMET CIGERCI<sup>2</sup>

### ABSTRACT

The objectives of this systematic review are fourfold: (1) to generate information about the range and depth of research undertaken into the use of digital storytelling in the language classroom, (2) to identify gaps in the body of existing research, (3) to promote the effectiveness of digital storytelling as a pedagogical tool; and (4) to encourage a greater use of digital storytelling amongst practitioners. Having identified parameters including Research Focus, Methodology, Data Collection Tools and Outcomes, Participant Age and Proficiency Levels, Duration and Size of Study and Storytelling Approach and Storytelling Tools a systematic and methodical review of research conducted between 2007 and 2017 has been conducted, the findings discussed and conclusions as to the objectives reached.

**KEY WORDS:** digital storytelling, language learning, systematic review.

### INTRODUCTION

Arguably storytelling is embedded into the human psyche, people have been telling stories to each other, passing on their history and their traditions for thousands of years, so in this digital age it is hardly surprising that we should be seeing the emergence of a digital form of storytelling, but what do we understand by the term “digital storytelling”? From an historical perspective the Center for Digital Storytelling, now known as StoryCenter (<https://www.storycenter.org/>), established by Joe Lambert and Dana Atchley in California during the early 1990’s is recognised as the birthplace of the genre. From these beginnings much work has been done by researchers including those based at the University of Houston where a website dedicated to the educational uses of digital storytelling is maintained (<http://digitalstorytelling.coe.uh.edu/>). This body of work has established that digital storytelling can be particularised by features including (Robin, 2016):

- A combination of “...the art of telling stories with a mixture of digital media, including text, pictures, recorded audio narration, music and video ... blended together using computer software, to tell a story that usually revolves around a specific theme or topic and often contains a particular point of view.
- “...digital stories (that) are relatively, short with a length of between 2 and 10 minutes ... saved in a digital format that can be viewed on a computer or other device capable of playing video files”.
- “...typically uploaded to the internet where they may be viewed through any popular web browser”.

With roots in an arts movement which understood that creativity is a human activity and not the sole preserve of the professional artist, that recognised the power and efficacy of digital technology and saw its transformational potential, digital storytelling has been utilised across a diverse spectrum. We have seen it used as a tool to give a voice to people to tell stories about identity, family, relationships, community, health, healing, place, the environment, about work, social justice and human rights (see these stories at <https://www.storycenter.org/stories/>). It has also been increasingly recognised as a powerful pedagogical tool in education where it has

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been used to engage and motivate students (AlKhayat, 2010; Campbell, 2012) and to support teaching and learning in both skills based and knowledge based subjects including critical thinking (Yang and Wu, 2012), digital literacy (Pardo, 2014), physics (Kotluk and Kocakaya, 2017) and maths (Istenic Starčič et al., 2016). So, we see today a “wide variety of digital storytelling forms that range from the personal to the educational, touching on professional and interactive entertainment. Some digital stories are video-based; others are based on photos and still others on cartoons and have varying duration. Some are written; others are spoken, while some incorporate multiple media formats”. (Ribeiro, 2015).

### **THE THEORY BEHIND DIGITAL STORYTELLING AS A PEDAGOGICAL TOOL**

Lee (Lee, 2014) suggests that a synchronicity exists between digital storytelling, used as a pedagogical tool and the social constructivist theory of teaching and learning. Social constructivism with its foundations in the theories of Piaget and Vygotsky argues that learning and understanding are inherently social and that rather than knowledge being rooted in the individual it is through cultural activities and the use of tools, be they artefacts, symbols or language that the individual acquires knowledge: thought, learning, and knowledge are social phenomena and cognition is a collaborative process (Palincsar, 1998). From this argument, that cognition is a collaborative process, it is but a short step to the perspective brought by the theory of experiential learning which, as its name suggests emphasizes the significance of experience in the learning process, describing an holistic integrative perspective on learning that combines experience, perception, cognition and behaviour (Kolb, 1984). So, if cognition is the result of a collaborative process as per social constructivist theory and effective learning is linked to doing in the spirit of experiential learning theory the effectiveness of the learning strategy described by Asher (Asher, 1964) as a total physical response approach becomes evident. Using this total physical response method language is taught through a process of teacher command, using imperatives to manipulate student behaviour followed by a physical response on the part of the student on the basis that body movement supports the development of understanding. The effectiveness of this method is well established (Asher, 1966) however its limitations have led to the development of what is termed TPR Storytelling (<http://tprstories.com>). Developed during the 1990's in California by Blaine Ray, a teacher of Spanish TPR Storytelling incorporates storytelling into the total physical response approach to foreign language teaching, a development that research has shown to have a positive effect upon fluency (Lichtman, 2015). Therefore, through social constructivist and experiential learning theories, the total physical response approach and the development of TPR Storytelling we are led incrementally towards the use of digital storytelling as a pedagogical tool. According to Robin (Robin, 2006) digital storytelling is an effective instructional tool for teachers, an effective learning tool for students and it supports the development of what has been described as “twenty-first century literacy”<sup>3</sup> (Brown, Bryan and Brown, 2005).

### **METHODOLOGY ADOPTED FOR THIS STUDY**

Our objectives in conducting this study were to generate information about the range and depth of research undertaken into the use of digital storytelling<sup>4</sup> in the language classroom, to identify gaps in the body of existing research, to promote its effectiveness as a pedagogical tool, thereby encouraging a greater use of digital storytelling amongst practitioners.

Mindful that what was required needed to be “systematic, explicit, comprehensive and reproducible” (Fink, 2014) we adopted a systematic review approach for this study. Systematic

<sup>3</sup> Digital Literacy, Global Literacy, Technology Literacy, Visual Literacy and Information Literacy

<sup>4</sup> Digital storytelling encompasses activity that includes the use by researchers of previously created digital stories as well those specifically created during the research process.

review is a well-established approach in the field of health research where it has been used to summarise evidence on given health conditions to establish for example the efficacy and safety of certain treatments, to facilitate a wider understanding of developments thereby encouraging the dissemination and application of those developments. Systematic review has also usefully identified lacunae in existing research and, because of its systematic nature can serve to eliminate, to some degree, the risk of bias. For these reasons it appeared that this approach might also be usefully applied to the subject of digital storytelling where there is a burgeoning body of research. Adopting a systematic review approach would therefore satisfy our objectives. Having determined to adopt a systematic review approach we implemented the following process:

<p><b>Step 1:</b> We selected Web of Science as the online database from which to identify research that had been published between 2007 and 20017, using the following criteria:</p> <ul style="list-style-type: none"> <li>▪ Digital Storytelling</li> <li>▪ Language</li> <li>▪ Teaching</li> </ul> <p>and conducted a search in late October 2017 in the following categories:</p> <ul style="list-style-type: none"> <li>▪ Education</li> <li>▪ Language</li> <li>▪ Linguistics</li> </ul>	<p><b>Step 2:</b> We stored those publications identified in Step 1 in a Mendeley Library created for the purpose of this study and, during November and early December 2017 supplemented our database search with those items suggested by Mendeley. A list of 65 publications was identified at the end of Step 2.</p>
<p><b>Step 3:</b> We reviewed the list identified in Step 2 according to whether:</p> <ol style="list-style-type: none"> <li>a. The research has been peer reviewed<sup>5</sup>.</li> <li>b. The research questions have been sufficiently defined.</li> <li>c. The study makes clear: <ul style="list-style-type: none"> <li>▪ who the participants are;</li> <li>▪ what the proficiency levels are;</li> <li>▪ which skills are being addressed;</li> <li>▪ what the approach to storytelling is;</li> <li>▪ what storytelling tools are used; and</li> <li>▪ what was the duration and location of the study.</li> </ul> </li> </ol> <p>A final list of 18 publications was identified at the end of Step 3.</p>	<p><b>Step 4:</b> Using the following parameters, the list identified in Step 3 was organised in a rubric created in an Excel spreadsheet. This supported the subsequent analysis of the information discussed in the Findings section below.</p> <p>Parameters:</p> <ul style="list-style-type: none"> <li>▪ Research Focus</li> <li>▪ Participants</li> <li>▪ Proficiency Level</li> <li>▪ Location</li> <li>▪ Duration</li> <li>▪ Storytelling Tools</li> <li>▪ Storytelling Approach</li> <li>▪ Research Methodology</li> <li>▪ Data Collection Tools</li> <li>▪ Outcomes</li> </ul>

## FINDINGS

Analysis of the rubric data established the following:

### Location - Geographical

The majority of research was conducted in Spain and Turkey (Table 1). Of that research conducted in Spain three studies were based in Valencia (Torres, Ponce and Pastor, 2012;

<sup>5</sup> Scopus was used to identify those publications that had been peer reviewed on the basis that Scopus is described as being the largest abstract and citation database of peer-reviewed literature.

Pardo, 2014; Diaz, 2016) whilst the fourth was in Madrid (Verdugo and Belmonte, 2007). In Turkey two studies were based in rural locations (Yıldırım, Torun and Pınar Torun, 2014; Yamaç and Ulusoy, 2016) and the third in a city location (Ciğerci and Gultekin, 2017). We would suggest that a preponderance of research in a particular location suggests that factors exist which have encouraged an interest in computer assisted learning, certainly in Turkey there is an initiative that seeks to support the use of technology in the classroom which may provide an explanation.

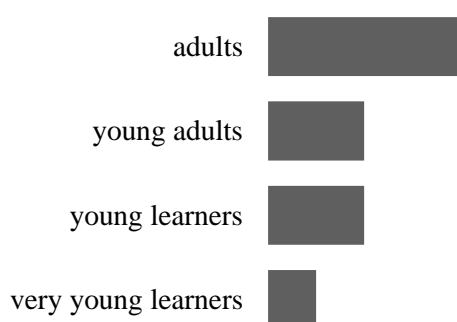
**TABLE 1: LOCATION**



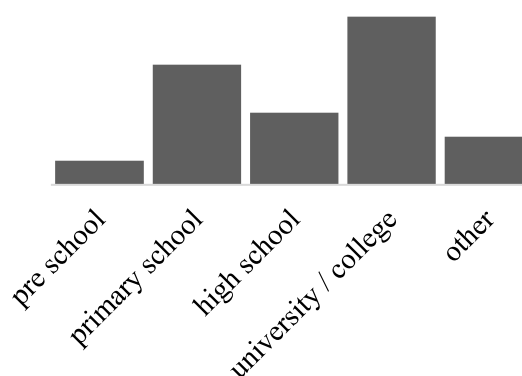
### Age of Participants

Whilst research was conducted across the whole age spectrum from very young learners to adults the majority of participants were adults (Table 2).

