

The Market

International Journal of Business

The Market: International Journal of Business

The Market: International Journal of Business is a scholarly, peer-reviewed research journal published annually by the Cyprus Centre for Business Research at The Cyprus Institute of Marketing (CIM).

We seek to promote new and productive interaction between various business disciplines and fields. We consider articles that express new and innovative ideas in Business, paying particular attention to developments in Cyprus and the broader Eastern Mediterranean area.

Published by:

Cyprus Centre for Business Research at The Cyprus Institute of Marketing
25 Zannetos street, Ayios Andreas
Nicosia, Cyprus
market@cima.ac.cy

Founding Editor: Prof. John Kaminarides

Editor-in-Chief: Dr Constantinos Constantinou, CIM

Copyeditor: Brian Saunders

Scientific Board: Dr Derek Watson, University of Sunderland - Dr Suresh Gamlath, University of West London - Dr Nicos Antoniadis, St. John's University, New York - Dr Myria Kkali, CIM - Dr Maria Socratous, CIM - Dr George Afxentiou, CTL Eurocollege - Dr Styliani Krokida - Dr Katerina Pavlou, CIM - Dr Christiana Charalambidou, CIM - Dr Roman Puchkov, CIM

Submitting to *The Market: International Journal of Business*

For more information about the journal and guidance on how to submit, please see www.cima.ac.cy/market

Design: Platforma119

© 2021. All rights reserved.



Legally responsible person: Yangos Hadjiyannis

The Market and its editors, publishers, owners and anyone else involved in creating, producing or delivering *The Market* do not assume any liability or responsibility for the accuracy, completeness, topicality, or value of its contents, nor shall they be liable for any direct, indirect, incidental, special, consequential or punitive damages arising out of its contents.

The Market is published by the Cyprus Centre for Business Research, which is part of the Cyprus Institute of Marketing

ISSN 2547-9202

EDITORIAL

page 1

FORWARD

page 2

BUSINESS AND LAW

Corporate Governance: An Organisational Attribute or an Academic Exercise?

page 3 - 12

C. Doyle, D. Murphy and D. Watson

CYBER SPACE

Human Shielding™

page 13 - 25

Y. Nicolaidou

ENERGY

Are Economic Crises subject to the Laws of Physics rather than of Economics?

page 26 - 31

Critical review of the existing literature on econophysics and related studies.

R. Puchkov and N. Shiraz

FOOD AND BEVERAGE

The Internationalisation of the Food Manufacturing Industry in the Emerging

page 32 - 40

Chinese Food Market: A Case Study of Dairy Producers

Y. Zhai and D. Watson

HUMAN RESOURCE MANAGEMENT

An Investigation into Employee Engagement in the Private Sector in Cyprus.

page 41 - 51

I. Gleni and K. Pavlou

ONLINE GAMING

Are our Battles in Online Games Enough to Attain Peace Across the Globe?

page 52 - 58

A. Terekhova and C. Constantinou

POLITICAL MARKETING

Drivers of Competitive Presidential Candidates

page 59 - 66

N. Antoniadis

Knowledge as a Mediator to Social Media:
Path to Cyprus Government Change Performance

page 67 - 72

G. Yangou

The CIS Model as a Mediator to Climate Change Government Performance

page 73 - 82

N. Antoniadis, I. Mohr and C. Constantinou

SHIPPING

The Evolution of Digitalization in the Maritime Industry

page 83 - 97

D. Sourianos

SMEs

The Internationalisation of African Emerging Market SMEs –

page 98 - 109

A Literature Review and Propositions.

I. Kujala and A.R. Owusu

AUTHORS

page 110 - 114

Dear Readers,

We are delighted to welcome you all to the second issue of *The Market: International Journal of Business*. *The Market* is a scholarly, peer-reviewed research journal published annually by the Cyprus Centre for Business Research, and funded by The Cyprus Institute of Marketing (CIM).

More precisely, the journal considers articles that express new and innovative ideas in business, paying particular attention to developments in Cyprus and the broader Eastern Mediterranean region. It publishes the results of research endeavors that show strong future prospects and articles that address the betterment of human life as well as business practices. Moreover, it welcomes articles from major business disciplines with a domestic and/or an international outlook.

The Market aims to provide opportunities for the promotion of new dynamic business ideas to enhance research in all business fields – from management, strategy, and accounting and finance to HR, energy, marketing and shipping, among others. Its goal is to create an increased awareness of important scholarly achievements in the aforementioned fields, both locally and internationally.

One would naturally, therefore, expect the scope of this issue to be broad in nature, and, indeed, it becomes evident from the opening pages that we have ensured coverage of a plethora of contemporary and pressing topics. These include linking business with cyber security in this new era (specifically, delving into the Security Industry), the internationalization of African emerging market SMEs, an informative paper on the internationalization of the food manufacturing industry in the emerging Chinese food market, and a look into the evolution of digitalization in the maritime industry.

In addition to these topics, we are thrilled to introduce a new scheme by publishing the top dissertations of our master's degree programme students, thereby, aiding us in bringing a fresh perspective.

Other particularly salient issues are analysed, including corporate governance, political marketing in relation to social media, and climate change, a relatively new area which is continually gaining more traction worldwide.

We are also excited to announce that as of next year, every issue of *The Market* will be focusing on a single contemporary topic, for example, Artificial Intelligence, and contributors will be linking their articles to this main topic.

The following page includes a forward elaborating further on the subject-matter of this edition.

We hope that you will enjoy reading the following pages as much as we have done during the creation of this second issue. To be sure, these are only the first stepping-stones towards yet more and ever better issues in the near future.

Thank you and we look forward to reading your research paper and/or research note next time!

FORWARD

A time of crisis and unprecedented global challenge is perhaps the best opportunity to look at problems in a new way. In the space of less than a year, old assumptions based on traditional ways of working have been overturned.

Since the Industrial Revolution, the way in which organisations operate has, essentially, remained unchanged. In the cotton mills of Manchester, England in the 19th century, a line manager would watch over his subordinates. That way of working - the line manager or 'middle manager' watching their 'untrustworthy' subordinates - hadn't changed in over 200 years. Until just a few months ago, this was how the vast majority of organisations operated.

But now, where we physically work and our accountability within silos - themselves within hierarchical organisations - have become far less important. A forced evolution of working style has come about as a result of a global pandemic. This change was forecast in the 1960s by experts such as Professor Leonard R Sayles of Columbia University. Professor Sayles stated that hierarchical, compartmentalised organisation was the very worst way to run a business. The pandemic has forced organisations to adapt to Professor Sayles' forward and progressive way of working.

In light of these rapid - but overdue - changes, this edition of *The Market* addresses several key issues in today's rapidly changing business and organisational environment: Employee engagement with organisations, and new ways of analysing corporate governance; Political marketing and social media, and the way in which presidential candidates are promoted; Moving conflicts online, the digitisation of the maritime industry, and 'Human Shielding' as a main component of cybersecurity; The development of African SMEs, and the expansion and internationalisation of China's dairy industry complete the extensive line-up of analysis in this rapidly changing business environment we find ourselves in.

We are unlikely to go back to the old ways of working which characterised the Industrial Revolution. This invaluable edition of *The Market* brings together a wide range of comprehensive analyses of the new environment, during and after the pandemic, and looking forward to the future.

Corporate Governance: An organisational attribute or an academic exercise?

By

Cathy Doyle

Doctoral candidate, University of Sunderland. Programme Director and Lecturer, University of Medicine and Health Sciences, RCSI

Denis Murphy

Doctoral Candidate, University of Sunderland. Chief Administrative Officer, Association for Dental Education in Europe

Dr Derek Watson

Associate Professor, University of Sunderland

This conceptual paper provides an overview of the theory and application to the practice of corporate governance. The evolution of corporate governance theory and definitions are described, taking an international perspective. The paper offers insights at a national level into governance experiences within the UK, Ireland, and Cyprus.

The paper reviews four classic corporate governance theories most often cited in the literature. Each theory is critically discussed and applied at an organisational level. The authors introduce language theory, sociology, psychology and organisational theory as a means of uncovering the changing governance epistemologies, given that corporate governance is more than economic and legal theories.

A summary table (see Table 1) outlining key foci, actors, features and a critique of each model is provided, so as to enable the reader to easily identify each in practice. The paper concludes with recommendations for future research.

Key terms: Corporate governance, board, behavioural theory, agency theory, stakeholder theory, resources dependency theory, stewardship theory, conceptual paper.

Introduction

One way of viewing the concept of corporate governance is to consider external and internal mechanisms (Brennan, 2010). Agency theory, otherwise known as managerial theory of the firm (Jensen and Meckling, 1976) is an early model of corporate governance and can be viewed as either an external or internal instrument. Agency theory has attracted significant research attention over the past 40 years, and today it is widely cited as an underpinning governance theory.

This paper discusses literature on the four 'classic' corporate governance theories and explores how these can be identified in practice by their underlying focus, actors, and other elements. Against the background of the theory the paper outlines, there are wider influences beyond the organisation that provide for a more holistic approach to governance.

Some questions addressed in this paper are: 1. What are the respective histories of corporate governance in terms of theory development? 2. What is the role of governance theory in influencing board practices and focus? 3. As governing does not take place in a vacuum, what other factors should be considered?

The paper is structured as follows. Firstly, the historical influences on governance, its definitions and language are explored. The paper draws on four classic corporate governance theories; agency, stewardship, resource dependency and stakeholder theory as these are the most cited theories recounted in the literature. Each of these theories in turn emphasises different aspect of board governance. The researchers critique each governance theory or paradigm, summarising these in a table for ease of understanding. The paper concludes with recommendations for future research.

Governance – Its definitions, historical chronology, and language

The writers suggest that an epistemological view incorporating the diversity of views from sociology, psychology, history, economics and legal theory are essential to understand governance. Michel Foucault, cited in Cummings et al. (2016), proffers that the 'past is viewed in terms of making sense of the present...' (p.36). In a similar frame, the authors suggest that viewing governance and its supporting activities through a Foucauldian lens enables an understanding of the concepts and frameworks that have evolved under the governance umbrella and that are experienced today in practice. The aim is not to recount historical accuracy but review the storehouse of activity that has occurred, and to, in turn, understand evolving trends. White (2010) states that historians deal in 'concrete reality' (p.192) as they seek to narrate their interpretation of an event and tell the story well. Alternatively, organisational sociologists define a form of life that portrays an interdependence in a complex society, e.g. market transactions in the business world (Ocasio, Mauskopf and Steele, 2016). Sociology reminds us that corporate governance is not only based on economic and legal theory (Kubicek, Stamfestova and Strouhal, 2016) but should be also interpreted through cultural and contextual lenses. Psychologists, on the other hand, explain governance mechanisms from the perspectives of the individuals involved, stressing the importance of human interaction in governance frameworks, e.g. leadership behaviours and traits.

Corporate governance, for the most part, may be considered as a contested, diverse and temporal concept, which historically has had many definitions (L'huillier 2014; Mahadeo 2013; Organisation for Economic Cooperation and Development 2004; Turnbull 1997; Cadbury 1992). Conventionally, it was defined narrowly with the focus on the relationship of organisations and funders and the governance mechanisms for monitoring and control of the agent (Brennan, 2010). The debate continued in a search for an agreed definition, with researchers in healthcare, management, economics, accounting, and law being just some of the professional fields that have developed their own definitions. A useful consensus and broader definition of governance is put forward by the Organisation for Economic Cooperation and Development (2004) which defines corporate governance as involving 'a set of relationships between a company's management, its board, its shareholders and other stakeholders' (p.11). This definition portrays the organisation as an outward looking, complex social entity (Burr, 2003) and thus fits well in the context of the climate of globalisation. The definition also fits with the view of governance as having both an inward and outward focus and the navigation of a complex system.

In 1932 Berle and Means published "*The Modern Corporation and Private Property*" and, whilst they did not put a name to the discipline, their contribution influenced corporate governance systems in the United States. 44 years later the seminal paper of Jensen and Meckling (1976) had a similar economic related theme, and was foremost in setting the foundations for agency theory and its relationship to the separation of the responsibilities and control of upper level management, board of directors and shareholders. The Jensen and Meckling article has been cited more than 92,000 times, demonstrating its contribution to the field. Whilst their article does not overtly mention corporate governance (Shah and Napier, 2017), corporate governance at the time was based on agency theory, as distinct from a wider stakeholder approach. These seminal works began to set the narrative and dialogue around the concept of corporate governance.

Saussure's (1857-1913) approach to language and meaning demonstrates that variations in how words are defined can in itself lead to complexity, lack of clarity and misinterpretations. For example, 'oversight', 'control' or 'authority' are often used to explain 'governance'. Critics of Saussure posit that his theory on language and meaning was structured and 'frozen in time', rather than 'changing over time' (Leitch, 2010, p. 847). Post structuralist and postmodernist philosophers, e.g. Levi-Strauss, Derrida and Eagleton, further criticised Saussure's theory as limiting, because reviewing the language of governance without situating it within culture, context and time is only part of its understanding. In the idea that originated with Saussure, words can carry many meanings, and the understanding of what words mean can change over time (Burr, 2003). This suggests that the meaning of words is constructed, and language depends on context and the interpretation given to it. This is very much the case with governance. Over the past 50 years, the language of compliance, conformance, control and performance has shaped the governance narrative. The 1970s meanings and understandings of terms such as 'oversight', 'control' or 'authority' and 'governance' seem somewhat out of context when compared to the 2020 interpretations.

Societal calls, and in turn a contextual need for corporate governance arose out of failings in high-profile corporations in Europe in the 1980s and early 1990s, including Barings Bank, Coloroll, Maxwell Group, Polly Peck, and Parmalat. In 2002, the combined impact of US financial reporting and other corporate scandals, e.g. Enron, Global Crossing, Tyco, WorldCom and Xerox, saw the Dow Jones Index plummet. The collapse of the Cyprus Stock Exchange, also in 2002 (Krambia-Kapardis and Psaros, 2006), was not of the magnitude of Enron or Worldcom. Weak corporate governance in the Cypriot banking sector saw a second collapse of the banks in 2013, resulting in a bailout by the Troika (i.e. the European Commission, the European Central Bank and the International Monetary Fund) (Michaelides, 2014). In Ireland, the collapse of the Irish banking system and the 'Celtic Tiger' in 2008 also led to Ireland being 'bailed out' by the Troika (Bielenberg, 2018). In summary, weaker public confidence and political concerns because of the market and organisational failures, on both sides of the Atlantic, were among the drivers for change, and resulted in corporate governance initiatives being reinforced (L'Huillier, 2013).

The UK's response to its scandals was a focus on the development of external mechanisms. In 1991 the UK established the Committee on the Financial Aspects of Corporate Governance, led by Sir Adrian Cadbury (Johannesson et al. 2010). The Cadbury Report (1992) and a series of other reports such as the Turnbull Report (Turnbull, 1999) and Higgs Review (Higgs, 2003), which built on the original work of Cadbury, resulted in the non-statutory 2018 Combined Code (Financial Reporting Council, 2018) which is in operation today. In Cyprus, the Cyprus Stock Exchange introduced the Cypriot Corporate Governance Code in September 2002. Research by Krambia-Kapardis and Psaros (2006) found that few firms complied with "the provisions of the standards and the majority did not comply at any level" (p. 229), thus the early adoption of a governance code for many Cypriot organisations was a mere paper exercise. Krambia-Kapardis and Psaros (2006) suggest that other initiatives were needed to improve compliance with corporate governance, including education highlighting its benefits. Ireland, in 1991, was the earliest adopter in Europe of a governance code (Kubicek, Stamfestova and Strouhal, 2016) and today it embraces the principles of the UK Combined Code.

Discussion will now progress to recount the development of governance theory at a national and organisational level.

Fundamentally, there are two international approaches to corporate governance applied at a national level. The Anglo-Saxon model is a non-statutory, principles-based approach followed in many countries, including UK, Cyprus and Ireland. The rules/legislative approach is evident in the USA. These approaches can be described as a carrot and/or stick philosophy, rewarding good and punishing bad behaviours. The principles approach follows a best practice 'comply or explain' model associated with governance codes following Cadbury (1992). The US chose the legislative route with the hurried passing by Congress of the Sarbanes-Oxley (SOX) Act in 2002. US companies are obliged under Federal Law to comply with SOX, and non-compliance can result in a court appearance. The governance requirements of SOX appear to be grounded in positivist agency theory (Cohen et al. 2013).

The failings in the corporate world led to the external mechanisms for Corporate Governance described above. However, the internal mechanisms that evolved to support these at an organisational level must also be discussed. There are four key theoretical models that summarise practical application of governance at an organisational level. As outlined above, the earliest theoretical framework or model described is principal-agency theory, often simply referred to as agency theory (Chambers, 2012; Jensen & Meckling, 1976). With its origins in finance and economics (L'huillier, 2014) it is concerned with relationship and control, between the owner and their designate. Over time different theoretical governance models were proposed modifying this theory and removing the focus from the principal and agent (Freeman et al. 2016). Stewardship behaviour theory, originating in the disciplines of psychology and sociology, was the next to come to prominence.

In contrast to the principal-agency model, stewardship theory advances an idea whereby directors (and CEOs) have fiduciary duties and can be trusted, and hence they should be empowered (Turnbull, 1997). The third framework is the resource dependency model, with its origins in sociology. It can be defined as 'the linking role of the board to other organisations' (L'huillier, 2014, p.309). In this concept, networking and what the director brings to the table is the main interest. The fourth and final framework the authors identify is stakeholder theory. Boards that operate a stakeholder approach look for balance between different internal and external stakeholders needs (Millar et al. 2015; Bismark and Studdert 2013; Chambers, 2012; Pettersen et al. 2012; Huse, 2005).

Application of governance models to practice

Having identified four models and their primary differences, discussion now moves to exploring the **key focus, factors, actors and critique** of the four models. The authors will identify whether each model takes an internal or external focus; the key distinguishing factors associated with each model; which of the governance actors plays the central role and the primary relationships stressed within the models; and finally they will offer a critique as to the shortcomings in each model. In doing so, a picture of each of the four classic models evolves that will enable the reader to recognise which model is in operation, and to identify challenges and potential pitfalls they may experience or can expect. The models are now dealt with in chronological succession.

Agency Theory

Researchers are by no means united on a definition of agency theory. There is some degree of consensus on agency theory as a control and monitoring mechanism, focusing inwards into the organisation. This is evident from the early research in legal, financial and management literature (Johnson et al. 1996). The pessimistic beliefs of agency theory assume the self-serving opportunism of management (Roberts, McNulty and Stiles, 2005). However, this is critiqued as showing a simplistic view of human nature. Boston et al. (1996) propose that principal-agency theory is useful for analysing public policy issues, but it would not be suitable for analysing complex social interactions. Pettersen et al. (2012) report that its monitoring and compliance focus leads to lower performance in a board following the agency model, e.g. board moving from strategic discussions to focusing on budget monitoring. In essence, the critics suggest such boards are focused on the compliance of the present rather than the strategy of tomorrow. A limitation of agency theory is that it has an inward focus on economic efficiency and does not consider those outside of the organisation who may be affected by the organisation's decisions (Brennan, 2010). Agency theory highlights the fact that the only relationship of interest is between the board and management (DeRegge and Eeckloo, 2020). The absence of trust, and information asymmetry are core tenets in agency theory; the board do not trust management (Brennan 2010) and the shareholders do not trust the board, each needing to be monitored and controlled.

Organisations exhibiting traditional agency style board behaviour can be identified in practice where staff are being held accountable, burdened under internal reporting requirements to ensure compliance, and exhibit perceptions of the CEO being sandwiched, both upwards and downwards, in the accountability chain (Jones et al. 2018; Freeman et al. 2016; Bismark and Studdert, 2013; Endacott et al. 2013). Under agency theory it is assumed that managers (agents) may not act in a way to maximise shareholder (principal) value, and hence managers should be controlled by the board and have little discretionary power (L'huillier, 2014). Some authors suggest that agency theory can be identified in the public sector reforms in the UK of 20 years ago, and the introduction of managerialism, bureaucracy and loss of autonomy.

Stewardship Theory

Stewardship theory was an early challenger to the agency theory perspective (vanEes, Gabrielsson and Huse, 2009) and the agency theory view of the relationships between management and the board. Whilst agency theory is dominated by the economics and finance disciplines, stewardship theory is dominated by the disciplines of social psychology, organisational theory, and psychology. Here, the CEO/General Manager is identified as a key internal actor on the governance stage and whereas agency theory assumes information asymmetry, the stewardship model assumes the CEO is trustworthy (vanEes, Gabrielsson and Huse, 2009). Later studies discuss governance behaviours related to stewardship theory as boards attempting to implement a model of shared values built on high trust (Pronovost et al. 2018; Freeman et al. 2016; Millar et al. 2015; Veronesi et al. 2015).

This concept of shared values includes the importance of balanced monitoring and reporting of both *hard information* (in the form of financial reports, KPI dashboards and scorecards and national benchmarks) and *soft intelligence* (in the form of board walkarounds, staff stories and experiences), (Mannion et al. 2017; Freeman et al. 2016; Jha and Epstein, 2010; Jiang et al. 2009). Implied trust of the CEO is associated with early stewardship theory, whilst later evolutions of this theory identified CEO behaviours that recognise the importance of a rounded approach to knowledge generation via the provision of hard and soft information on which trust and confidence is fostered.

Organisations exhibiting stewardship style board behaviour can be identified in practice whereby a collaborative approach between management and boards who delegate authority and responsibilities to the CEO is evidenced. The board assumes that the motives of the management are aligned with the objectives of the board and shareholders (Brennan, 2010). Focus on compliance is reduced, resulting from the fostering of trust. The CEO role under stewardship theory has visibly evolved to become a conduit between the board, shareholder, and employees. The CEO is the voice of the organisation, with a strong visible presence. Under this theory the CEO is seen as a steward, a team player, and not as an agent or opportunist.

These first two theories have approached corporate governance via the relationship between management and the board, with agency theory seeking to control management's self-interest, while stewardship theory considers management and board motives to be aligned (DeRegge and Eeckloo, 2020). Whilst both these are theories of inward facing governance, the next two theories shift the focus outwards and take a broader perspective of corporate governance (Huse, 2005).