**TABLE 2: AGE**



**TABLE 3: VENUE**



- Very Young Learners (Verdugo and Belmonte, 2007; Papadimitriou et al., 2013)
- Young Learners (Yıldırım, Torun and Pınar Torun, 2014; Hwang et al., 2016; Yamaç and Ulusoy, 2016; Ciğerci and Gultekin, 2017)
- Young Adults (Yang and Wu, 2012; Tahriri, Tous and Movahedfar, 2015; Towndrow, 2015; Batsila and Tsihouridis, 2016)
- Adults (Torres, Ponce and Pastor, 2012; Kim, 2014; Lee, 2014; Pardo, 2014; Thang, Mahmud and Tng, 2015; Diaz, 2016; Nishioka, 2016; Leshchenko, Ruban and Tymchuk, 2017).

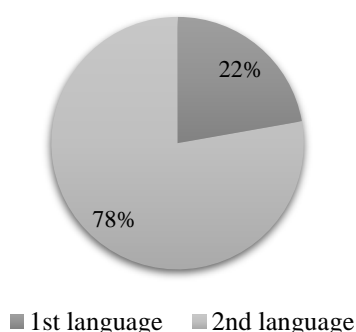
## Location - Venue

Unsurprisingly, given that the majority of participants were adults most of the research was conducted in a university or college as is shown in Table 3. Three of these university based studies were conducted in Spain with participants who were enrolled on undergraduate courses for students intending to become Primary School Teachers (Torres, Ponce and Pastor, 2012; Pardo, 2014; Diaz, 2016). The venue for two studies, one conducted online with independent learners (Kim, 2014) and the other in a private language institute (Tahriri, Tous and Movahedfar, 2015) was categorized as “other”.

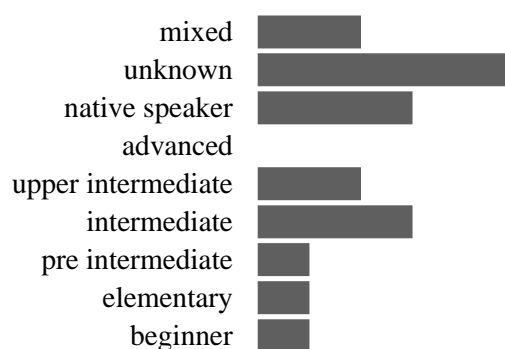
## Language Focus

The overwhelming number of studies related to second language learning. Participants in the three studies relating to first language classrooms (Papadimitriou et al., 2013; Yamaç and Ulusoy, 2016; Ciğerci and Gultekin, 2017) were native speakers as indicated in Table 4.

**TABLE 4: LANGUAGE FOCUS**



**TABLE 5: PROFICIENCY**



## Proficiency Levels

Whilst it is notable that for a significant number of studies proficiency levels were not identified it is evident that research has been conducted across the whole spectrum of proficiency from beginner to upper intermediate, although no research was undertaken with participants at an advanced level (Table 5). It is noteworthy that in two studies research was undertaken with groups with mixed proficiency levels (Lee, 2014; Nishioka, 2016).

## Duration of Study

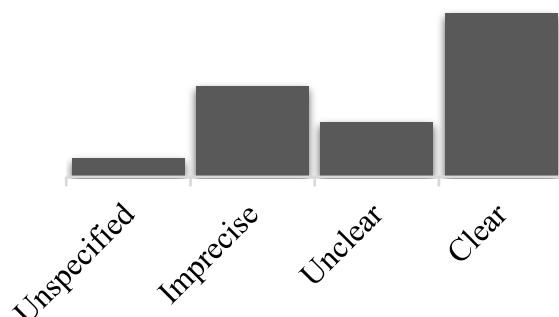
No consistent description of the duration of the studies was identified consequently duration was analysed in terms of the period described, the number of weeks and number of hours. Periods were variously described as sessions, terms and years without necessarily defining what constituted a session nor how long a term was or whether a year was calendar or academic. For these studies it was not possible to define the duration with any degree of precision (Torres, Ponce and Pastor, 2012; Lee, 2014; Pardo, 2014; Diaz, 2016; Leshchenko, Ruban and Tymchuk, 2017). These are identified as Imprecise in Table 6. Three studies described duration in terms of the number of weeks but did not specify how much time was spent during those weeks (Papadimitriou et al., 2013; Thang, Mahmud and Tng, 2015; Ciğerci and Gultekin, 2017). These studies are identified in Table 6 as Unclear. Nine studies are described as Clear in Table 6, these studies defined duration in terms of weeks and hours. Duration was unspecified in one study (Nishioka, 2016).

## Size of Study

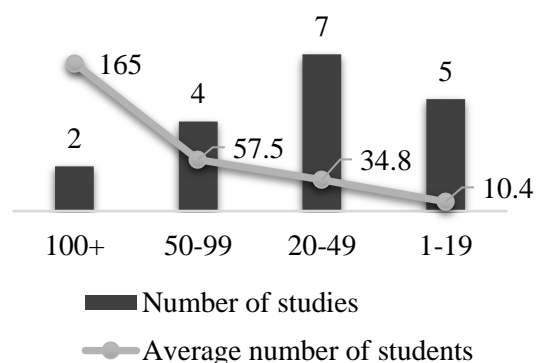
Study size varied considerably as is shown in Table 7. The largest study contained 220 participants (Verdugo and Belmonte, 2007) and the smallest 3 (Nishioka, 2016). The most

common study size was one with participants numbering between 20 and 49 and in this category the largest studies (Diaz, 2016; Leshchenko, Ruban and Tymchuk, 2017) had 48 participants and the smallest 21 (Pardo, 2014).

**TABLE 6: DURATION**



**TABLE 7: SIZE OF STUDY**



### Focus of Research:

Research focus was categorised as being on:

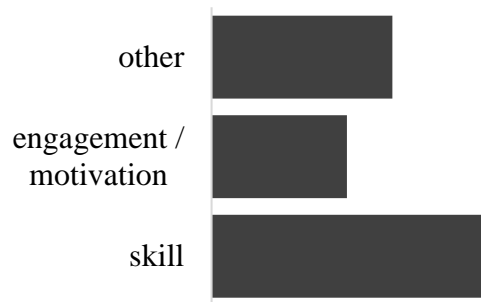
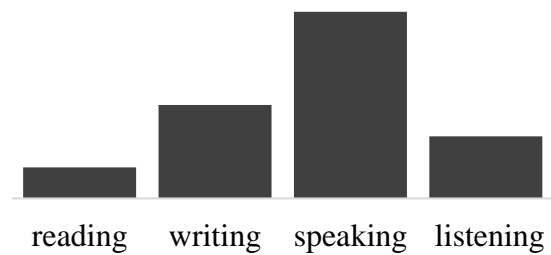
- |   |                                     |   |
|---|-------------------------------------|---|
| <p>1. Skills:</p> <ul style="list-style-type: none"> <li>▪ reading</li> <li>▪ writing</li> <li>▪ speaking</li> <li>▪ listening</li> </ul> | <p>2. Motivation<br/>Engagement</p> | <p>/ 3. Other:</p> <ul style="list-style-type: none"> <li>▪ critical thinking and digital literacy skills</li> <li>▪ the interaction between participants;</li> <li>▪ the opinions and perceptions of participants and teachers</li> <li>▪ methods and processes</li> </ul> |
|---|-------------------------------------|---|

The majority of studies had a single focus<sup>6</sup> (Table 8) and the principle focus was on skills (Table 9). Of those studies that focussed on skills the majority were concerned with speaking skills and in only one study was the focus on writing (Batsila and Tsihouridis, 2016)

**TABLE 8: RESEARCH FOCUS**



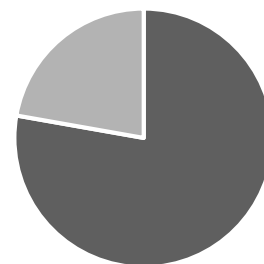
<sup>6</sup> Of those studies with a single focus (Table 8) the majority related to skills.

**TABLE 9: RESEARCH FOCUS**

**TABLE 10: SKILL FOCUS**


### Storytelling Approach and Choice of Storytelling Tools

In the overwhelming majority of studies, the storytelling approach was student led, that is the participants were responsible for developing and creating their own digital stories, having had some initial pre-instruction from a teacher (Table 12).

In only four studies was the storytelling approach teacher led, that is the teacher was responsible for the selection of existing digital stories which were then used by participants during the study. Of those that were student led in one (Diaz, 2016) the student participants were pre service teacher who developed and created digital stories for use by them in their teaching placements.

**TABLE 12: STORYTELLING APPROACH**


■ Student Led    ■ Teacher Led

There is a vast and diverse array of tools available for use in the creation of digital stories and to some degree this diversity was reflected in the choice of digital storytelling tools used in these studies as illustrated in Table 13. It should be noted that some studies made use of multiple tools. One study made use of unspecified Web 2.0-based applications (Nishioka, 2016) and two did not specify the tool(s) used (Ciğerci and Gultekin, 2017; Leshchenko, Ruban and Tymchuk, 2017). Microsoft products were the most popular - of the eighteen studies discussed in this paper six made use of Microsoft Photo Story 3 and of those six, three also made use of Microsoft Movie Maker.

**TABLE 13: STORYTELLING TOOLS**

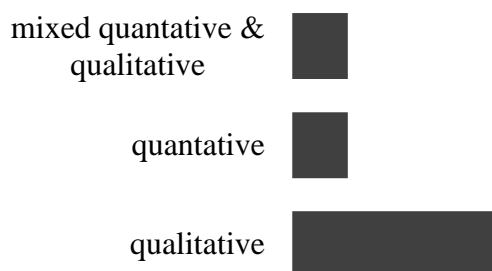
Tool	Description
Microsoft Photo Story 3	User-friendly requiring basic computer skills. Can upload and customise images, record voice and add music. It can be accessed offline
Microsoft Movie Maker	Video editing software used to create, edit and publish videos. Now discontinued
Vegas Pro 11	Video editing software
Pow Toon	User-friendly, intuitive animation software.

“Storyboard”	A sequential display of text and graphics used to support the creation of an interactive media sequence.
BBC	Stories in full multimedia format, with sound, music, and animation selected from BBC website (2007)
www.storyarts.org	Website providing a Story Library, Lesson Plans & Activities and a Story Arts Theatre
‘Up and Away’	Digital storytelling software developed by Oxford University Press.
Kindersite	Website with links to games, songs and stories.
VoiceThread	Interactive and multimedia online slide show program.
Vocaroo	Online recording program
vozMe	Text-to-Speech program
Digital camera / webcam	
Blog	<a href="http://elmer-project.blogspot.com/2011/01/blog-post_9004.html">http://elmer-project.blogspot.com/2011/01/blog-post_9004.html</a>
Developed by the researchers for the purposes of the study.	Web-based multimedia system with 2 main functions: Story Editor and Story Player.

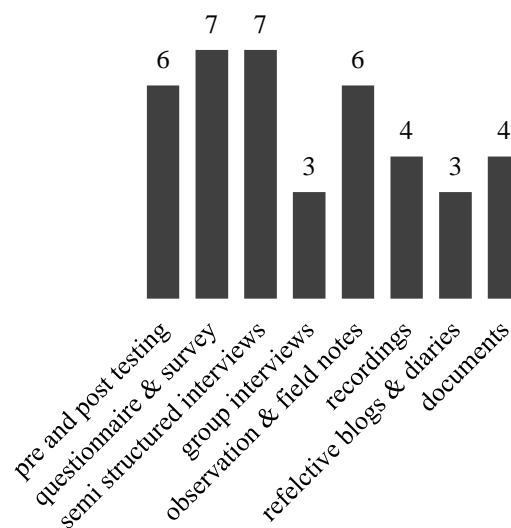
## RESEARCH METHODOLOGY AND DATA COLLECTION

The majority of studies adopted a purely qualitative approach to the research, with two describing the research approach as being that of a case study (Table 14). In eight studies participants were organised into control and experimental groups. With regard to data collection a wide variety of methods were adopted as illustrated in Table 15. Whilst some studies used a single collection method many made use of multiple methods – whilst the average number was three one study made use of six<sup>7</sup>.

**TABLE 14: RESEARCH METHODOLOGY**



**TABLE 15: DATA COLLECTION METHODS**



<sup>7</sup> Pre and post testing, questionnaire, semi structured interviews, observations, recordings, documents

## OUTCOMES

A review of research outcomes shows the positive impact of digital storytelling (Table 5). Contained within the positive categorisation are outcomes described in individual studies as being “significant”, “positive” and “generally positive”. However, in some studies outcomes were described as mixed. These included:

**TABLE 16: OUTCOMES**

Mixed



Positive



- Kim where overall oral proficiency was gradually enhanced and there was significant improvement in vocabulary, sentence complexity, and pronunciation but no significant improvement in discourse and grammar (Kim, 2014).
- Thang which reported that digital storytelling helped to increase motivation amongst participants and a belief on the part of the teacher that digital storytelling had enhanced reading, writing and speaking skills but also that it was too demanding and too time consuming (Thang, Mahmud and Tng, 2015).
- Yang where no significant differences were found between the control and experimental groups in terms of vocabulary and grammar but as regards listening skills the experimental group outperformed the control group and significant differences were noted with regard to critical thinking skills and motivation (Yang and Wu, 2012).
- Towndrow who concluded from the results that there “is potential to enhance storytelling digitally, but there is also a need to understand and practice how stories are constructed and how meaning making is designed and realised through various semiotic modes of representation” (Towndrow, 2015).

## DISCUSSION AND CONCLUSION

What conclusions can we draw from these findings? At the outset we identified four objectives for this study, from these we can pose four questions:

1. What is the range and depth of research into the use of digital storytelling in the language classroom?
2. Are there any gaps in the body of the existing research?
3. Has this review of existing research promoted the effectiveness of digital storytelling as a pedagogical tool?
4. Will this review encourage a greater use of digital storytelling amongst practitioners?

Turning now to the answers to these questions:

### Range and Depth:

Findings relating to the age and proficiency levels of participants and the venue in which research has been conducted are indicative of research having covered the full range and it would be reasonable to conclude that the research focus of the studies has been extensive. We can see also that in terms of geographical location research has taken place across the world although there are some locations in which research activity has been more extensive. Additionally, the review suggests that the range of data collection tools utilised in the studies has been comprehensive and that researchers have adopted mixed methodologies, all suggestive of the extent of research practice in this area. However, as regards the depth of the research some limitations are evident. Some research has been conducted with small numbers of participants over a short duration, although these studies can be balanced against that research conducted with significant numbers and over a significant period of time. We might also conclude that whilst this review has demonstrated a diversity in the use of digital

storytelling tools that, within the context of the vast array of tools that are available that diversity might not properly be described as being of full range.

### **Gaps in the Body of the Existing Research:**

Whilst this review demonstrates that the focus of research has been broadly extensive an examination of the information in Tables 4, 9 and 10 suggests that gaps in the existing research do exist. From Table 4 it is apparent that research interest has been primarily with regard to second language learning and that very little research has been conducted in the first language classroom. Tables 9 and 10 would suggest that, whilst there has been a focus across the full range of skills much of that has been directed at speaking skills and that reading and listening skills have not received the same degree of interest. We would also suggest that there has been little research examining the use of previously created digital stories as the pedagogical tool (as opposed to those digital stories created in the classroom) and that this too might be perceived as a gap.

### **Promoting the Effectiveness of Digital Storytelling as a Pedagogical Tool:**

Research outcomes are certainly capable of evidencing the effectiveness of digital storytelling as a pedagogical tool. Where outcomes have been mixed they have revealed differences in impact between research targets as in the studies conducted by Kim and Yang (Yang and Wu, 2012; Kim, 2014) or they have discussed the practicalities of using digital storytelling in the classroom and the difficulties that these might present (Thang, Mahmud and Tng, 2015). Therefore, at the very least, the findings regarding outcome in this review do nothing to undermine the position taken by Robin as to the effectiveness of digital storytelling (Robin, 2006).

### **Encouraging a Greater Use of Digital Storytelling Amongst Practitioners**

We would suggest that evidence from this review should encourage a greater use of digital storytelling amongst practitioners but perhaps this is something that remains open to discussion.

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35-BD26-5817

## UN GLOBAL COMPACT: IMPLEMENTING LABOUR STANDARDS FOR THE ELIMINATION OF DISCRIMINATION IN EMPLOYMENT AND OCCUPATION

FATMA DEMİR<sup>1</sup>

### ABSTRACT

This paper reviews the best business policies and practices of labour standards for the elimination of discrimination in employment and occupation as part of the United Nations Global Compact.

The UN Global Compact is an initiative of the United Nations. It aims to encourage businesses worldwide to adopt sustainable and social responsible policies and practices, and to report on their implementation. The elimination of discrimination in employment and occupation is the sixth principle of the UN Global Compact in the area of labour standards. Business policies and practices are critical to eliminating the discrimination that arises in a variety of work life activities, including access to employment, access to particular occupations, promotion and training and vocational guidance.

Viewed from this perspective, businesses should support the elimination of discrimination in employment and occupation to implement the labour standards of the UN Global Compact.

**Keywords:** global compact, labour standards, employment, occupation, talent

### INTRODUCTION

The UN Global Compact is a voluntary initiative designed to promote innovation in relation to corporate sustainability by helping establish the business case for human rights, labour standards, environmental stewardship, and the fight against corruption. Participation in the UN Global Compact is open to any company that is serious about its commitment to working towards implementation of the UN Global Compact principles throughout its operations and spheres of influence, and willing to communicate on its progress.

The UN Global Compact is not a formal membership organisation. On joining the UN Global Compact, larger companies are asked to make a required annual contribution to support their engagement in the UN Global Compact. The Communication on Progress (COP) is a visible expression of commitment to sustainability, and participant stakeholders can view it on a company's profile page.

The UN Global Compact is a voluntary initiative, and signatories are free to end their participation at any time. However, as the initial commitment to the UN Global Compact requires a letter from an organisation's top executive, the same is expected to leave the initiative. The letter should be addressed to the UN Secretary-General, and should specify the organisation's reasons for ending the commitment.

The UN Global Compact is not a performance or assessment tool. It does not provide a seal of approval, nor does it make judgments on performance. Participants are expected to publish a description of the ways in which they are supporting the UN Global Compact and its 10 principles in their annual report or similar corporate document (e.g. a sustainability report). This is the COP. The UN Global Compact believes that this sort of openness and transparency encourages improved practices by participants.

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## THE UN GLOBAL COMPACT

The UN Global Compact was first announced by the UN Secretary-General Kofi Annan in an address to The World Economic Forum held in Davos, Switzerland in January 1999 and was officially launched at the UN Headquarters in New York in July 2000. It aims to encourage businesses worldwide to adopt sustainable and social responsible policies and practices, and to report on their implementation. According to current data provided on the UN Global Compact website (U.N., 2017), the UN Global Compact has over 13,000 participants from 170 countries. More than 9,000 of those participants are businesses; the remaining 4,000 include public agencies, local administrations, associations, foundations, trade unions, professional organisations and academic bodies.

At the UN Global Compact launch in 2000, approximately 40 companies came together with a dozen labour and civil society leaders to commit to universal principles (Gonzalez-Perez, and Leonard, 2015, pxiii). Today, the UN Global Compact is the world's largest voluntary corporate responsibility initiative.

The Global Compact asks companies all around the world to embrace support and enact the 10 principles universally established regarding human rights, labour standards, the environment and anti-corruption fields. The ten principles constitute the “heart” of the Global Compact. The acknowledged universal legitimacy of the principles offers an institutional advantage to the initiative. (Rasche and Kell, 2010, p12) The Global Compact's 10 principles are as follows.

## THE UN GLOBAL COMPACT PRINCIPLES

### Human Rights

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights;

Principle 2: Businesses should ensure that they are not complicit in human rights abuses.

### Labour Standards

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: Businesses should support the elimination of all forms of forced or compulsory labour.

Principle 5: Businesses should support the effective abolition of child labour

Principle 6: Businesses should support the elimination of discrimination respecting employment and occupation.

### Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility;

Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.

### Anti-corruption

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

The elimination of discrimination in employment and occupation is the sixth principle of the UN Global Compact. Business policies and practices are critical to eliminating the discrimination arising from a variety of worklife activities, including: access to employment,

access to particular occupations, promotion, training and vocational guidance, talent management, diversity and inclusion, gender equality, and occupational health and safety.

From this perspective, UN Global Compact participant businesses should support the elimination of discrimination in employment and occupation. Participants must be devoted their capacities and global network to this goal make it happen, according to the sound values and principles on which the UN Global Compact is built upon.

The types of organisation involved in the UN Global Compact are as follows:

Academic: 486

Foundation: 319

Public Sector Organisation: 159

Business Association (Global): 86

Labour (Global): 1 (*Entidad Mexicana de Acreditacion, A.C.*)

Small or Medium-Sized Enterprise: 5282

Business Association (Local): 424

Labour (Local): 16

City: 96 (Municipalities)

NGO Global: 467

Company: 4449

NGO (Local): 1071

Today's multinational corporations have grown in size and influence, in largely due to the trust, consent, and support of the constituents they serve. As businesses have grown more global, the challenge has become how to retain this trust while balancing the diverse needs and motivations of their various stakeholder constituents. (Lawrence and Beamish, 2012, pxi). A huge prize becomes available to business and society if a tipping point can be reached where enlightened self-interest joins hands with increased trust in business to make way for greater mobilisation of private resources to address the biggest social challenges of our time (Oppenheim and Bonnini, 2007, p29).

The UN Global Compact applies the leadership principle. If the CEO of a company's global parent (holding, group, etc.) embraces the 10 principles of the UN Global Compact by sending a letter to the UN Secretary-General, the UN Global Compact will post only the name of the parent company on the global list assuming all subsidiaries participate as well. Subsidiaries wishing to send a letter directly to the UN Secretary-General to underline their commitment, whether alongside the parent company or individually, will also be listed as participants, and are invited to be active at the global and local level, including through the Global Compact Local Network of their host country. Subsidiaries that do not meet the product-based exclusionary criteria can apply individually to the UN Global Compact, if their parent company is excluded from participation.