Resource Dependency Theory

Empirical data suggests boards have a wider role than espoused by agency theory (Roberts, McNulty and Stiles, 2005) and stewardship theory, suggesting that board members can also give advice, open doors to new relationships and enhance strategy. Resource dependency theory emphasises external relationships as these can be used to leverage advantage (DeRegge and Eeckloo, 2020). The premise of resource dependency theory is that organisations seek to make links and connections for the achievement of the organisation goals (vanEes, Gabrielsson and Huse, 2009). In industries that have been studied and espouse resource dependency, there is evidence of board members who bring *human capital*, in the form of specialist expertise, experience and knowledge and *relational capital*, in networking and external stakeholder associations into the boardroom. There is solid evidence in the literature of boards exhibiting these competencies and behaviours and demonstrating high performance activity in governing with both an inward and external focus on the achievement of goals (Mannion et al. 2017; Freeman et al. 2016; Jha and Epstein, 2010; Jiang et al. 2009). Having these skillsets at the board table is key for managing internal and external relationships and for acquiring resource and strategic advantage.

However, other researchers of this governance behaviour demonstrate conflicting views. As a caveat Hicks Midanek (2018) cautions that it is important to establish the appropriate tone at the top and 'explicitly include screening for people's character as well as competence' as 'corporate reputations can be destroyed in an instant' (p. 176). L'huillier (2014) argues, based on the theory of Hung (1978) and the earlier findings of Mace (1971), that resource dependency behaviour theory should be viewed from a critical perspective and cautions that the human resources could demonstrate power via

their 'old boys network and school tie brigade' (p. 310). L'huillier's (2014) critique was based on a governance study that is almost 50 years old. It does nevertheless provide a critical and balancing perspective which is quite different to the discussion on behaviours described earlier in the paragraph.

Organisations exhibiting resource dependency style board behaviour can be identified in practice by their strategic co-option of board members from influential networks, banking, politics and similar domains. Boards characterised by resource dependency seek to bolster board strength by including the right participants in the boardroom (Stock, 2018). This may be achieved through formal connections, especially with financial institutions, based on the theory that such connections may facilitate access to cashflow for the organisation (Johnston et al. 1996).

Stakeholder Theory

The final concept is stakeholder theory which traces its origins to management theory, politics and law (L'huillier, 2014). Again, there is no consensus on the definition of stakeholder theory, and it is loosely defined in the literature. Researchers generally agree that it is about a balancing act, with boards taking a pluralist approach where stakeholders' interests are considered alongside the interests of funders and employees. Stakeholder theory takes a broader perspective on corporate governance, as it focusses on the interests of each stakeholder in the governance process. DeRegge and Eeckloo (2020) and Huse (2005) argue for this inclusiveness and recognise that stakeholders may be internal or external actors. Pettersen et al. (2012) and Malfait et al. (2017) stress boards need to secure the interests of stakeholders and looked at involving stakeholders in decision making processes. The research of Mannion et al. (2017) acknowledges that organisations have overlapping stakeholder interests, both co-operative and competitive, and suggest these overlapping interests can be addressed in an integrated and balanced fashion.

Freeman et al. (2018) considers the tensions in stakeholder theory and asks the question 'Is stakeholder theory primarily aimed at creating value for all involved or at creating value for the firm?' (p. 210). This question led Freeman et al. (2018) to ponder who 'all' is. The article discussed ethics and how much of ethics is concerned with political theory. As seen above in the resource dependency model, many board appointments may be construed as having political undertones. Huse (2005) cautions a dominant coalition of stakeholders in the board room and the challenges this may bring.

Organisations exhibiting stakeholder style board governance behaviour can be identified in practice by their broad representation in the boardroom, including the appointment of employees as directors. In Ireland, the composition of board membership in recent years demonstrates an increase in the use of this model in areas such as professional regulation and statutory and not-for-profit boards. Indeed, internationally issues such gender balance, ethnic minority representation, diversity and inclusion are all very much to the fore. These trends in behaviour are indicators of stakeholder theory.

The latter two theories discussed above, resource dependency theory and stakeholder theory, have as their focus the linking of the organisations with the external environment in which the organisation is situated. These theories do not place as much focus on the individual (e.g. agent or steward) as is the case with the first two theories. Agency theory is still the dominant governance theory, and it is the starting point for building an understanding of governance (L'huillier, 2014).

Drawing on the theory and examples of practice in the earlier sections of the article, Table 1 below represents the key ideas in each of the four classic models and has been developed as an easy to use tool to aid understanding, identification and classification of governance concepts observed in practice.

TABLE 1: GOVERNANCE THEORIES SUMMARY AND RECOGNISING THEORIES IN PRACTICE

	Agency	Stewardship	Resource Dependency	Stakeholder
Popularised in	1970's	1980's	1980's	2000's
Key focus of theory	Inward	Inward	Inwards and Outward	Outward
Key actors in the governance model (Bold emphasis demonstrating key actor)	Owner Board Manager	Owner Board Manager	Owner Board Manager	Stakeholders Owner Board Manager
Key distinguishing factors	Theoretical origin in economics and finance Assumes conflict of interest between owner and agent. Asymmetry of information Command and control of the actions of agent Oversight	Theoretical origin in social psychology, sociology and organisational theory Empowerment of CEO Implied trust, evolving to explicit trust	Theoretical origin in sociology Boundary spanning Board as gatekeepers Social networks Tone at the top Leveraging external relationship	Origins in management, political and legal theories Behavioural viewpoint Co-operating, consulting and involving beyond the boardroom, inside and outside the organisation Voice of the customer, diversity and inclusion in the boardroom
Key critique of the governance model	Explicit lack of trust Financial focus to the detriment of other views Short-term perspectives	Assumption of trustworthiness may leave organisation open to fraud	Old Boy's club may lead to exclusion of persons or groups outside 'the club' Misuse of individual or collective power	Political appointments could disturb board business Some stakeholders may be marginalised, as their interests may be omitted

To effectively understand corporate governance, it is important to recognise that contextual issues have shaped its development to date. As demonstrated by the summary points of Table 1, the internal control focus of the 1970s and 1980s made the agency model a suitable approach for the time, especially following the scandals in Europe and overseas. In the multiculturally diverse society at the turn of the 21st century a new model for governance was shaped to be reflective of increased calls for participative governance. In making sense of current governance practice, the authors highlight the contribution of governance models of the past including their inherent shortfalls and how these have evolved and enabled an understanding of the current pluralist perspective. The reader is again reminded of the words of Foucault that the 'past is viewed in terms of making sense of the present...' (Cummings et al. 2016, p.36).

As the world wrestles with the COVID-19 pandemic, it is prudent to reflect on past and current models, as these are likely to evolve once more. Indeed, the authors argue that the COVID-19 pandemic is once more changing the governance routines for many organisations. Boards must now serve more than the shareholders and investors in this time of complexity and change. They are required to truly take a pluralist approach and consider the advice of non-traditional boardroom actors, such as public health specialists, scientists, social media influencers and a raft of others. While at the same time continuing to engage with the traditional actors such as the banks, funders, staff and customers and clients. As the concept of the stakeholder is again at a crossroads and being redefined by COVID-19, the language of governance will likely evolve in the coming decade in response to the multiplicity of factors. Roberts, McNulty and Stiles (2005) also argue for the progress of the corporate governance agenda. Perhaps, a hybrid of all four models will be the future of corporate governance.

Conclusion

In this paper a chronological/historical perspective of how governance theory has evolved over the last 50 years has identified that different governance theories are not 'a string of isolated pearls but a mosaic in which each work fits into a larger frame' (Leitch 2010, p. xxxiv). The theoretical foundations of the language and meaning of governance have been examined, identifying the different lenses through which the theory is espoused. It has become evident how the language of governance and the influence of corporate governance on board practices has changed from a 'control', 'information asymmetry' and 'agency' approach in the earliest theory to 'collaboration', 'pluralism' and 'voice of the customer' approach in stakeholder theory.

The concept of pluralism in a wider sense is proposed, suggesting that rather than one dominant theory, a hybrid of all four theories is critical to progress the corporate governance agenda. Like others, the authors argue not for an either-or approach to one theory being more valid than another, but rather linking governance models to develop a multi-theoretical approach. How external and internal mechanisms are enacted in practice by organisations has been reinterpreted over the decades. Corporate governance, whilst having its foundations in academic exercises, is indeed an organisational attribute that has shown itself worthy of its place within the language, culture and context.

Recommendations for future research

The corporate governance discussion set out above may inspire researchers to undertake further research in this area. Some recommendations for consideration are as follows:

Understanding the historical changes in governance is important as it sets the scene for 21st century governance. Given the dearth of published research on governance mechanisms in Cyprus, now is the time to shift the scholarly governance debate from the UK, USA, Australia and Canada. Researchers should conduct research in Cypriot organisations to determine the operational governance model and explore the relationship to organisational performance.

Much research in the area of corporate governance is focussed on quantitative research of the formal structures and mechanisms of boards. However, there is also the informal, softer side of corporate governance which is often ignored in academic writing. This softer side of governance relates to the process and practices of governing and has been referred to by Huse (2005) as the 'opening of the black box' on board behaviour. Whilst there are some studies which use qualitative research techniques, further work is needed in this area to enlighten the picture of corporate governance.

In response to COVID and other unexpected PESTLE factors (i.e. Political, Economic, Social, Technological, Legal, and Environmental factors as the aforesaid mnemonic denotes), boards need to be adaptive and creative in their approach to change. To do this, boards need directors and leaders with a different skillset. This is an area of governance that warrants empirical investigation. Future studies could explore the implications of how boards have responded to the pandemic and if the responses have succeeded or failed. This research could be written up in the form of case studies.