The UN Global Compact principles are based on a guiding perspective for businesses and organisations to allow them to achieve further objectives in terms of efficiency growth, motivation and fidelity of employees, brand awareness and access to new markets. The Global Compact has been made gradually become more widespread since 2000 while the studies conducted to ensure compliance with 10 principles are reported through the UN Global Compact website.

## A CASE STUDY OF THE UN GLOBAL COMPACT PARTICIPANT

The Koç Group (KG) is one participating company out of 250 participants in Turkey.

Koç Group: 'Koç' or 'Koç Holding'

Country: Turkey

Org. Type: Company

Sector: General Industrials

Global Compact Status: Active

Employees: 88000

Ownership: Publicly Listed

Participant since: 05 April 2006

Initiatives carried out by KG

Projects conducted by the Group Companies: Arçelik, Aygaz, Ford Otosan, Koç Information Technologies Group, Opet, Otokar, Otokoç Otomotiv, Tat Gıda, Tofaş, Türk Traktör, Tüpraş and Yapı Kredi

Joint projects conducted by NGOs supported by the Group, The Vehbi Koç Foundation and affiliated institutions.

KG signed the UN Global Compact in 2006. Since then, the principles have become its framework in shaping its sustainability approach. The aim of KG is to help Turkey through the pioneering steps the Group has taken in innovation, digital transformation and sustainability, thereby transforming its leading position in the country into global success stories. The Group confirms that KG reaffirms its support of the 10 principles of the United Nations Global Compact and UN Women's Empowerment Principles (WEPs). As with all other UN Global Compact participants, the KG has to prepare a COP report. Submitting an annual COP is at the heart of the Participant Company's commitment to the UN Global Compact and provides valuable information to the company stakeholders. The overall format of a COP is flexible, COPs can be prepared in any language. The COP describes the actions taken and the progress made throughout 2016.

According to KG COP Report:<sup>2</sup>

In signing the Global Compact, the KG's aim was to share its new business culture and its cognition of social responsibility internally with its Group as much as externally with its stakeholders and companies around KG. Today, KG stands at the point where it is delighted to have acted in favour of Turkey and the world by demonstrating an exemplary corporate citizenship comprised of Group employees, distributors, and vendors.

KG consistently improves its corporate structure, operations, and social responsibility, all of which are illustrated through its projects in parallel with the principles and values inherited from its founder, Vehbi Koç. Since signing the Global Compact in 2006, KG has been acting with a perspective that reflects these global principles. KG closely monitors the data from portals and principles that KG itself has established within this scope, and shapes its decisions, accordingly.

As a board member of the Global Compact Local Network Turkey, KG continues to support efforts to extend and institutionalise the Global Compact in Turkey. KG signed the UN WEPs in 2015, and has taken an active role in the Global Compact Turkey Women's Empowerment Study Group, which was established to support the learning processes among companies and contribute to spreading them across the country by merging private sector initiatives on gender equality.

In March 2008, KG published its first Corporate Social Responsibility report. Since then, KG has regularly published COP reports reflecting on projects already completed and the progress of its long-term projects. KG is continuously working to improve and disperse best practice among group companies.

<sup>2</sup>Koç Group COP Report 2016. This report has been prepared by Koç Group ("Koç" or "Koç Holding") as a COP for the UN Global Compact and WEP Initiatives. All the information and opinions contained in this report (which does not purport to be comprehensive) were provided by Koç Group and have not been independently verified for this purposes. This report is prepared for information purposes only by the Koç Group.

## **Talent, Diversity and Inclusion**

Viewing its employees as its most valuable capital is a common understanding shared across the entire KG. In its business activities, the KG is keenly aware that moving KG forward into the future depends on recruiting well qualified professionals and generating value jointly with them. To this end, KG companies supports their employees throughout their careers starting at the recruitment phase via human resources practices. KG fosters a fair and equal opportunity working environment that is conducive to both personal and professional development.

Diversity is respected, and no discrimination is made at any stage of work life. Improving and ensuring the efficiency of its human resources processes is the responsibility of the human resources departments of KG companies. All employees, with the support of these departments, implement its human resources approach and the policies, strategies, and processes developed in accordance with this approach. Group companies publish human resources guidelines in order to ensure broad adoption of this approach and to raise awareness among the staff. Efforts to ensure the continuity and sustainability of its workplace culture are guided by the KG Code, which serves as a major reference guide for personnel to consult whenever they need direction.

No KG company employs child labour or engages in forced or compulsory labor practices. KG suppliers are also expected to operate with the same sensitivity in such matters. To ensure compliance with these requirements, KG collects written commitments from its suppliers and monitors their practices. KG respects its employees rights to join trade unions and participate in collective bargaining. Group staff members can be elected to the local and central management bodies of employee or employer associations in addition to serving as members of their respective professional organisations. Besides these memberships and representations, a number of KG employees are engaged in Provincial Employment Boards, Chambers of Industry and Commerce, and in various civil society organisations to contribute to job creation, the Turkish economy, and societal development.

## **Gender Equality**

KG has adopted providing jobs that respect human rights as a principle. The Group is committed to providing equal rights to all employees. Creating a workplace culture sensitive to gender is an important element of KG's human-centered employment policies. In line with this perspective, KG has joined a number of local and international initiatives and made commitments to create workplace environments that are sensitive to gender equality issues. In 2013, KG became a signatory to the Declaration on Equality at Work, in 2015, KG signed the WEPs. In line with its commitments, KG stepped up efforts to integrate the 'Equality at Work' concept in the management approach and business processes. As a result, KG created a management model, starting from the human resources processes, in order to reinforce gender equality within KG. As a first step toward establishing gender equality, we adopted 'KG Equality Principles and Implementation Principles' in our workplaces. Modelled after the KG Code of Ethics and Business Conduct and Implementation Principles, the Equality Principles set forth the strategic background and supporting practices regarding gender equality.

One of the most important elements to ensure the best implementation of core principles and practices stipulated in the Equality Guidelines is to increase the Group workforce's knowledge on gender equality. To this end, KG developed a series of training programmes with the support of expert civil society organisations, international organisations, and universities, for the various needs of a diverse set of target audiences. These training programmes span a broad spectrum, from training that highlights gender norms to leadership development training for women. The gender equality-related training initiatives are being carried out as part of the 'Supporting Gender Equality for My Country' project. The project aims to extend practices that target increase in the share of female employees throughout KG and to create a gender sensitive work environment. Seminars are also organised to raise the

awareness of employees, managers and dealers. As part of the project we collaborated with the Mother Child Education Foundation, UNESCO, the Koç University Center for Gender Studies (KOÇ-KAM), and the Turkey Family Health and Planning Foundation (TAPV).

In 2016, KG continued to support the 'HeForShe' movement and collaborated with the global business representatives to find solutions to common gender equality problems. The Koç Holding Chairman Ömer M. Koç took on the leadership role, within the framework of the Impact Champions, which was designed to advance gender equality. This achieved its goal of reaching 4 million supporters by 2017, and has made significant progress towards achieving the goal of delivering gender equality awareness education to at least 100,000 people by 2020, leading to the recognition of gender-sensitive workplace culture to help establish equality.

As a signatory of WEP, KG also took an active role in the Global Compact Turkey Women's Empowerment Working Group, which was established to support the learning processes among companies and contribute to spreading them across the country by merging private sector initiatives on gender equality.

KG are also a part of the Women's Employment and Gender Equality Working Group in Business World and BCSD Turkey (SKD Türkiye).

In 2016 the Working Group published a report including case studies on gender equality from Koç Holding and other companies. The report was also introduced by a panel hosted by Koç Holding.

Brand communication activities carried out by Group companies were identified as another important area of intervention, since mass media can be a very effective tool for breaking gender stereotypes. 'Gender Equality in Marketing Communications' workshops were held with the participation of marketing and corporate communications teams and advertising agencies of Group companies, and guidelines were prepared. These workshops are now being expanded to include all Group companies and their advertising and marketing communications partners.

## **Occupational Health and Safety**

Fostering a work environment where employees and related stakeholders can undertake their roles under healthy and safe conditions, while eliminating risks that may prevent the establishment of this environment, is an indispensable, core priority for Group companies. To this end, occupational health and safety is managed proactively and systematically across the Group. Occupational health and safety specialists, work place physicians, other health of officials, and service providers in this area employed by Group companies, monitor related developments closely and implement required improvements in line with globally-accepted standards. Of the 85 facilities owned by Group companies, 68 are covered by OHSAS 18001 'Occupational Health and Safety Management System' certification. The certified facility ratio stood at 80% as of year-end 2016.

The Koç Holding Occupational Health and Safety Coordination Board is responsible for maintaining the particular importance we place on occupational health and safety. The functions of this board include: Reviewing Group-wide practices regularly on an issue-by-issue basis, developing recommendations for improvement and broader adoption, ensuring that best practices are adopted by Group companies, tracking occupational accident statistics regularly and providing recommendations for improvement and development to achieve the zeroaccident goal, and managing processes to ensure complete compliance with applicable laws, rules and regulations.

In addition to the Occupational Health and Safety Coordination Board, which is charged with coordination at Group level, occupational health and safety issue is managed by Occupational Health and Safety Committees at company level. As of 2016, KG companies

have 123 active working OHS committees, 1,270 representatives and 1,506 members working on these committees. Occupational Health and Safety is implemented in Group companies via practices that begin with the recruitment process. Employees are asked to provide health information and medical reports, stating that they are fit and healthy for the job as part of the hiring process. Regular health screenings, and medical examinations, and screenings for special tasks are performed across the Group. Workplace physicians, occupational health and safety specialists, and additional health personnel as needed at the Group facilities provide the requisite health services for the staff.

Health and occupational safety-related provisions of collective bargaining agreements are adhered to fully and completely. In addition to various workplace practices, training activities and projects are also conducted for personnel and their families. Group companies organise training activities to raise and bolster occupational health and safety awareness. As a result, measures implemented against identified risks are expanded in scale and scope. To this end, processes and practices are implemented throughout the year to eliminate occupational health and safety risks identified as a result of risk assessment activities. Training was administered to employees of Group companies and contractor firms as needed. In 2016, 561,916 employee-hours of training were provided to 89,898 personnel of Group companies, and 77,663 employee-hours of training were provided to 29,234 contractor firm staff members.

## CONCLUSION

As a voluntary initiative UN Global Compact is corporate responsibility initiative to promote innovation in relation to corporate sustainability by helping to establish the business case for human rights, labour standards, environmental stewardship and the fight against corruption.

Participation in the UN Global Compact is open to any company that is serious about its commitment to work towards implementation of the UN Global Compact principles throughout its operations and sphere of influence, and also willing to communicate on its progress.

On joining the UN Global Compact, larger companies are asked to make a required annual contribution to support their engagement in the UN Global Compact. The COP is a visible expression of commitment to sustainability, and participant stakeholders can view it on the company's profile page.

The private sector is a key partner in efforts to advance gender equality and empower women. Current research demonstrating that gender diversity helps businesses perform better signals that self-interest and common interest can come together, but ensuring the inclusion of women's talents, skills and energies—from executive offices to the factory floor and the supply chain—requires intentional action and deliberate policies.

The principles of the UN Global Compact were developed as a *voluntary* framework and resource for companies dedicated to advancing gender equality. Signing the CEO Statement of Support does not constitute any type of binding obligation. However, signing the CEO Statement is a great way to demonstrate commitment to the first principle: 'Establish high-level corporate leadership for gender equality'. It has now been signed by over 550 chief executives of companies around the world.

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**1-BF05-5527**

**COST VERSUS PERFORMANCE BASED EMPLOYEE HR ATTRIBUTIONS AND TASK PERFORMANCE MODERATED BY CORE SELF-EVALUATIONS: EVIDENCE FROM A COLLECTIVIST CULTURAL CONTEXT**

DR. AMNA YOUSAF<sup>1</sup>

Much of the extant research adopts a purely management-centric approach in exploring the influence of the HRM on employee outcomes with employees being (passive) receivers of HRM. Employee HR attributions are neglected in the research linking HRM to outcomes, which has recently generated calls from various researchers. In response to this, the current study investigated if employee performance based HR attributions and cost based HR attributions could distinctly impact their task performance in a collectivist cultural context. Furthermore, we examined the moderating role played by employees personality attributes (core self-evaluations) to influence the HRM attribution-task performance relationship. Multi source data was collected from 272 professionals in a large bank located in Pakistan (line managers of work units responded on task performance, of their subordinates while data on HR attributions, and CSE was collected directly from employees) and analysed using multiple regression to obtain results. It was found that performance based HR attributions were positively related to task performance, while cost based HR attributions were negatively related to task performance. Moreover, core self-evaluations strengthened the positive relationship between performance based HR attributions and task performance while these weakened the negative relationship between cost based HR attributions and task performance. The study findings may be linked with pluralist approach of management in suggesting that HR attributions are multi-dimensional with unique employee outcomes. This is suggestive of the idea that employees do perceive and attribute fundamental differences between their interests and those of management as indicated by pluralist perspective. The study has important contributions to make to SHRM literature as well as practice. This study is not only the first to integrate HRM attribution theory and employee performance but we also address a call to focus on the effect of personality variables in examining if the attribution relationship to outcome is affected by those.

Key Words: Performance based HR attributions; Cost based HR attributions; Task Performance; Core Self Evaluations; Collectivist Cultural Context

**3-BD22-5793**

**EXPLORING UNDERGRADUATE NURSING STUDENTS' PERCEPTIONS ABOUT USING PORTFOLIOS IN NURSING EDUCATION**

DR. MAHA AL-MADANI<sup>2</sup>

Academic programs typically emphasise initial and continuing performance assessments and evaluations for nursing students, to ensure safe professional practices in the workplace. In the mid of 1980s, Student portfolios developed as an educational tool and many of nursing education used portfolios as an assessment strategy for both formative and summative assessment. This study used a descriptive and exploratory design to obtain undergraduate nursing students' perceptions about portfolio used in their clinical education. A questionnaire was distributed at the end of each semester to all undergraduate nursing students in all study years and levels. The finding showed that students identified many issues and concerns

<sup>1</sup> Dr. Amna Yousaf, Lecturer, Swinburne University of Technology.

<sup>2</sup> Dr. Maha Al-Madani, Assistant Professor, Imam Abdulrahman Bin Faisal University (IAU).

regarding portfolio guidelines, including their time-consuming nature and need for clarification of faculty and student roles. This study highlights the obstacles that nursing students face when preparing portfolios and reports on potential deficits and areas for improvement. To conclude, this study reflects how nurse educators should be aware of the process of student portfolio preparation. In addition, the results will be of particular interest to faculty aiming to identify the challenges surrounding portfolio use.

#### **4-BD13-5747**

### **INDONESIAN LANGUAGE LEARNING AS A FOREIGN EDUCATION: A COMMUNICATION APPROACH IN CULTURE**

MRS. RITA DESTIWATI<sup>3</sup>

BIPA (Indonesian Foreign Speaker) is a learning method for Indonesian language that is very useful for strengthening the Indonesian language. History of BIPA (Indonesian Foreign Speaker) is that the Indonesian language is a language that we should be introduced to all corners of the world in order to raise the pride and dignity of Indonesian language into an international language that wants to internationalize the Indonesian language in the UN so it can go bigger. In the context of intercultural communication there are people inside and outside who do not like to communicate with the Indonesian language. Due to dislike and do not want to communicate with others and do not want to see the affairs of others. In the context of intercultural communication for example if we ask about the situation they do not like to tell about the privacy area, they do not like to be asked the exclusive and foreigners who come to Indonesia is considered strange by the Indonesian people because the foreigner's posture and physical differences of Indonesian People. the is not too visible but if strangers from Europe certainly Indonesian people see it strange and must ask some countries why interested in learning Indonesian, because the language is not difficult to learn. The method is qualitative with observation and interview. The result of the study found that learning Indonesian as a foreign speaker shows a very good dynamics of interest in intercultural communication, both within Indonesian and also outsiders who are so interested in Indonesian. Although there are interesting dynamics seen from the context of cultural communication.

Keywords: BIPA, communication, intercultural, speaker, Indonesian language and education.

#### **5-BF16-5748**

### **THE EFFECTS OF HUE AND CHROMA COMBINATIONS ON PURCHASE INTENTION: A VIRTUAL REALITY EXPERIMENTAL RESEARCH**

PROF. GUNTALEE RUENROM<sup>4</sup> AND DR. AKE PATTARATANAKUN<sup>5</sup>

The growth of the service business such as spa, resort, health club indicate the customers' interest in the relaxing service business. Color is one of the most visualized physical evidences that could help customers perceive the relaxing atmosphere embedded in the service. Although the influence of colors on emotion led behavior has been previously studied, there are various dimensions of colors to be further investigated.

To our knowledge, very limited studies have explored the effect of color combinations to stimulate the decision making in a relaxing service business. More studies are needed in

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<sup>4</sup> Prof. Guntalee Ruenrom, Professor, Chulalongkorn University.

<sup>5</sup> Dr. Ake Pattaratanakun, Professor, Chulalongkorn University.

order to gain better understanding of consumer buying decision in this particular business. The main research question was whether the mix or the combination of colors (hues) with different intensities (chromas) or saturation can induce consumer behavioral intention to purchase the relaxing service. And if this will be the case, which combination of colors intensity can induce their purchase intention. In sum, the research questions are:

1. What are combinations of colors and their intensities that impact consumer purchase intention in the relaxing service business?
2. How does the combination of colors and their intensities impact on consumer purchase intention in the relaxing service business?

The data from VR experiments reveal that while color has significant impact on purchase intention for the relaxing service, the intensity of color does not have impact on the intention. It is also suggested that the relaxing service business should apply the same color rather than using different colors to induce consumers' purchasing intention. The underlining reasons for the effects are "pleasing to the eyes" and "feeling relaxing."

The research findings enhance better understanding of the combination of colors and their intensities on purchasing intention in the context of relaxing service. The results could create interest among the interior designers and the management of the relaxing service business.

\*This research was supported by the Chulalongkorn Academic Advancement into its 2nd Century project (CUAASC)

## 7-BF22-5676

### EUROPEAN ENTREPRENEURIAL ACTIVITY IN A CHANGING MACROECONOMIC ENVIRONMENT

DR. IRINA BILAN<sup>6</sup> AND DR. ANGELA ROMAN, ASSOCIATE PROFESSOR

The major role of entrepreneurship in enhancing economic growth, job creation and innovation, but also in increasing the productivity and competitiveness of national economies has prompted the intensification of researchers and decision makers' concern about investigating the factors that affect its dynamics in different countries and regions. Against this background, our paper aims to assess the impact of some variables from the macroeconomic environment on the development of entrepreneurial activity in eighteen developed and emerging European Union countries, over the period 2003-2015. Our research is grounded on data from the Global Entrepreneurship Monitor (GEM) and the World Bank, and uses the fixed-effects panel data estimation technique. Three alternative indicators have been considered as proxy for the level of entrepreneurial activity, namely the early-stage entrepreneurial activity rate, the nascent entrepreneurship rate, and the new business start-ups rate. As independent variables, we have taken into account several macroeconomic indicators with potential impact on entrepreneurial activity, namely GDP per capita, unemployment, inflation, total tax rate, foreign direct investment, domestic credit to private sector by banks, stock market capitalization to GDP, and public debt. The results of our research largely confirm those of previous empirical studies on the determinants of entrepreneurship and indicate that many of the selected explanatory variables significantly affect the dynamics of entrepreneurial activity in our sample countries. Thus, the most relevant macroeconomic factors are found to be GDP per capita, unemployment, inflation, total tax, foreign direct investment and domestic credit, although their impact differs, in some respects, depending on the stages of the entrepreneurial process. Overall, our research underlines the major importance of ensuring a stable, solid and healthy

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<sup>6</sup> Dr. Irina Bilan, Associate Professor, Alexandru Ioan Cuza University of Iasi.

macroeconomic environment for the development of entrepreneurial activities in a country, both from the perspective of starting-up new businesses and expanding the existing ones.

## **8-BF11-5696**

### **INVESTIGATING THE RELATIONSHIP BETWEEN EXCESS LIQUIDITY AND PRODUCTIVITY: EVIDENCE FROM THE CHINA ECONOMY**

MR. TIANYU WANG<sup>7</sup> AND KUI-WAI LI

A loose financial policy through the provision of loans and fiscal subsidies to state-owned enterprises and households has long been practiced in China, though financial liberalization since the 1980s has revitalized banks and other institutions. By using provincial data, this paper attempts to show the relationship between liquidity and productivity in post-reform. China's total factor productivity growth has been estimated by the Malmquist index. A total of three regression models have been employed and the findings support the inverse relationship between liquidity and productivity, especially since 2008. China's loose financial policy that promoted "cash-richness" must be reexamined as excess liquidity coexisted with decline in total factor productivity. In addition, increase of 1% in excess liquidity would result in 0.60% loss in TFP due to market distortion.