- Berle, A., and Means, G. (1932). *The modern corporation and private property*. New York: Macmillan.
- Bielenberg, K. (2018) 'Hell at the gates: how the financial crash hit Ireland'. Irish independent, 17 March, <https://www.independent.ie/business/irish/hell-at-the-gates-how-the-financial-crash-hit-ireland-36709945.html> [accessed 28 October 2020].
- Bismark, M.M., and Studdert, D.M. (2013) 'Governance of quality of care: a qualitative study of health service boards in Victoria, Australia'. *BMJ Quality and Safety*, 23, 474–482.
- Boston, J., Martin, J., Pallot, J. and Walsh P. (1996) *Public Management: The New Zealand Model*, Auckland: Oxford University Press.
- Burr, V. (2003) *Social Constructionism*, 2nd Edition, London: Routledge.
- Cadbury, A. (1992) *Report of the Committee on the Financial Aspects of Corporate Governance*, London: Gee.
- Chambers, N. (2012) 'Healthcare board governance', *Journal of Health Organization and Management*, 26(1), 6-14.
- Christopher, J. (2010) 'A multi-theoretical approach to recognizing the wider influencing forces impacting on organizations', *Critical Perspectives on Accounting*, 21, 683-695.
- Cohen, J.R., Hayes, C., Krishnamoorthy, G., Monroe, G.S. and Wright, A.M. (2013) 'The Effectiveness of SOX regulation: an interview study of corporate directors', *Behavioral Research in Accounting* 25(1), 61-87.
- Cummings, D. (2016) 'Unfreezing change as three steps: Rethinking Kurt Lewin's legacy for change management', *Human Relations*, 69(1), 33–60.
- DeRegge, M. and Eeckloo, K. (2020) 'Balancing hospital governance: a systematic review of 15 years of empirical research', *Social Science @ Medicine* 262, available at: doi.org/10.1016/j.socscimed.2020.113252.
- Financial Reporting Council (2018) *The UK Corporate Governance Code*, London: The FRC Limited.
- Freeman, T., Millar, R., Mannion, R. and Davies, H. (2016) 'Enacting corporate governance of healthcare safety and quality: a dramaturgy of hospital boards in England', *Sociology of Health and Illness*, 38, 233–51.
- Freeman, E.E., Phillips, R., Rajendra, S. (2020) 'Tensions in Stakeholder Theory', *Business @ Society* 59(2), 213-321.
- Hicks Midanek, D. (2018) *The Governance Revolution: What every board member needs to know, NOW!* Boston Walter de Gruyter Inc.
- Higgs, D. (2003) *Review of the Role and Effectiveness of Non- Executive Directors*, London: Department of Trade and Industry/HMSO.
- Huse, M. (2005) 'Accountability and creating accountability: a framework for exploring behavioural perspectives of corporate governance', *British Journal of Management*, 16, S65-S75.
- Jensen, M. and Meckling, W. (1976) 'Theory of the firm: managerial behavior, agency costs and ownership structure', *Journal of Financial Economics*, 3, 303-360, available at: [doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X).
- Jha, A. and Epstein, A. (2010) 'Hospital Governance and the quality of care', *Health Affairs*, 29(1), 182-187.
- Jiang, H. J., Lockee, C., Bass, K., Fraser, I. and Norwood, E. (2009) 'Board oversight of quality: any differences in process of care and mortality?', *Journal of Healthcare Management*, 54(1), 15-30.
- Johannesson, J., Palona, I., Guillen, J.F. and Fock, M. (2010) 'UK, Russia, Kazakhstan and Cyprus governance compared', *Corporate Governance*, 12(2), 226-242.
- Johnson, J.L., Daily, C.M. and Ellstrand, A. E. (1996) 'Boards of Directors: a review and research agenda', *Journal of Management*, 22(3), 409-438.
- Jones, L., Pomeroy, L., Robert, G., Burnett, S., Anderson, J., Morris, S., Capelas Barbosa, E. and Fulop, N. (2018) 'Explaining organisational responses to a board-level quality improvement intervention: findings from an evaluation in six providers in the English National Health Service', *BMJ Quality and Safety*, 1-7, E-pub ahead of print.

- Krambia-Kapardis, M. and Psaros, J. (2006) 'The implementation of corporate governance principles in an emerging economy: a critique of the situation in Cyprus', *Corporate Governance*, 14(2), 126-139.
- Kubicek, A., Stamfestova, P. and Strouhal, J. (2016) 'Cross country analysis of corporate governance codes in the European Union', *Economics and Sociology*, 9(2), 319-337.
- Leitch, V.B. (2010) *The Norton anthology of theory and criticism*, New York: Norton & Co.
- L'huillier, B.M. (2014) 'What does corporate governance actually mean?', *Corporate Governance*, 14(3), 300-319.
- Mahadeo, J.D., Soobaroyen, T. and Hanuman, V.O. (2012) 'Board composition and financial performance: uncovering the effects of diversity in an emerging economy', *Journal of Business Ethics*, 5(3), 375-388.
- Malfait, S., Van Hecke, A., Hellings, J., De Bodt, G., and Eeckloo, K. (2017) 'The impact of stakeholder involvement in hospital policy decision-making: a study of the hospital's business processes', *Acta Clinica Belgica*, 72(1), 63-71, available at: doi.org/10.1080/17843286.2016.1246681.
- Mannion, R., Davies, H., Jacobs, R., Kasteridis, P. Millar, R., and Freeman, T. (2017) 'Do hospital boards matter for better, safer, patient care?', *Social Sciences and Medicine*, 177, 278-287.
- Michaelides, A. (2014) 'Cyprus from boom to bail-in', *Economic Policy*, 639-689.
- Millar, R., Freeman, T. and Mannion, R. (2015) 'Hospital board oversight of quality and safety: a stakeholder analysis exploring the role of trust and intelligence'. *BMC Health Services Research*, 15(1), 196.
- Organisation for Economic Cooperation and Development (2004) *Principles of corporate governance*, Paris: OECD Publications Service.
- Pettersen, I. J., Nyland, K. and Kaarboe, K. (2012) 'Governance and the functions of boards. An empirical study of hospital boards in Norway', *Health Policy*, 107, 269-275.
- Pronovost, P., Armstrong, C.M., Demski, R., Peterson, R. and Rothman P. (2018) 'Next level of board accountability in health care quality', *Journal of Health Organization and Management*, 32(1), 2-8.
- Roberts, J., McNulty, T. and Stiles, P. (2005) 'Beyond Agency Conceptions of the Work of the Non-Executive Director: Creating Accountability in the Boardroom', *British Journal of Management*, 16, Special Issue S5-S26.
- Shah, N. and Napier, C.J. (2017) 'The Cadbury Report 1992: Shared Vision and Beyond'. United Kingdom, available at: https://scholar.google.co.uk/citations?user=PA8ErogAAAAJ&view_op=list_works&sortby=pubdate.
- Turnbull N. (1999) *Internal Control: Guidance for Directors on the Combined Code (The Turnbull Report)*, London: Institute of Chartered Accountants in England and Wales (ICAEW).
- Turnbull, S. (1997) 'Corporate Governance: its scope, concerns and theories', *Corporate Governance*, 5(4), 181-205.
- van Ees, H., Gabrielsson, J. and Huse, M. (2009) 'Towards a behavioural theory of boards and corporate governance', *Corporate Governance: An International Review*, 1(30), 307-319.
- Veronesi, G., Kirkpatrick, I. and Altanlar, A. (2015) 'Clinical leadership and the changing governance of public hospitals: implications for patient experience', *Public Administration*, 93(4), 1031-1048.
- White, H. (2010) *The fiction of narrative: Essays on history, literature and theory, 1957-2007*, Ed. Doran, R., Baltimore, John Hopkins University Press.

CYBER SPACE

HUMAN SHIELDING™

By

Yiota Nicolaidou

Security Mechanics Strategist | CEO - Y. Secure World Vision

Behavioural Security, Human Shielding™, Reticular Activating System, Human factor

Definitions

Behavioural security refers to tools and systems which track the normal behaviour of the user of a system, to be able to identify any deviation or anomaly of the norm in the future.

Usability is the measure of how well an approach or methodology has been designed so that it feels like second nature to a specific user/person.

Human Shielding™ is the evolution of behavioural security when married with usability. It is the art and science of closing the gap between systems and people. It is the methodology used to transform the weakest link and the greatest liability in security, that is people, into the greatest ally or asset.

Reticular Activating System (RAS) is the mechanism which separates important information and filters out all that is unnecessary.

Security strategy is the cornerstone of protection. It is the roadmap that prepares us for the most relevant, destructive and impactful threats and attacks, and our compass to effective protection.

Human factor refers to the people who are involved in a business or personal security setting.

Abstract

Being in control is the only way to be protected and people are in the first line of cyber warfare. Thus, security needs to be effortless, simple, applicable, and actionable for people. **“Human Shielding™” is the power source and most effective secret behind long-term protection.** A security training framework developed by Y. Secure World Vision to transform the human factor from the weakest link to the greatest ally against attacks. The framework utilizes brain functionality to create human shields.

1. Introduction

Security is a concept that many people do not want to talk about, and this is understandable. But what if they realise that they have been tricked about what security is, its effectiveness and benefits, its impact on their personal and business life, but most importantly, how cost effective and easily it can be put in place, if it is done correctly?

That is why in this article a framework called “Human Shielding™” is introduced.

But we begin with the basics, ‘behavioural security’.

2. What is Behavioural Security?

Behavioural security is an area which attracts great interest from the security industry, by promising breakthroughs and a profound impact for the end user. The traditional term refers to tools and systems which track the normal behaviour of the user of a system in order to be able to identify any deviation or anomaly from the norm in the future.

As a simple example of a high-end behavioural security pattern, let us consider the following scenario:

An employee called John is working in company XYZ.

This involves working between the hours of 9am – 5pm.

While working, he uses a specific device and he is assigned to a corporate phone for email access and emergency contact in non-business hours as well.

John accesses specific files and folders from his assigned device on a daily basis and other files on specific dates of the month based on a predefined pattern.

He has a specific pattern to the way in which he types on the assigned device.

So, if John's normal pattern changes even slightly, i.e he tries to open a file he does not usually open on a specific date, or he wants to work during "non-normal hours" the system will recognize the deviation and apply further checks in order to verify his identity before allowing him access to the data he usually needs for his job. So, instead of a password, John might be asked to use a second factor of authentication which might be his fingerprint or his face structure, replying to a few questions which only he knows the answer for, or just a code from another device. Therefore, if an attacker tries to impersonate John, in theory, they would fail, right?

Well, in security there is a saying: There is no 100% security, and this saying is there for a reason. In short, we cannot predict everything. This scenario and its supportive security measures and control implementation is an awfully expensive approach, meaning it is impossible to implement for small and medium sized businesses. It also has a flaw. A system needs to understand and analyse the behaviour of the users. But the major question is, are systems perfect and fault free at predicting human behaviour and/or protecting them from an attacker? The reality is that systems can and will be fooled.

But before you decide this is just another article saying that is impossible to beat cyber-criminals, hold your horses. That is exactly what it is NOT. This article introduces an approach to behavioural security which everyone can afford and everyone can understand and apply, no matter their age group, prior knowledge and/or familiarity with systems and security.

3. Talos

The above traditional approach to behavioural security reminds me of Talos in ancient Greece. In case you are not aware of Talos, as it is not one of the most common myths, here is a summary of the story.

According to one of the versions of the myth, Talos was created by the God of the forge-Hephaestus for King Minos, who wanted fewer intruders on his island kingdom of Crete. But no matter its creator, one thing is certain, Talos was considered by far the most advanced defense system of its period.

The need for Talos' creation was the inadequate security of the island. Mortal guards and ordinary weapons would not suffice. Thus, the visionary God Hephaestus devised Talos. Talos had the shape of a giant man and had the substance of gleaming bronze. It was the first mechanical humanoid endowed with superhuman strength and powered by ichor, which was the life fluid of the gods. Talos' effectiveness was extraordinary, as the humanoid protector stalked the shores of the island of Crete hurling rocks at unidentified sea vessels and embracing any enemy or uninvited person who dared to land with its immolating red-hot bear hug. Talos was by far the most effective defense system, and was craved by other kingdoms and considered one of the most powerful tools of the domination of King Minos in the area.

However, no system can beat the human mind's resourcefulness and as the ancient Greeks were well known for their resourcefulness, Talos was defeated. Jason of the Argonauts, in his journey to Colchis while pursuing the Golden Fleece had to feed his crew and stopped at the island of Crete. Jason was protected during his journey and supported by the mother of the gods, Hera. Hera informed him about the weakest point of Talos, the unbeatable protector of Crete. Hera told Jason to look to Talos' leg. Jason derived a plan to deceive Talos by instructing his men to distract the humanoid giant as decoys while Jason went from the back and spotted a nail in Talos heel. Jason pulled the nail out and drained the vital ichor fluid, leaving the bronze giant dead.

How is this myth relevant?

As a systems' designer, I never thought that I would even attempt to solve a digital world problem by focusing on people instead of systems. But this is the first lesson in effective security. The solution has to be found from where it exists, especially when the parameters are dynamic and constantly evolving, due to technological improvements.