## **10-BF12-5714**

### **INFORMATION CONTENT OF RISK AND ASSETS PRICING**

MR. OMAR ALMANIA<sup>8</sup>

The scandals and bankruptcy of several high profile corporations in recent decades encouraged the users of firms' financial reports to require more risk disclosure in order to assess the level of risk engaged in by firms and how it is being managed. Therefore, when a firm discloses less risk-related information in its annual report, the investors would face more difficulties in predicting future cash flows. As a result, the investors will ask for a higher rate of return because of the increased information risk. In other words, firms with a low level of risk disclosure (high information risk or uncertainty) are expected to have a higher cost of capital. The objective of this study is to address the current gap in the disclosure literature by investigating the impact of the risk communication on cost of capital in a developing economy (Saudi Arabia). The sample consists of all non-financial listed firms on the Saudi Stock Exchange. All data was collected manually from the annual reports of 122 firms from 2012 to 2015 using content analysis in order to assess risk disclosure level. Cost of capital is measured using the Weighted Average Cost of Capital model. The analysis of OLS regression illustrates that risk communication is negatively associated with cost of capital as hypothesised. The finding is significant at the 5% level.

<sup>7</sup> Mr. Tianyu WANG, PhD Candidate, City University of Hong Kong.

<sup>8</sup> Mr. Omar Almania, PhD student, University of Glasgow.

## 12-BF32-5816

### BOARD DIVERSITY, FINANCIAL PERFORMANCE AND CORPORATE GOVERNANCE

MR. AHMAD ALGAFARI<sup>9</sup>

In this paper, the business case for board diversity is examined. The business case is that board diversity:

- 1) improves directors' independence which in turn influence positively their ability to monitor effectively.
- 2) brings about diversity in ideas and prospective which enhance the decision-making process and enhance creativity and unusual but brilliant approaches to complex problems.
- 3) diverse directors enhance the quality of information provided by the boards to managers due to their unique experiences and knowledge.
- 4) diverse directors facilitate access to diverse resources in the external environment of a firm due to their contacts or expert knowledge in certain fields.
- 5) signals positively and appeal to an organisation's stakeholders, suppliers, consumers and markets
- 6) board diversity brings about legitimacy to the corporation that appeal to both insiders and outsiders.

We examine the relationship between board diversity, performance of firms and corporate governance as seen in CEO turnover and compensation plans. Our sample consist of all firms listed in S&P 500 between 2007 and 2015. The results show positive effect of board diversity on performance of firms as far as ethnic diversity is concerned. However, we do not find conclusive evidence that such positive effect is channelled through committees' assignment. We find no evidence of positive or negative relationship between gender diversity and firm financial performance. Additionally, we find that ethnic diversity increases the sensitivity of CEO turnover to firm profitability and also influence CEO compensation by increasing equity pay which makes CEO interests consistent with shareholders' interest but find no evidence of similar effect from gender diversity.

## 14-BF28-5815

### HRO EFFECTIVENESS: A SERVICE PERFORMANCE PERSPECTIVE

MS. SIEW CHEN SIM<sup>10</sup>

In the past decade, there has been significant growth in services outsourcing in scale and scope (Rhodes et al., 2016); growing strong at rates of 12 percent to 26 percent across functions (Deloitte, 2014). This includes human resource outsourcing (HRO) which involves placing HR activities outside an organisation's boundary. Globally, HRO is one of the fastest growing segment of business process outsourcing (Cullen, Lacity and Willcocks, 2014) and is projected to increase by 8.5% year over year through 2019, developing into a \$100 billion market (Deloitte, 2016).

The pressure of increased competition, downsizing, rapid growth or decline, globalisation as well as restructuring in the business world continue to drive organisations to look to HR outsourcing (HRO) for better performance and cost advantages. However, against this background The extant HRO literature is found to concentrate on the client's sourcing decisions such as when and what firms should and should not outsource (Lievens and Corte,

<sup>9</sup> Mr. Ahmad Algafari, PhD Student, Glasgow University.

<sup>10</sup> Ms. Siew Chen Sim, University Teaching Fellow, The University of Nottingham Malaysia Campus.

2008; Sim et al., 2016) which shows that there remain huge knowledge gaps beyond the make or buy decisions. In particular, HRO effectiveness from the service quality perspective has not been adequately researched especially when it was reported that overall service quality of the provider was found to be the most important factor in deciding early termination of an outsourcing contract or back sourcing (Deloitte, 2012; 2016). Meanwhile, organisations are urged to regularly assess their satisfaction with provider services (Deloitte, 2016).

Taking this into consideration, HRO effectiveness is defined as the extent to which HRO prescribed service quality objectives made up of service outcome quality and service process quality are met satisfactorily which in turn result in client loyalty in this study. 1304 companies were randomly selected and 258 valid questionnaires were returned (19.8% response rate). The data was analysed using PLS-SEM version 3.0 (Ringle, Wende and Becker, 2015). The most significant contribution of this study is that HRO service outcome quality and HRO service process quality are both tested as formative constructs together with other reflective constructs and both significantly affect client satisfaction. Although there have been much debates in the literature about the inapplicability of SERVPERF developed by Cronin and Taylor (1992) in B2B context, such as HRO, the findings in this study showed otherwise. HRO service process quality was found to be relatively much more important than HRO outcome quality in influencing client satisfaction. Client satisfaction was found to fully mediate the relationships between HRO service outcome quality and HRO service process quality on client loyalty. Client satisfaction was found to be significantly influencing client loyalty.

#### **16-BF29-5570**

#### **FRONTIER MARKETS AND SUBPRIME FINANCIAL CRISES: AN ECONOPHYSICS APPROACH**

MS. WAHBEEAH MOHTI<sup>11</sup>, ANDREIA DIONÍSIO, ISABEL VIEIRA AND PAULO FERREIRA

This study investigates contagion effects of the subprime financial crisis on frontier stock markets. We use Detrended Fluctuation Analysis to examine non-linear dependence in the series, and Detrended Cross-Correlation Analysis to assess cross correlation between the US and each frontier market in our sample. The cross correlation coefficients suggest that there are positive and significant links between the US stock market and most of the stock markets in other countries in America and in Europe. For African, Middle Eastern and Asian markets, correlation coefficients are not significant before the crisis but, in most cases, increase in value in crisis period. Our analysis suggests that the effect of the subprime financial crisis on frontier markets was short lived.

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<sup>11</sup> Ms. Wahbeeah Mohti, PhD Scholar, Universidade de Évora.

**17-BF01-5583**

**ASSET SPECIFICITY AND PARTNERS' OPPORTUNISTIC BEHAVIOR:  
COMPARATIVE EFFICACY OF CONTRACT AND TRUST**

MS. CHENXI SHI<sup>12</sup>, MR. HONGJIANG YAO<sup>13</sup>, PROF. WENXUE LYU<sup>14</sup>, MR. YIMING ZHANG<sup>15</sup> AND DR. YONGQIANG CHEN, PROFESSOR

**Purpose** – In inter-organizational transactions, one party invests in substantial transaction-specific assets, and the other party may take advantage of them and engage in opportunistic behavior. To safeguard transactions, the parties employ complex contracts and trust simultaneously. However, which one of these governance mechanisms is more effective remains unclear. This paper aims to investigate the relationship between asset specificity and partners' opportunistic behavior (both strong and weak forms), including examining and comparing the effectiveness of contract and trust.

**Design/methodology/approach** – Research data were collected from 228 project managers or contract managers in Chinese construction industry. Several interviews were conducted to refine the constructs and measurements. The hypotheses were tested and verified with the help of SPSS 20.0.

**Findings** – The empirical results indicate that asset specificity is positive associated with partners' strong form and weak form opportunistic behavior and the effect of asset specificity on weak form is stronger. In addition, this research confirms the moderating effects of contract on the relationship between asset specificity and opportunistic behavior (both strong and weak forms), and the moderating effect of trust on the relationship between asset specificity and only weak form opportunistic behavior. Moreover, contract is more effective on mitigating strong form opportunistic behavior while there is little significant difference between the effectiveness of contract and trust on reducing weak form opportunistic behavior.

**Research limitations/implications** – First, the authors only concerns about one party; the partner side should also participate in the survey. Second, this research views governance mechanisms from an overall perspective and future nuanced research should focus on multidimensional conceptualization of contract and trust.

**Practical implications** – The authors recommend that managers should be cautious of not only strong form opportunistic behavior, but also weak form. Additionally, to curtail strong form opportunistic behavior resulted from asset specificity, parties should emphasize the importance of complex contracts.

**Originality/value** – This research makes three important theoretical contributions to the understanding of TCE and governance mechanisms. First, this research enriches the proposition of TCE by indicating that partners engage in more weak form opportunistic behavior than strong form as asset specificity increases. Second, this paper integrates the antecedent and consequence of contract and trust in a more complete model. Finally, the findings help to have a nuanced and advanced understanding of the relative effectiveness of complex contracts or high level of trust under different problems of transactions.

**Keywords:** Asset specificity; Opportunistic behavior; Contract; Trust.

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<sup>13</sup> Mr. Hongjiang Yao, Postgraduate Student, Tianjin University.

<sup>14</sup> Prof. Wenxue Lyu, Professor, Tianjin University.

<sup>15</sup> Mr. Yiming Zhang, Undergraduate student, Tianjin University.

**23-BD09-5616****ENVIRONMENTAL HEALTH: DEVELOPMENT RESERVOIR OF JATIGEDE**DR. JUNARDI HARAHAP<sup>16</sup> AND PROF. DR. OPAN S SUWARTAPRADJA

Environmental health is a society that is part of an environment that is interconnected with each other that can support a healthy environment in accordance with global reference as a container to become an integral part of society and health. Health is influenced by the environment that influences such as where existing development in existing reservoir aspect is done construction of reservoir in a development. The method used is qualitative method with the key question of this article is one which aspect of environmental health that exist in affected area Jati Gede, West Java, Indonesia. The results of the study found that environmental aspects that bring about the number of plants and animals that exist in the area of Jati Gede is not found anymore due to the construction of Jati Gede dam. This means that in the environment and health in the area of Jati Gede comes from environmental problems that come from things that smell and comes from biotic and abiotic.

Keywords: Jati Gede, Resettlement, Culture, Health and Environment

**27-BD07-5096****ECONOMIC IMPLICATIONS OF ACADEMIC PERFORMANCE OF TERTIARY EDUCATION STUDENTS IN VOCATIONAL AND SCIENCE EDUCATION COURSES**MR. TAIWO OLAYANJU<sup>17</sup> AND MR. EBENEZER OJE<sup>18</sup>

Despite the over-saturatedness of the job market, there is still a high level of patronage for all forms of tertiary education by both the employed and the unemployed. This results in the yearly mass turn out of graduates with varying academic performances ranging from passes, merits, credits and even distinctions. The purpose of this study is to establish the quantity of graduates that fall into each of the levels as determinants of eventual economic implication of these results for the nation and the world, bearing in mind the recession the world is currently going through. Correlational research design was adopted. The population comprised all the Science and Vocational Education Students of the Federal College of Education (Technical), Akoka, Lagos for 2015/2016 academic session. All the students were used for the study and so no sampling was done. Two hypotheses guided the study. The College generated academic performance results in form of Cumulative Grade Point Average (CGPA) of the students constituted the secondary data used. The data were analysed with mean, standard deviation and t-test statistics. The finding shows that there is a significant difference between the performance of Science and Vocational students and in favour of the Science students. It also shows that less than one percent of the students fall into the distinctions category, less than thirty two percent (32%) had credits, while others had either merits or passes. Based on this, it was concluded that majority of the graduates may not be able to start any job on their own but result to looking for white collar jobs. It was therefore recommended that all stakeholders in the fields of education should ensure that students are drilled to better mastery of their course contents and courses be made highly practical oriented. This will help to ensure that graduates will practice on their own at creating self-employment.