Since 2012, I have been extensively researching what the components of protection are, and the most prominent one by far is human behaviour.

The reality is that currently no system can surpass human intelligence and cyber criminals possess the art of seduction, deception and manipulation. The common mentality of collecting and utilizing tools without any strategic approach in the security arena is just not providing any organization with protection. It is instead wasting money and other useful resources. Worst of all is that it leads people to feel helpless against cyber criminals and their attacks.

This vicious cycle ends here.

4. What is "HUMAN SHIELDING™"?

Human Shielding™ is the evolution of behavioural security when married with usability. In strict terminology, Human Shielding™ is the art and science of closing the gap between systems and people. Its two important ingredients are reverse engineering the cyber-criminal, to avoid falling into their deceptional traps, and employing the same toolkit of deception methodologies to stay out of their attack radar.

In simple terms, it is the methodology used to transform the weakest link and the greatest liability in security, that is people, into the greatest ally or asset. Your insiders, employees, external providers and anyone with inside information about your organization, can be used and utilized by a perpetrator to compromise the security of your organization and consequently jeopardize the survival of it and its valuable assets. It is all about you getting the control back from the attacker. By just creating the element of the resourcefulness of the insiders in your organization, you can avoid or minimize to a considerable degree the attackers' ability to damage it.

Human Shielding™ is promising a lifetime resource, not a tool that needs to be replaced with the next achievements of technology. It is this element that makes it a sustainable and low-cost long-term investment for any organization, whether private or state related. Human Shielding™ is literally creating a chain of human shields ready to break up and stop the most challenging attacks against which normally no system or tool is effective, no matter how sophisticated and advanced it is.

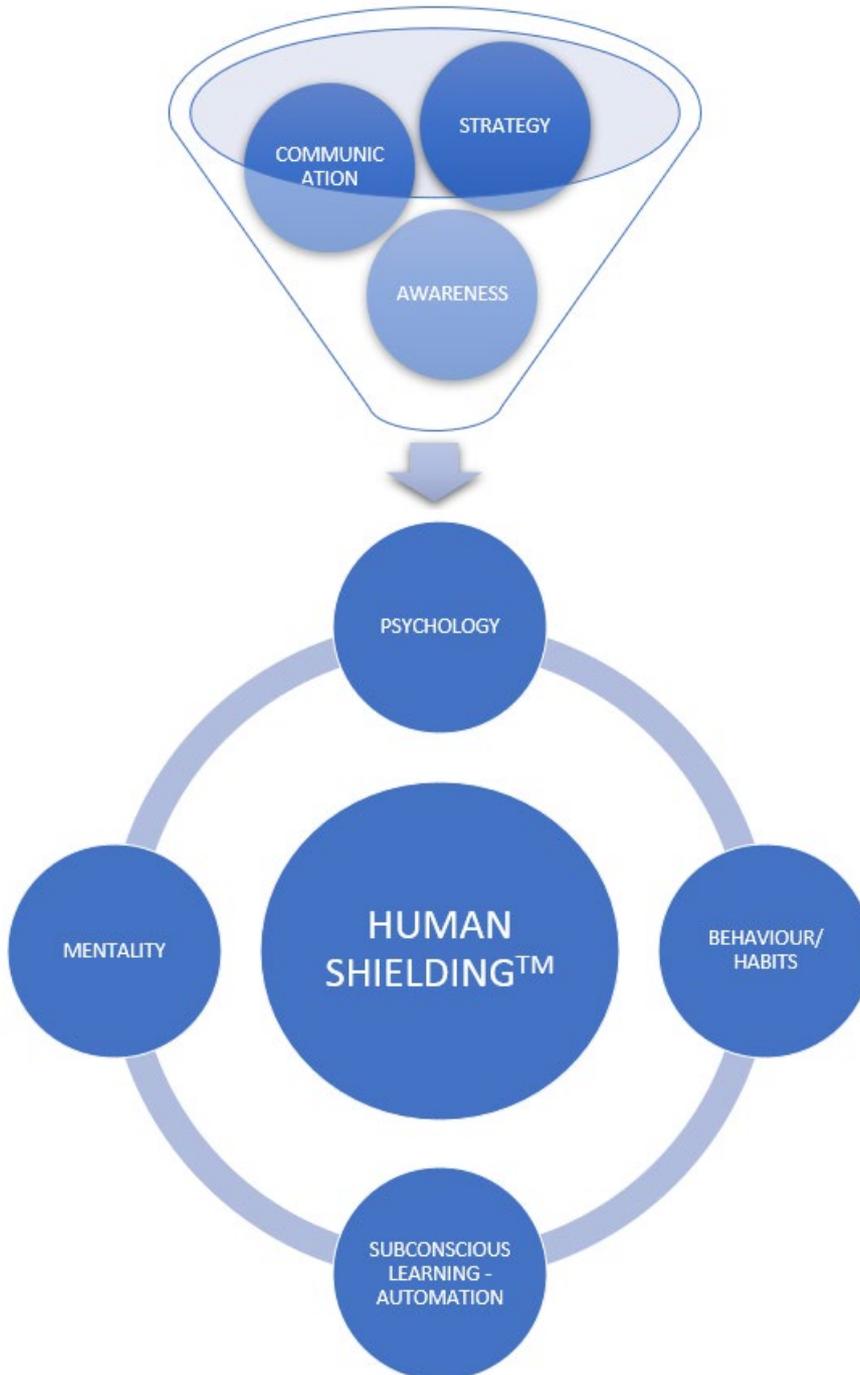
Security is a state of mind.

In this paper the seven pillars behind the revolutionary security framework called Human Shielding™ are introduced.

5. The Seven Pillars behind HUMAN SHIELDING™ are:

- 1) The language of protection - Creating rapport
- 2) Reverse mentality
- 3) The psychology factor
- 4) Creating awareness
- 5) Strategy
- 6) Behaviour and habits
- 7) Set it and forget it – Automation

See schematic 1 below.



Schematic 1: The seven pillars of the human shielding framework

Everything has a language. People, animals, nature and machines. Everything in this physical plane has its own language and its own code of understanding, because communication is a necessity. That is why a security strategist needs to establish unique communication models for each dimension of security. These are systems, people and the element of surprise. Systems have a language, humans have another language, and the element of surprise has its own language. Each dimension must have its own unique language and it is crucial to understand it and decode it in depth.

One of the greatest misconceptions about security is that it is difficult. One of the main reasons why people have this false belief about security is the way security experts communicate with them. The biggest mistake they make is talking to people like they are talking to systems or experts of the field, using jargon.

Let me demonstrate that by using an example:

- You need AES encryption,
- We will create redundancy with a hot and a cold spare,
- I will add a zip bomb,
- Use a Sandbox,
- How about a vault mechanism in the junction?

What junction?

I lost you right?

The result is people get lost. They do not understand, they resist and, with time, a negative mindset about security is created.

So, if I start talking to people like I am talking to systems or experts in the field, it is like talking to a Greek in Farci or Chinese. That is why, in order to be able to help people to get protected, the first step is to have people skills and to always be able to communicate effectively. Thus, it is essential to be able to explain to people in simple and comprehensible language what we mean. The secret behind effective communication is an understanding of the human brain.

But this is only the obvious part of communication. In fact, only about 7% of human communication is achieved with words. Because of the way the human brain is designed, a staggering 93% of communication is non-verbal. This explains the old saying that people decide whether they like us or not within the first seven seconds of seeing us, without us even saying a word. The way we look, dress, move, behave, our tone of voice and all our other traits are perceived by the human senses and can identify our status, trustworthiness, charisma, leadership ability, attractiveness, intelligence, dominance, success and much more. No one wants to be around someone who is not like them, so, in order to be able as a security strategist to develop a “human shield” you have to create the feeling of familiarity and commonality with a person. The most effective technique by far to achieve that is creating rapport. Rapport is the total responsiveness between people.

The concept of ‘rapport’ was initially developed by one of the top psychologists and pioneers in the field, Dr. Milton H. Erickson. Dr. Erickson spent most of his time observing people. After observing them for long periods of time, he realized that by nature people who like their companions tend to copy their body pose, tone of voice, even match their breathing. He then developed the method called ‘matching and mirroring’, which helps people to share feelings, drop their guard and be open and admmissive at a subconscious level to the introduction of a new idea or even to learning something new. Obviously, it is a technique which can be used to manipulate people, but that is a problem of intention. When applied with real interest in people and in improving their success in many areas of their lives, including their protection, it is an essential and exceptional tool for unconscious learning.

5.2 Reverse Mentality

In the past, systems were the only defense against cyber-criminals. That is why people were forced to comply. However, nowadays threats have become far more complicated, producing a much higher level of impact. Additionally, the lines between personal and professional protection have become blurred. We cannot, therefore, expect people to comply with outrageously forceful rules which are not natural and, at the same time, are outdated and become an obstacle to their daily tasks. As soon as the security expert turns their back the user will avoid them. The result of such a forceful approach is exactly the opposite of being protected. With this forceful approach, the security industry has managed to turn the human factor into the weakest link in the security system. Only recently, since 2012, has the cyber-security industry realized how damaging this approach is and begun to take the human factor into consideration in the security equation. During this time, security experts have worked on more usable approaches, or as I call them, 'second nature approaches' which are able to first alter the negative mindset the previous approach created and at the same time make security something natural and exciting, by adding ease to user's everyday tasks.

But how do we achieve this reversal in the negative mindset? By going deep into how the human brain creates and alters beliefs. There is a technique that is used to alter beliefs quickly and it is applied by homeland security. For example, when there is a bomb attack, and they have a suspected terrorist in custody, people act based on their beliefs. It is well known that terrorists, and especially suicide bombers, are so deeply programmed that they are even willing to give their life. When you are up against the clock to discover where the next bomb is going to blow up, you do not have the time or belief that it is possible for the terrorist to give you the information in goodwill. Everything that would work in any other case, from interrogation to promises, is just not going to cut it. You have only limited time to get the information and the only way to do that is by reversing the root belief in which the specific programming is based. That belief is that the person is from that country for which they are fighting. Just to outline this briefly; the process starts with a series of questions which can lead the suspect themselves to question whether or not their parents are their actual ones and eventually whether that person is from the country they are fighting for. At this stage, the subject's belief roots start shaking. Then an exceptional actress posing as a real mother comes into the room with pictures of a child and in a very fraught emotional state. This is the key to reversing that belief and getting the information about the bomb instantly. Obviously, it is a very delicate technique which requires a high-level skillset, and it is far more complex than the simplified description I have provided for the purposes of this article. However, a variation of this approach is the key to reversing people's mentality and limiting beliefs around security. It is just a matter of feeding the insiders' adult brain with facts that indicate exactly the opposite of what they know as reality so far, and then letting their critical mind connect the dots. Then infusing them emotionally with what this belief could cause them in real terms. As a side note, a child's mind requires some variations to this approach, but these will not be analyzed in this article as it is out of scope.

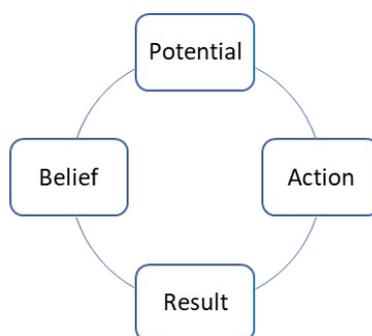
Once the negative mindset is removed it is time to create a positive one which will replace the old beliefs by applying the following steps, mostly in parallel: creating awareness, building positive psychology, being strategic about the protection goals, developing and maintaining protection enforcing habits.

5.3 The psychological games our brains play on us

The next step in the process is creating a momentum with positive psychology.

Mentality is everything, and this is the secret cyber-criminals do not want people to know, in order to stay in the avoidance state of protection while they will be destroying them and their business. Cyber-criminals are counting on people having the wrong perceptions of reality in order to be able to take advantage of them and maintain leverage over their protection.

One of the greatest concepts Tony Robbins covers is the cycle of success. The cycle of success has four steps. See schematic 2.



Schematic 2: The Cycle of Success

In this four-step cycle, each component is feeding the next over and over again. In this principle lies the power of momentum. Everyone has unlimited potential in every area of their lives, including their security. Potential inspires action and each action leads to a result. Every result creates a certain belief which in turn either reinforces or minimizes our potential. However, instead of using this powerful cycle to our benefit, most people have been trained by both the failure of the security industry, the systems and ready-made solutions' market, and the successes of the cyber-criminals to feel helpless. As a result of the repeating of this pattern for a period of time, the belief is deep rooted in their subconscious mind. As you will have realised, if even one of these four steps is disrupted it can create a ripple effect with damaging results. In order to reverse this, a security strategist needs to inspire action by redefining people's potential. Starting with simple and fast wins (results) we can rebuild the potential, inspire action and create a momentum which will be a game changer for long term protection and the re-establishment of positive beliefs around security. Designing these simple and fast wins, and their order of placement, will be the cornerstone for success, as beliefs are the power source/secret behind "Human Shielding™" and long-term protection.

5.4 Creating Awareness

It is a fact that in recent years attacks have grown exponentially in terms of numbers, sophistication and most importantly impact/damage they can cause when taken advantage of by an attacker. Awareness is the key to solving any problem. Clearly, we cannot really solve a problem if we do not know of its existence.

It is inevitable that without knowing about the threats and the potential impact/damage they can cause when taken advantage of by an attacker it is impossible to be protected and on guard. Furthermore, it is essential to understand the cyber-criminal's techniques and tricks in order to avoid them.

Thus, awareness plays a double role in Human Shielding. It is an instrument for feeding the insiders' adult brain with facts that will reverse their negative mindset and the impact of that false belief, while at the same time building the basis in which the sustainable and long-term skillset of protection will be constructed.

The first step in awareness is to capture someone's attention, but how do we effectively do that, given that we are living in a world in which everything demands our attention?

In order to do that we are going to employ a very interesting part of the brain called the "Reticular Activating System" or in short RAS.

Our brain receives 40 million bits of sensory information per second and it can cope with only about 40 bits per second. RAS acts as 'the gatekeeper of information between most sensory systems and the conscious mind'¹ (Sharon Linde).

In simple terms, RAS is the mechanism which separates important information and filters out all that is unnecessary. But what are those filters based on? They are based on what we are interested in either because we want to be, or someone else made us care about something.

The simplest example of this is thinking about a specific type of car. Suddenly we see it everywhere. No, it is not that everyone has decided during that timeframe to own the same type of car that we are considering. It is just that our RAS now has a filter which allows information related to this car type to pass into our brain.

Thus, a security strategist can implant and/or establish a series of filters so that the insiders of an organization (in a business security setting) and/or members of a family (in a personal security setting) can apply in order to both understand the importance of protection and its impact as well as what common approaches and tricks cyber-criminals will use to trick them, based on the risk assessment performed.

Another important factor in the awareness stage is the type of information. Nowadays, cyber-criminals use much more advanced methodologies and approaches mostly employed for state level attacks and, surprisingly, those attacks cannot be detected by any industry tool or equipment. Those attacks are usually referred to as 'invisible'. Thus, there is a necessity for the insiders to be fully informed about the modern and most recent methodologies and approaches of cyber-criminals. That is why 'Human Shielding™' takes into consideration the most state of the art attacks, in order to prepare the insider to avoid even the most sophisticated and invisible attacks, like zero days and hardware level backdoors. The idea that this

¹ Sharon Linde (2016) Reticular Activating System: Definition & Function.

Study.com, [Online] <https://study.com/academy/lesson/reticular-activating-system-definition-function.html> (Accessed: 7 September 2020).

level of attack will not be employed against small and medium size businesses or an industry unrelated to the state is just not valid, considering that hybrid warfare can affect any aspect of our lives, including economic, political, media outlets, health, education and literally any other category.

Understanding the way this information will be presented is also essential in order to avoid the feeling of being overwhelmed and to bypass the obstacles which prevent the insider from being able to both understand them in simple terms and equally importantly remember them long-term. Any information presented should be memorable. Memorability can be achieved by applying three techniques which are briefly described below.

5.4.1 Having a point of reference:

The human brain shuts down when there are no reference points to link to something. That is because the human brain uses prior information to make sense of new information coming in. This means two things. A security strategist needs to find the point of reference for each insider and then effectively trained insiders will be able to succeed in avoiding triggering attacks which cyber-criminals have orchestrated against them.

5.4.2 Connecting with strong neural pathways:

Every time people learn something, a network of neurons is formed in their memory. Think of the network of neurons like pathways or roads. The stronger the memory the more it becomes a highway. Which means that by teaching security using the right language, avoiding jargon, we can connect it with other known and memorable information in the brain.

5.4.3 Enabling more parts of the brain:

According to research, being able to enable more functional parts of the brain and using as many sensory factors as possible (our senses) allows a stronger formation of habits. This is a methodology used to help older people with Alzheimer's syndrome, as well. Fusing the mind with emotion allows higher memorability.

5.5 Strategy

In the sea of billions of attacks, what do you really need to protect yourself and/or your business against?

This is the first and most important question to ask and it really depends mostly on the types of perpetrators you attract based on your assets, the resources they have and your insiders' skillset. Yet, I have seen so many organizations doing this the wrong way or not doing it at all. Even in cases of safety-critical infrastructure, security is in place only for regulatory purposes and is not extended as a tool for higher levels of protection. The reality is that it is very easy to get off track if you do not have a solid strategy.

It is a fact that there is a plethora of types and approaches of attacks, and believing that you can be protected from all of them is just a dream. After all, there is no 100% security protection. However, the reality is that you do not need 100% security; you need relevant protection that will cover your bottom line. What do I mean by that?

- You can still get hacked, but keep your brand reputation.
- You can still have intruders in your systems, but avoid data leakage.
- You can still receive requests to pay ransoms, but get your systems up and running at the speed of light without paying a cent.

The message I want to convey here is that **impact is the key. The success of the attack lies in its impact, and with a solid strategy you are in control of that impact.** It is utopic to believe that you can be protected from everything,

but it is very much possible to prepare for the most relevant, destructive and impactful threats and attacks against you, and you can identify these by performing a risk assessment which will then be used to design your security strategy. For a solid strategy, it is important to have realistic goals. Without strategy you are just lost in the threat space and you are just applying patches for things that are not even important; an approach which will not get you very far. **Thus, the security strategy is the cornerstone of protection. It is your compass to protection, and, without it, no security solution is going to be effective.**

An essential part of your strategy is the development of your human shields. In order to achieve that, we need to put in place a plan based on the goals and targets of your business. This plan will be a game changer for long term protection and the re-establishment of positive beliefs around security. To craft this plan, we need to take into consideration the most relevant threats to you and/or your organization, as well as the order or priority for covering them.

The whole process analysed in steps in this article is the strategy. The strategy, to create human shields through your employees, partners, VIPs, collaborators, third party providers and anyone who could be taken advantage of by a perpetrator in order to compromise your security and damage you personally, or your business.

In terms of insiders, the game is defined by you having the ability to train them so that they will not enable or initiate the attack orchestrated against you. This is the greatest secret in the development of human shields. No matter how sophisticated an attack against you might be, in 99.9% of the cases it requires the assistance of an insider in order to be enabled.

The fundamental steps of the Human Shield Strategy are as follows:

1. Identify your insiders, by examining the processes and interaction frames of you yourself or your company
2. Clarify the damage/impact each insider can cause based on the assets they are handling or operating with
3. Reverse insiders' negative mindset around security
4. Inspire action by redefining people's potential
5. Rebuild peoples' beliefs with simple and fast wins
6. Create awareness about the most relevant and disruptive attacks
7. Create a momentum of building positive security habits
8. Build small compounding positive security habits
9. Establish a culture for long term protection
10. Make protective habits a subconscious procedure
11. Set up management metrics to evaluate the effectiveness of the strategy along the way (accountability, observability, measurement and more)
12. Make your strategy sustainable, expandable, and most importantly flexible, as the threat space is dynamic, it keeps changing and evolving

Just as a side note, compounding protection refers to the scaling effect. Compounding protection is a series of steps which link one component of protection to another in a way that produces a smooth interconnection between the components and sustainability is achieved.

5.6 Behaviour and Habits

We have managed to successfully reverse insiders' mindset, enable positive psychology and create awareness which are the basis on which the sustainable and long-term skillset of protection will be based. Now what? It is time to alter bad security related habits and replace them with protective ones. But how?

We live in a light speed world in which culture forces us to do more, be faster and become better instantly. However, change is always a matter of tiny habits compounding on each other over a long period of time. There are many gurus in the field of behavioural change and habit formation or cancellation with interesting things to say about the best approaches, but the one applied in Human Shielding™ is called the Fogg Behaviour Model (FBM), a model for analyzing and designing human behaviour. The model was developed by B. J. Fogg, a behavioural scientist at the University of Stanford.

According to Fogg there are only three triggers which can create lasting change:

1. an epiphany to occur
2. a change in the environment
3. the application of baby steps

Creating epiphanies is not an easy task, and, unless you are in the rush, because let's say you are dying, and you need to alter your eating habits instantly, you can do it with a less strenuous approach. The combination of an alteration in your environment and the application of baby steps can enable you to create long lasting habits effortlessly.

According to the Fogg Behaviour Model (FBM) there are three elements to behaviour (B); motivation, ability and prompt. Motivation (M) refers to the desire to do the behaviour. Ability (A) is the person's capacity to do the behaviour, in other words if it is easy or difficult for that person. Prompt (P) serves as the trigger to initiate the behaviour.

The equation of behaviour according to Fogg is **B = M A P**. Based on this equation we build security-related habits and withdraw threat-enabling ones.

In order to maximize the possibility of the new habit being applied, we first find an anchor, that is basically connecting the new habit with an already existing routine or event. A simplified version of the habit usually on a smaller scale or in a shorter form is applied, and the process is finished with an instant celebration which can be anything from a simple statement from the person who achieved, up to a cultural endorsement from the company interested in increasing its security levels by developing human shields. The order in which habits are selected to be applied and the scale of them depends on the level of difficulty (ability) for each individual involved. There is no one solution for all behaviours and all individuals. According to this case, we need to adjust the three components in order to find out the balance between them that works best for that individual in order to establish the habit.

In order to stop a habit which is threat enabling, we usually play with the prompt. Finding ways to make it more complicated is the first thing we do. If a threat enabling habit is in the way of a protective one, we start by removing the negative one first before even attempting to start the positive one.