<sup>16</sup> Dr. Junardi Harahap, Lecturer, Universitas Padjadjaran.

<sup>17</sup> Mr. Taiwo Olayanju, Lecturer, Federal College Of Education (Technical).

<sup>18</sup> Mr. Ebenezer Oje, Lecturer, Federal College Of Education (Technical).

**29-BD25-5822**

## **CITIZENSHIP EDUCATION THROUGH NON-FORMAL LEARNING IN KOREA**

DR. SUN YOUNG PARK<sup>19</sup>

The biggest local education authority called Gyeonggi Provincial Office of Education in Korea passed legislation on democratic citizenship education in school in 2015. Yet the concept of citizenship is defined in a different way in the diverse educational contexts due to the short history of citizenship education provision in the Korea. How to help young people with practising citizenship is much more controversial than any other education subject. This study begins from the assumption that young people can develop how to practice citizenship through participating in non-formal learning such as youth work activities and programmes. The aims of this study are firstly to explore the concept of citizenship both in the Korean context and in the global community. Secondly, this study aims to discover the notion of non-formal learning such as youth work including the history and actual condition in relation to citizenship education. The third aim is to find out the practising methods for citizenship through youth work programmes, non-formal learning.

In conclusion, this research has found several pertinent points regarding the practice of citizenship in Korean educational contexts for young people. Firstly, although the provision of citizenship education is important through both formal and non-formal learning there were several challenges in order to promote citizenship education. Secondly, there were lack of concern on non-formal learning in educational setting; in contrast formal education was too much valued in the exam-oriented school environment. Finally, this study found and suggest that citizenship education can be delivered through both formal and non-formal learning and in particular, non-formal learning can play an important role in practising citizenship for young people due to the nature of citizenship.

**30-BD01-5522**

## **FACULTY DEVELOPMENT IN EGYPT IN THE 21ST CENTURY: AN EXPLORATORY STUDY.**

MS. NORAN ELDEBECKY<sup>20</sup>

Faculty members teaching in the 21st century face pressing challenges of accelerated advancement in their disciplines, pedagogy, and technology. With these challenges, come the myriad roles of faculty in teaching, research and community service. To navigate successfully between these three pillars and to face the 21st century challenges, faculty development comprehensive initiatives are needed. In Egypt, faculty development started systematically only at the beginning of the 21st century. Thus, it is important to explore the effectiveness of faculty development initiatives from faculty's perspectives. As such, the purpose of this qualitative study is to explore faculty's perceptions of comprehensive faculty development initiatives offered by Egyptian universities inside their premises for faculty professional development. The sample included 16 faculty members from one public university and one private. The main instrument was semi-structure interviews. Thematic analysis was used for data analysis with the help of NVIVO@11 software. The main results show that faculty members had different perceptions regarding formal faculty development initiatives that could be grouped into four themes: benefits, both academic and social; motivations and feelings, such as frustration from the current faculty development initiatives and some extrinsic motivations

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<sup>20</sup> Ms. Noran Eldebecky, Language Instructor, German University in Cairo.

that could help them attend more initiatives; challenges, such as the one-size-fits-all system and needs, such as the need for more variety of topics, second more practical workshops; and finally a need for more discipline specific workshops. Implications presented can guide future faculty development initiatives to better meet faculty's needs.

### **31-BD29-5814**

#### **DISTANCE BETWEEN THE STATE AND ITS PEOPLE : THE CASE STUDY OF PRIMARY DROPOUT ISSUE IN LAOS**

MRS. ITTHIDA GNANGNOUVONG<sup>21</sup>

The research investigates the distance between the Lao state and its people by examining a particular government policy, a "progressive promotion," to deal with the problem of primary school dropouts. An achievement of this policy - a temporary reduction in the school dropouts and its failure -- the return shortly to the old habit of leaving the school as other needs require the children to do so illustrate the distance between the government (the state) and its people, the limited ability of the central government to make difference in local people's life. The implications of this distance may be found in other policy areas.

### **36-BD18-5777**

#### **INTERNATIONAL ENVIRONMENTAL LAWS AND HUMAN RIGHTS ISSUES**

DR. SUSHIL GUPTA<sup>22</sup> AND MS POONAM DHAWAN<sup>23</sup>

The linkages between human rights and the environment are multi-dimensional and reciprocal, and advancing goals in either field has the potential to promote the achievement of goals in the other. There has been a dramatic increase in the appreciation of and work surrounding these important linkages in recent years, including through a collaboration between the UN Environment Programme (UNEP), the office of the High Commissioner for Human Rights (OHCHR) and the Independent Expert on Human Rights and the Environment, to achieve a sound knowledge base on human rights and environment linkages. In 1972, the Stockholm Declaration on the Human Environment proclaimed that, "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being. However, after four decades of discussions concerning the linkages between human rights and the environment, key developments have contributed to the international community's understanding of these linkages. A significant number of international instruments, including both treaties and international resolutions and declarations, have elucidated certain aspects of the human rights and the environment connection. The Rio Declaration on Environment and Development, for example, emphasizes the need to integrate environment and development in order to achieve sustainable development and allow for a healthy and productive life in harmony with nature. A number of multilateral environmental agreements (MEAs) recognize the link between the environment and human health and well-being, and many MEAs include provisions regarding disclosure of environmental information and public participation in decision-making. Similarly, human rights treaties in the Americas and Africa explicitly refer to the right to live in a healthy environment in varying formulations. The treaty bodies overseeing the implementation of the universal human rights conventions

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have produced general comments linking the rights protected under the respective instrument with environmental issues.

#### **40-BD21-5810**

### **VALIDITY OF MIXED METHODS APPROACH IN ISLAMIC STUDIES : SAUDI JUVENILES' SYSTEM AS A CASE STUDY**

MR. HAJED ALOTAIBI<sup>24</sup>

Al'assaf (2014) argued that both deductive and inductive approaches are just tools or methods in a qualitative approach. Consequently, there could be no clear relationship between a design and method of collecting data using a qualitative approach rather than a quantitative one and this may open the door for potential bias. Therefore, Deshpand (1983) strongly advised researchers to re-balance between inductive and deductive methods so that the bias in researches be minimised. Furthermore, this advantage can be achieved through two steps; firstly, by using a qualitative approach (i.e. inductive method) when we generate a new theory. Secondly, by utilising a quantitative method (i.e. deductive approach) while we examine that theory. Therefore, the researcher thinks that the suitable design for his study can be mixing between explanatory and exploratory sequential mixed method. While the explanatory begins with quantitative data (collecting and analysing), then employs these results in order to give a greater depth of understanding of the topic, the exploratory starts off by using qualitative data, then uses quantitative data to develop the criteria for the topic (i.e. suggesting potential solutions for certain problems such as determining juveniles' ages of criminal liability in Islam).

#### **41-BD28-5820**

### **THE IMPACT OF GLOBALIZATION ON OBESITY**

MS. KEIKO KANNO<sup>25</sup>

The purpose of this paper is to provide a comprehensive analysis of the potential impacts of globalization on the sharp rise in the rates of obesity and associated diseases. I explore dynamic factors contributing to obesity, such as the growing income inequality, economic insecurity, and rapid lifestyle changes, all of which are associated with globalization. While globalization can be seen to have tremendous impacts on health, such health concerns are often omitted from the discussions around globalization and socioeconomic changes. In this paper, I argue that obesity requires more holistic and multidimensional approaches beyond disciplines to understand the highly complex and interrelated economic, sociocultural, and biomedical factors, as obesity is not utterly monocausal as it may appear. Globalization has introduced a highly competitive society and given rise to social and economic uncertainty and anxiety among workers and consumers (Offer, 2012). Such anxiety may cause higher levels of toxic daily stress, which can trigger or exacerbate serious health problems including cardiovascular diseases such as stroke and cardiomyopathy. Studies have shown that glucocorticoids, hormones released in a stressful condition, may be a dominant factor accountable for the predisposition to obesity and abdominal obesity (Bjorntorp, 2001; Rosmond et al. 1998). Moreover, consumers today are increasingly exposed to fast-food and precooked food, which are more affordable and time-saving than fresh and nutritious food. Such inexpensive, unhealthy food contains high calories and poor nutrition, which could lead to reduced immunity and productivity, as well as impaired mental health in the long term. Meanwhile, instead of

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today's stressful, fast-paced, and highly competitive globalized society, individuals alone are often blamed for obesity even though obesity can be argued as a "personal disorder that is mostly inflicted by society" (Offer, 2012). The obese suffer from discrimination in society in addition to intricate health disadvantages including higher chances of developing hypertension, type 2 diabetes, and numerous other diseases and disorders. Health education campaigns for obesity prevention and reduction often contain weight-stigmatizing visual content, which may have adverse health consequences (Pearl et al. 2015). Health education sometimes results in perpetuating weight stigma such as obesity as a result of laziness and lacking self-discipline. This paper proceeds by highlighting the significance of understanding the progressive, multiple causes of obesity and their relation to globalization, as opposed to the negative assumptions of obesity as a simple consequence of individual inactivity or low willpower.

**42-BF19-5778**

### **CRYPTOCURRENCY, THE SOCIO-LEGAL AND FINANCIAL IMPACTS ON GLOBAL ECONOMY**

DR. HEMANT GARG<sup>26</sup> AND MR. VATTANPREET SINGH SANDHU<sup>27</sup>

When blockchain white papers were presented, the international community has been observing with bated breath the effects of the new form of currency. The situation became more intense with the introduction of blockchain technology and Bitcoin a bit later. While the initial stages of development look promising, financial investors, managers, and economists cannot help but question the wisdom in changing the fundamentals of international trade, finance and commerce. This paper investigates the socio-legal impacts of cryptocurrency using various stakeholder perspectives. Then it looks into the financial impacts that cryptocurrency such as Bitcoin will have on global economies before investigating their effects on the global economic order.