5.7 Set it and forget it – Automation

In the previous stage we removed established threat-enabling habits and built shield-protecting ones.

The question is, are we done?

There is one last step in the process, automation.

Let me demonstrate that with a story.

A few years back in a nuclear reactor facility an accident almost happened. The operator of one of the nuclear reactors saw the temperature rising and the manual handles to drop water and stop it from boiling were not operational. So, he panicked and started running.

The people selected to operate nuclear reactors have extremely high IQs, they go through extensive training to be able to react in extreme conditions and know intellectually many approaches in order to stop the possibility of an accident, and with good reason. However, in this case his training failed. Why?

In reality, the approach followed for his training was excellent in typical scenarios. However, everything we know changes when certain parameters change in our environment so that stress becomes the controlling emotion in our brain. In such a scenario, the lizard part of the brain takes over responsibility and the only way to operate when under stress is at a subconscious level. Even though people who operate important facilities go through different scenarios in emulators and simulators, in reality, there is never a 100% match to a real situation. That man might have had a fight with his wife the previous night, or his baby may have been crying all night and he couldn't sleep, or perhaps a driver might have almost hit him while he was driving to work. The scenarios of what could go wrong are endless, however, it is a fact that once we are stressed, our operating IQ level falls to fifty percent of its original capability and thus even Einstein would act like a monkey. That is why in high stress positions, for example intelligence, military and other governmental security positions, we apply extreme techniques which implant actions and reactions into the insiders' subconscious brain. This approach can apply to insiders in charge of or operating certain assets or resources; which include important and sensitive data. But, what about the remainder of the insiders?

Every day we have a finite amount of cognitive fuel, which is really a fancy word for how many decisions and how much energy it takes to complete the tasks we have to do. But there is a way to hack this mechanism of our brain taking advantage of another part of our brain in order to achieve much more without burning ourselves out. We need to apply a technique which saves us precious cognitive fuel for important tasks while still giving us the result of remaining protected. We can achieve that by putting as much decision making and as many tasks as we can onto autopilot. The reality is that no matter how well we embed security in a company's culture, it is still not the main task of its insiders. The only way to make it possible for it to exist in their lives without overwhelming them is to make it co-exist with their everyday life without interruptions and somehow 'overhead'. Surprisingly, the same technique as when we are stressed.

That is why the "security script" is developed as part of the process. Basically, a security script is a checklist of steps available in a written form, in order for a person to avoid forgetting a process which is newly established. Even though it is used for speed learning in high stake facilities, anyone can leverage this technique. A security script is a blueprint of operations which within a certain period of time and with enough repetition becomes a subconscious habit. You can think about it like driving a car. After a few years, you do not have to think consciously when to change gear or when to hit the brakes. After a while you realize that your mind can drift away without causing an accident because your subconscious mind takes over.

This final step is all about making security effortless and long lasting by engraving it into people's subconscious mind. They will be performing their daily tasks without a security overhead, because it is just a matter of following instructions. They do not consume decision/cognitive fuel, which is valuable for successful people who want to achieve as much as possible and who consider time and energy their most valuable assets.

An effective hack to advance your protection is the drafting of a security script.

6. Conclusions

The human factor is considered the weakest link in security, but is a factor that you can control, and thus with the right methodology and training it can become your biggest ally against attacks.

This is what security strategists do. Establish force multipliers, while creating an unpredictable environment for the perpetrators. Being able to stretch the effectiveness of every factor and participant in the security equation by hacking not only systems and controls effectiveness but the human brain, per se. Create human shields which have the ability to evaluate the threat space and risk like an expert, and feel like it is second nature.

That is what it takes to make security effortless, simple and applicable to people. I said simple, but not easy, because it is simple once you know the brain hacks you can apply.

The thing is that security needs to be actionable. Implementing the methodology provided in this article will be the cornerstone for success. **"Human Shielding™" is the power source and most effective secret behind long-term protection.**

BJ Fogg Ph.D., *Tiny Habits: The Small Changes That Change Everything* (2020): Houghton Mifflin.

Christopher G. Goetz M.D., *Textbook of Clinical Neurology*, (2007): Elsevier.

Milton H. Erickson M.D., *In the Room with Milton H. Erickson, M.D. Volume I, II, III*, Available at: <http://miltonericksondvds.com/transcript-table-of-contents/> (Accessed: 12 March 2015).

Tony Robbins, *The Success Cycle - Tony Robbins Best Motivation for Success 2017*, Available at: <https://youtu.be/53SUD-sFZU> (Accessed: 15 January 2018).

Robert Lamb, *Meet Talos, the Killer Robot From Ancient Greek Mythology*, Available at: <https://history.howstuffworks.com/history-vs-myth/meet-talos-killer-robot-from-ancient-greek-mythology.htm> (Accessed: 7 September 2020).

Tobias van Schneider, 2017, *If you want it, you might get it. The Reticular Activating System explained*, Available at: <https://medium.com/desk-of-van-schneider/if-you-want-it-you-might-get-it-the-reticular-activating-system-explained-761b6ac14e53> (Accessed: 12 September 2020).

Sharon Linde (2016) *Reticular Activating System: Definition & Function*. Study.com, [Online] <https://study.com/academy/lesson/reticular-activating-system-definition-function.html> (Accessed: 7 September 2020).

Margaret Rouse, 2020, *Behaviour-based security*, Available at: <https://whatis.techtarget.com/definition/behaviour-based-security> (Accessed: 12 September 2020).

ENERGY

ARE ECONOMIC CRISES SUBJECT TO THE LAWS OF
PHYSICS RATHER THAN OF ECONOMICS?

CRITICAL REVIEW OF THE EXISTING LITERATURE ON
ECONOPHYSICS AND RELATED STUDIES.

By

Dr Roman Puchkov

Director of Learning, The Cyprus Institute of Marketing

Dr Nataliya Shiraz

Associate Dean for Learning and Teaching, Global Banking School, London, UK

This paper provides academic underpinning in an attempt to explain the causes of global economic crises in the past five decades, usually seen as non-parametric systems, using some of the most fundamental principles of physics and mathematics, as opposed to invented economic laws. These principles may include equations of motion, mass-energy equivalence, and the principles of stationary action and mass conservation, all of which may become crucial in predicting optimal levels of some of what traditionally have been considered as economic variables, including global energy consumption (GEC). The paper argues that economic crises are rooted in excessive energy consumption and should be examined at a higher systems level. There is a vast body of knowledge establishing a correlation between energy consumption and economic growth rate, population growth rate, wealth levels as per capita income indicators (PCI) and broader human development. A critical analysis of the literature relating to the interconnectedness of theoretical physics and stochastic processes in economic development has been carried out to highlight the importance of non-linear dynamics present in these processes. This requires a new dimension in examining erratic economic processes at a global level, to focus on natural sciences and parametric system analysis.

Key terms: global energy consumption (GEC), econophysics, long-cycle theory, input-output model, parametric system analysis of the world economy.

Background

Over the past 50 years the world has faced a number of global economic crises, often resulting in a decrease in global energy consumption (GEC). Two major critical developments associated with oil price shocks occurred in the world due to a decreased oil output in the wake of the Iranian Revolution in 1973 and the 1978 oil crises, when the members of OAPEC proclaimed an oil embargo. The more recent global financial crisis of 2007–2008 is considered by some economic observers to have been the worst financial crisis since the Great Depression of the 1930s (Eigner and Umlauf, 2015), with a substantial slowdown in global energy production and growth. The years of 2014 and 2015 featured economic shocks in Eastern Europe and Central Asia, associated with sanctions imposed by the EU and the USA on Russia. The current global pandemic of 2020 and 2021 is likely to have a long-term effect across a large spectrum of the global economy, including energy consumption.

It is believed that these global economic crises are multifaceted phenomena, seen as a result of numerous external and internal sector specific factors. However, it should be noted that no matter how significant these factors are, they may reflect the developments within an internal system, for example, a world energy consumption system. A world economic crisis is a global phenomenon within the framework of civilisation, and therefore should be considered at a higher system level. Recent developments of the pandemic and consequent global economic crisis, point to the need for much in-depth system analysis of the world economy. Mau and Ulyukaev noted that “... a system crisis is not limited to a recession, increase in unemployment or a panic by bank depositors. It consists of a number of episodes and waves, covering different sectors of the economy, countries and regions” (2014:15).

Therefore, the task of the systematisation of a crisis as a phenomenon is to identify patterns from the totality of episodes, selected sectors (e.g. energy), and national and regional economies that determine the direction of entire global economic systems.

In this article we argue that in order to explain the occurrence of economic crises, one may need to apply the principal laws of physics and operate physical parameters and patterns – motion, general relativity, mass-energy equivalence. It is safe to suggest that the systems where only internal parameters are in operation (for example, national or regional economic systems) are invented and administered by mankind as opposed to being natural forces. These systems, therefore, may be lacking the key principles of system development at a higher level, discovered in the laws of physics. Before drawing a hypothesis to test our assumption, we need to review the existing body of knowledge on the subject.

The key principles of physics may be fundamental to the present research into forecasting optimal levels of GEC, which may be governed by natural systems rather than the economic developments initiated by humankind. The interconnectedness between theoretical physics and economics was first demonstrated in works by Irving Fisher, a ‘modern behavioural economist’, and his neoclassical economic theory (Fisher, 1930; cited in Thaler *et al.*, 1997). That said, there was no indication of the inclusion of any specific foundational principles of physics in economic imperatives in scientific debates at the time.

There was then a 30-year gap in the research before Tinbergen (1962) used an analogy with Newton’s universal law of gravitation to describe the patterns of bilateral aggregate trade flows between two countries. It should be noted that both economists had a background in physics, not economics.

Their research was followed up by Pöyhönen (1963), resulting in the emergence of the gravity model, which was later applied by Linnemann (1966) and is now used by economists to study international trade. The model suggests that the volume of international trade between country A and country B is directly proportional to the product of the economic masses (for example, energy) measured by GDP, and inversely proportional to the distance between them. The significance of distance as a variable has become void in recent decades, due to the ease of transportation and globalisation, however the model remains an apt illustration of how some of the key principles of physics, such as gravity, can and should be used to explain some key economic developments.

There was another pause in research during the 1970s and 1980s, a period which coincided with a tremendous increase in world oil production and globalisation. Later in the 1990s, per capita income indicators (PCI) which are measured by product per capita GDPs or GNPs, have eventually become a standard covariate in the gravity models, as exemplified in the work of Eaton and Tamura (1994). Around the same time, the term ‘econophysics’ evolved to describe the large number of papers written by physicists on problems in economics, usually those including uncertainty or stochastic processes in economic development and nonlinear dynamics (Da Silva and Stanley, 1996). Some of its applications to the study of financial markets and stock markets have been termed ‘statistical finances’, referring to their roots in statistical physics. Some of the most recent work on the application of the gravity model to economics was done by Frankel *et al.* (1997a, 1997b), Rauch (1999), and Rose (2004), among others.

The works of Velikhov (1986; 1965) often feature the notion of the apparent interconnectedness of natural science and economics, challenging the imperfections of economic parameters, if looked at from a perspective of nuclear physics. These studies supported a heterodox interdisciplinary research field, applying the theories and methods originally developed by physicists to solve economic problems. A study by Iberall (1984) attempted to apply a physics of systems (e.g. statistical mechanics, thermodynamics) to civilisations as social constructs, linking complex physical systems to living systems and, more recently, to social systems (known as social physics).