**44-BD12-5751**

### **ANALYSIS OF CHARACTER EDUCATION IMPLEMENTATION AMONG ADOLESCENT**

MRS. SITTI HUTARI MULYANI TARI<sup>28</sup>, KRISNOVA NASTASIA, MUTIANA PRATIWI, HENNY JULIUS, RIO ANDHIKA PUTRA, BILLY HENDRIK, MUHAMMAD RIDWAN AND KHAIDZIR ISMAIL

In Indonesia, character education programs have been established, both in the hidden and formal curriculum. It is established under Pancasila (national ideology) and the values contained therein. Unresolved adolescent problems is one of the reasons for inhibiting the moral development of adolescent. Based on this the government instructed to apply character education. At the same time, the university is one means to achieve good moral development through character education. Universities are considered to have the ability to address problems that occur in adolescents, especially late adolescents. In this study, researchers want to analyze the character education that has been implemented and has been obliged by the government of Indonesia. In this case the Indonesian government wants the university to contribute through character education to build better adolescent morale. In this study also described the level of

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adolescent age of experts namely; early adolescents, middle adolescents and late adolescents. This study aims to analyze the application of character education in normal late adolescents (18-22) years. The statistical population of this study was 1,764 students consisting of female and male students. The research method used is a quantitative method, with the scale that has been tested its validity to the respondents who have followed the character of the education course. This research is more directed to developmental psychology. This article also provides the results of character education implementation based on gender, age and origin of the faculty. Interviews and observations show that adolescents who take a character education course in the first year show better results, with the hypothesis that the adolescent is accompanied by environmental control. Samples were given treatment (character education course) at different times, and various results were obtained after the level of implementation was measured. Different results were found in adolescents who attended courses at the end of the 4th year, namely the lack of character education implementation in everyday life compared to adolescents who had taken the course at the beginning of the first semester.

Keywords— Character Education, Late Adolescence, Higher Education student

#### 45-BD30-5823

### **DRUG VIOLENCE: CAN ITS PRESENCE BE TURNED INTO A POSITIVE DEVELOPMENT? THE CASE OF TEJALPA, A DRUG VIOLENCE HOT SPOT IN CENTRAL MEXICO**

MS. LUISA ISABEL HERNÁNDEZ GONZÁLEZ<sup>29</sup>

The present research calls attention to the increasing involvement of the Mexican government in the drug trafficking issue. Government's direct confrontation of drug cartels has resulted in a boost and expansion of drug violence, as well as an increase of local drug markets. This research aims to understand how people living in a drug violence hot spot, in central Mexico, cope with major signs of violence in their living environment, as well as their strategies to keep their normal conduct of life. In the various rounds of fieldwork from 2013-2017, the following ironical developments have been found. Drug violence has been sustained regardless of residents' protective actions. These actions establish differences among the various groups of people living in the community: imposing divisions and barriers, creating stereotypes, and restricting mobility. These responses do not necessarily decrease the likelihood of becoming a victim, but they do increase residents' levels of fear, leading them to strengthen protective actions. Drug violence affects all groups in different ways, making their already sharp inequalities even more pronounced. Drug violence presence allows residents to reinforce and justify their isolation from other groups. No matter how scary and extreme drug violence impact might be, it does not consume residents' daily concerns. Drug violence presence is just one among many other worries, more familiar and likely to happen, that dissipate its significance in residents' daily lives. Drug violence leads residents to focus more in their immediate problems, but at the same time it diminishes their importance. Despite the many worries majority of residents have and how difficult their life might be, at least they haven't been victims yet. Majority of residents feel thankful and better off than others who have been victims.

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**47-BD09A-5760****COMMUNITY EMPOWERMENT BASED ON CULTURE AND LIVESTOCK: AN ANALYSIS OF ECONOMIC EMPOWERMENT IN RESPECT TO THE IMPACT OF DEVELOPMENT**DR. JUNARDI HARAHA<sup>30</sup> AND ENDANG SUJANA

Empowerment is a viable solution for development cases that can help affected communities. The development that occurs certainly has an impact on the community that inevitably must be well received, because development usually brings things that are sometimes unpleasant for affected people, for example the people affected by the construction of the dam. This is thought to be a solution for affected communities that must have an impact on the economies of people affected by development. Certainly in terms of bringing to the values of the traditions that exist in the affected areas and also based on livestock that is used as a tool to obtain the welfare of the community. The method used is qualitative method by observation and interview, with research location in Sukamenak village, Sumedang regency, West Java, Indonesian. The results of the study found that the community is helped by the farms that serve as a solution for the community. The existing community also feel happy because it is in accordance with the breeding culture like ducks that already exist in the community in Indonesia. Because the community-based aspects of the benefits provided better because closer to the culture owned by the community. Many developments that can be well run as a result of seeing the culture of society in the community.

Keywords: Empowerment, economy, development, livestock, duck and impact.

**48-BF10-5642****IMPACT OF GST ON INDIAN FMCG SECTOR**MR. RISHI BAFNA<sup>31</sup>

International economy has considerably changed in last three decades due to information technology revolution and globalization of world economy. Today, consumers are more informed and they have greater bargaining power in almost all markets. Globally, governments are also following free markets practices and now very few markets are operated under conformist regimes. Today, the Indian consumers are more brand savvy and they have multiple access of online and offline markets. The Indian markets are also flourished with the brands of multinational organization in almost all products and service categories. To strengthen the economy and also to make it more attractive for global investment, GST (Goods and Services Tax) was in the wish list of central government from many years. The previous government was not able to pass the GST bill because of lack of support of other coalition parties. But the present, BJP government with the perfect majority in both the houses has passed GST bill recently. This paper attempts to understand business implication of the GST on value delivery networks in Indian FMCG (Fast Moving Consumer Goods) sector and also aims to understand its impact on business & marketing strategies of corporate which are operational in Indian markets. The findings of this paper highlight long and short term implication of GST on business strategies of MNCs and Indian organizations of FMCG sector. It also presents impact of this bill on supply chain strategies of FMCG companies of Indian markets.

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Key words: MNC (Multinational companies), SCM (supply chain management), FMCG (Fast moving consumer goods), GST (Goods and Services Tax).

**49-BD15-5641**

## **IDENTIFYING THE ECONOMIC EFFECT OF PRIVATIZATION ON HEALTH SECTOR**

MR. LAKSHAY GOEL<sup>32</sup>

Privatization has made great macro and microeconomic impact all over the globe. This essay is concerned with the impact of privatization on the health sector of Jaipur, a city in Rajasthan, India, and its influence on different objectives of the economy i.e. Economic Growth and Employment. Medical Tourism and its impacts are evaluated in context of effectiveness of privatizing the health sector.

The introduction portrays the opportunities with the sector to expand through a private sector means. Though there are certain cons of healthcare sector expanding its footprint over private sector, like high price charged for surgeries, whose solutions are embedded under the essay's conclusion.

Pricing structure is put up through a primary research which justifies that which of the hospital is charging more, whether it is the government or the private. It will be identified that whether the consumers' demand has shifted forward or backward which is determined in order to cater whether the pricing strategies are justified or not. The opportunity over medical health care services is also identified and the competition will justify the lowering price.

Later the impact of privatization over the two macroeconomic objectives are appraised i.e. measure of employment and economic growth. The boom in the sector is validated and identified through facts and figures and an economic diagram is established in order to extrapolate the data and make it precise. Role of medical tourism will also be adhered which brings foreign money to the economy. This all will be encompassed in a conclusion and it will help to determine whether the hypothesis made is justify or not . Conclusion will also state certain policies that other countries have executed in order to overshadow the cons in privatized healthcare sector.

Keywords: Employment, Economic Growth, Health Care, Medical Tourism, and Privatization.

**50-BF30-5750**

## **WOMEN ENTREPRENEURSHIP IN INDIA: CHALLENGES AND STRUGGLES**

MS. HIMISHA PARMAR<sup>33</sup>

This paper emphasis on India's leading women entrepreneurs and the struggle in the work and life as a female. India is a country of 1.324 billion people, to which there are 944 females to every 1000 males. Women entrepreneurship is gaining in India in the wake of economic liberalization and globalization. There exists a surfeit of successful business women entrepreneurs both in social and economic fields in India. India is known for the most number of females CEO's in banking sector compared to the whole world. The primary objective of the paper is to discover hardships of a female entrepreneurs working in India. Females of 21st Century India are troubled and have to go through various kinds of challenges at work place and life. This paper is supported by the data and research of a primary survey.

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**51-BF08-5695****AN INTELLIGENT SYSTEM FOR FINANCIAL DISTRESS PREDICTIONS**PROF. SHIAN-CHANG HUANG<sup>34</sup>

Big data analysis and cloud computing are becoming increasingly involved in the area of business and management. The high computation capability enables one to apply intelligent analysis utilizing large amounts of business data. Mining high-dimensional data is a crucial component in many application domains. Financial data mining or big data analysis, such as that involved in predicting distress or bankruptcies, have become a popular topic owing to the late-2000s financial crisis. The objective of this research is to develop an intelligent and reliable system for financial distress predictions.

Recently, many approaches from data mining to artificial intelligence have been developed for solving the above problems. These approaches include inductive learning (Han et al., 1996; Shaw and Gentry, 1998), case-based reasoning (Bryant, 1997; Buta, 1994), neural networks (Bortiz and Kennedy, 1995; Coakley and Brown, 2000; Jo and Han, 1996; Nasir et al., 2000; Tang and Chi, 2005), rough set theory (Dimitras et al., 1999; Ahn et al., 2000), and support vector machines (SVMs) (Wu et al., 2006; Hua et al., 2007). In financial distress prediction, large amount of data can be collected from financial markets. The performances of traditional methods are not satisfactory in dealing with such type of high-dimensional data.

High-dimensional data from financial statements and stock markets generally degrade the performance of a prediction (or classification) system due to the curse of dimensionality. To address these problems, this study employs kernel canonical correlation analysis (KCCA) to develop a new prediction system, where KCCA searches feature vectors for inputs and outputs such that the correlations between the feature vectors are mutually maximized. The feature vectors then serve as the inputs of our classifier to improve classification performance and reduce computational loading. Empirical results showed that the proposed systems are more accurate and robust than traditional classifiers, and KCCA outperforms conventional dimensionality reduction methods in big data analysis.

**52-BF38-5694****A-SCORE: DEVELOPMENT AND TESTING OF AUGMENTED DISTRESS PREDICTION MODEL: A COMPARATIVE STUDY ON DEVELOPED AND EMERGING MARKET**MS. SUMAIRA ASHRAF<sup>35</sup> DR. ELISABETE G.S. FÉLIX, ASSISTANT PROFESSOR;  
AND DR. ZÉLIA SERRASQUEIRO, PROFESSOR

This study explores the impact of Earning Response (ER) on the probability of financial distress for both developed and emerging market. This empirical study was conducted on the non-financial sector companies listed on both London and Karachi stock exchange between 2001 to 2015. The results reveal that there is a negative impact of earning response and the financial reporting quality on the probability of financial distress. In this study, we attempt to develop a new distress prediction model by employing logistic regression based on the data of developed market. Our new model is based on a statistically significant set of accounting and market-based ratios, earning response and the financial reporting quality. The results of the new model show that the overall predictability of the model is 91.6% for the developed market.

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We further tested the generalizability of our model on the emerging market, Pakistan, which shows 87.5% overall prediction accuracy. Our further analysis of the model during the Global Financial Crisis period reveals that the prediction accuracy of the model is 91.5% and 89.8% for the developed and emerging market.

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