In economics, the long-cycle theory of the world economy was developed by the Russian economist Nikolai Kondratieff. He argued that in major western countries between 1790 and 1916, there were three periods of slow expansion and contraction of economic activity averaging about fifty years in length (1925). “Kondratieff’s waves” can be projected to the present day. These cycles are driven by technical, economic or regional changes which make them of great importance, even if they are more difficult to detect (Cournot, 1927) – something that natural sciences cannot predict.

More than 50 years later Braudel (1982) identified much longer cycles lasting a century or more with peaks in the European economy occurring in 1315, 1650, 1817 and 1973. Relatively shortly after Kondratieff’s publication (1925), Schumpeter (1939) argued that the explanation of the long-wave cycles could be found in technological innovation (steam power, the railway boom, the motor, and electricity), as cited in Stopford (2009: 95-96).

In these studies the notion of physical forces governing the development of long-wave cycles was not discussed. However, an input–output model developed by Leontief in 1936 represents the interdependencies between different sectors of a national economy or different regional economies (Leontief, 1936: 105-125). His work can be probably seen as the first attempt to recognise the complexity of interdependencies between various sectoral parameters at the level of a sub-parametric system within an economy.

The existing body of knowledge on GEC appears to be region, country or sector specific, which poses significant challenges in assessing optimal levels of energy consumption at a global level. Many commentators focus on a particular type of energy (e.g. fossil fuels) as opposed to global consumption, which makes the task of categorising their findings more difficult than would be expected. Corporate data on GEC appears to have been distorted by the profit-driven strategies of global energy producers (BP, for example, publishes annual 'Energy Outlooks'). There are also issues with measuring GEC.

A strong relationship between energy consumption and economic growth, based on the input-output model, can be clearly recognised in the contemporary at both state and international level (Bekhet and Yasmin, 2014; Bekhet, 2013; Bekeht and Abdullah, 2010; Yuan et al., 2010; Rasiah, 2009; Bekhet, 2009). The positive correlation between these variables was particularly apparent with most countries' energy demands declining during the 2008-2009 global financial crisis. However, according to Li *et al.* (2014), this was not the case for some export-oriented economies, including China, where energy consumption continued to increase after the global crisis.

Sas (2016) examined a correlation between energy and industrial competitiveness before and after the 2008 economic crisis, and found that there was a continuous decline in energy consumption before (due to new policy implementation) and after the crisis. Zavada (2008) suggested that the structure of GEC results in the development of particular industries in the economy, citing examples of renewable energy sources in Poland and its energy balance. Ugursal (2014) found a connection between energy consumption, wealth and human development, where population growth in particular was seen as a key variable determining levels of GEC. His findings were confirmed by Gazder (2017) who argued in favour of a constant rise in energy consumption corresponding to the increase in world population. His research concluded this was true only for energy insecure countries (e.g. Pakistan), whereas energy consumption in oil-rich countries (e.g. Saudi Arabia) has been driven by its economic development.

Bilgen (2014) argued that GEC can be more accurately forecast when structured by fuel type (liquid fuels, coal, natural gas, renewables and nuclear) or sector. Energy consumption by the world's globalised economy was explored by Chen (2014), tracking both direct and indirect energy uses based on a systems input-output simulation. This was originally discovered by Leontief in his work cited above (1936), which suggests consistency in the approaches taken by both authors, despite being nearly 80 years apart. Based on a forecast for 2005–2035, Chen (2014) was able to predict China replacing the United States as the world's leading embodied energy consumer by 2027.

The notion of population growth affecting energy consumption is not new in the conventional knowledge of the subject area. In his ground-breaking phenomenological non-linear theory of world population growth, Kapitza (1996) called the phenomenon the most significant quantitative process. He assumed the population growth rate to be proportional to the square of the number of people and saw it as a 'systemic singularity' determined by the inherent pattern of growth of an open system, rather than by the lack of resources (p. 65).

About two decades earlier, von Hoerner (1975) had suggested world population cannot grow infinitely and must reach a maximum, and "physical laws leading to a singularity usually are said to 'break down' shortly before reaching it" (p. 695). This was probably the first indication that failure to keep observable variables (whether population growth or energy consumption levels) within the limits of physical laws would inevitably lead to catastrophes led by 'unbridled and hectic' economic developments.

Korotayev and Markov (2014) looked at economic and demographic growth parameters over the period of the past two millennia – although these are difficult to verify - and highlighted a number of models arguing that world population growth is a hyperbolic function. Nielsen (2016) took this argument to a different level by looking at the spectrum of the past 12000 years and suggesting that, if unchecked, population does not increase exponentially but, indeed, hyperbolically. He identified three approximately-determined episodes of population hyperbolic growth and three demographic 'transitions', with the last one - from 1950s to the present day - developing in an unknown trajectory.

The economy as a system is characterised by a lack of system laws and regulations at the global level. To predict a range of natural phenomena, the most pronounced laws of physics operate, most notably the principle of stationary action and the principle of mass conservation. For example, Newtonian, Lagrangian and Hamiltonian equations of motion, and even general relativity theory (the so-called Einstein–Hilbert action) derived from these principles, which we can attempt to use to predict economic crises. These principles remain central in modern physics and mathematics, and as such can be seen as one of the foundational elements of the natural sciences. We may attempt to use some of these principles to determine and assess an optimal level of GEC as a scope for further research. For example, we can recognise the principle of mass-energy equivalence as significant to calculating energy consumption based on the biological mass of the world's population to define the most optimal level of GEC needed. This will be a subject of further research, to develop a model to predict GEC based on the fundamental principles of physics by considering the economic imperatives of world development. The research could be carried out deductively, by drawing upon the existing key principles of physics to test the hypothesis that global economic processes such as economic crises are rooted in non-parametric systems and linked to the laws of nature, rather than social science.

References

- Bekhet, H. (2009) Assessing economic connectedness degree of the Malaysian economy: input-output model approach. *International Journal of Economics and Finance*, 2, pp. 107–130.
- Bekhet, H. (2013) Assessing structural changes in the Malaysian economy: I–O approach. *Economic Modelling*, 30, pp.126–135.
- Bekhet, H. and Abdullah, A. (2010). Energy use in agriculture sector: input-output analyses. *International Business Research*, 3, 111–121.
- Bekhet, H. and Yasmin, T. (2014) Assessment of the global financial crisis effects on energy consumption and economic growth in Malaysia: An input–output analysis. *International Economics*, 140, pp. 49-70.
- Bilgen, S. (2014) Structure and environmental impact of global energy consumption. *Renewable and Sustainable Energy Review*, 38, pp. 890-902.
- Braudel, F. (1992) *Civilisation and capitalism 15th-18th Century*, Vol 3: The Perspective of the World, Collins.
- Cournot, A. (1927) *Researches into the mathematical principles of the theory of wealth*. New York: Macmillan.
- Da Silva L. and Stanley, H. (1996) Duality-based approximation for the critical point of the square lattice Ising ferromagnet within Tsallis statistics, 234 (1-2), pp. 497-505.
- Eaton, J. and Tamura, A. (1994) Bilateralism and regionalism in Japanese and U.S. trade and direct foreign investment patterns. *Journal of the Japanese and International Economies*, 8 (4) pp. 478-510.
- Eigner, P. and Umlauf, T. S. (2015) The Great Depression(s) of 1929–1933 and 2007–2009? Parallels, differences and policy lessons. Hungarian Academy of Science, MTA-ELTE Crisis History Working Paper No. 2, pp. 5-12.
- Frankel, J. A, E. Stein and Wei, S.-J. (1997a) Trading blocs and the Americas: The natural, the unnatural, and the super-natural. *Journal of Development Economics*, 47 (1), pp. 61-95.
- Frankel, J. A., Stein, E., Wei S.-J. (1997b) *Regional trading blocs in the world economic system*. Washington: Institute for International Economics.
- Gazder, U. (2017) Energy Consumption Trends in Energy Scarce and Rich Countries: Comparative Study for Pakistan and Saudi Arabia. *Proceeding to World Renewable Energy Congress*, 17, 03 December 2016 - 08 December 2016.
- Iberall, A. (1984) Contributions to a physical science for the study of civilization. *Journal of Social and Biological Structures*, 7 (3) pp. 259-283.
- Kapitza, S. (1996) The phenomenological theory of world population growth, *UFN*, 166 (1), pp. 63–80.

- Kondratieff N. D. (1925 [1993]) Long cycles of economic conjuncture. Selected works (in Russ), Ed. by Abalkin, L., pp. 24–83. Moscow: Ekonomika.
- Korotayev, A. and Markov, A. (2014) Mathematical modelling of biological and social phases of big history, *Uchitel*, pp.188-219.
- Leontief, W. (1936) Quantitative input-output relations in the economic system of the United States, *Review of Economic Statistics*, 18, pp. 105–125.
- Li, J., Wang, X., Zhang, Y., Kouc Q. (2014) The economic impact of carbon pricing with regulated electricity prices in China—An application of a computable general equilibrium approach. *Energy Policy*, 75 (12), pp. 46-56.
- Linnemann, H. (1966) An econometric study of international trade flows. *The Economic Journal*, 77 (306) pp. 366-368.
- Mau, V. and Ulyukaev, A. (2014) Global crisis and trends of economic development. *Voprosy Ekonomiki*, 11, pp. 4-24. (In Russ.).
- Nielsen, R. (2016) Growth of the world population in the past 12,000 years and its link to the economic growth. *Journal of Economics*, 3(1), pp. 1-12.
- Pöyhönen, P. (1963) A tentative model for the volume of trade between countries. *Weltwirtschaftliches Archiv*, 90, pp. 93–100.
- Rasiah, R. (2009). Growth and Slowdown in the Electronics Industry in Southeast Asia. *Journal of Asia Pacific Economy*, 14, pp. 123-137.
- Rauch, J. E., (1999), Networks versus markets in international trade. *Journal of International Economics*, 48, pp. 7-35.
- Rose, A.K. (2004) Macroeconomic determinants of international trade. NBER working paper. Cambridge, MA: National Bureau of Economic Research.
- Sas, M. (2016) Analysis of the correlation between energy consumption and industrial competitiveness in the European Union. *SEA - Practical Application of Science*, 11, pp. 253-258.
- Schumpeter, J.A. (1939) *Business cycles: a theoretical, historical and statistical analysis of the capitalist process*. London: McGraw-Hill.
- Stanley, H.E. (2013) Interview on econophysics. *IIM Kozhikode Society and Management Review*, 2 (2) pp.73-78.
- Stopford, M. (2009) *Maritime Economics* (3rd Ed). New York: Routledge.
- Thaler, R.H., Tversky, A., Kahneman, D. and Schwartz, A. (1997) The effect of myopia and loss aversion on risk taking: an experimental test. *The Quarterly Journal of Economics*, 112 (2), pp. 647–661.
- Tinbergen, J. (1962) *Shaping the world economy: suggestions for an international economic policy*. New York: Twentieth Century Fund.
- Ugursal, V. Ismet (2013). Energy consumption, associated questions and some answers. *Applied Energy*, 130, pp. 783-792.
- Velikhov, E. (1965) *Science and humankind*. Moscow: Znanie.
- Velikhov, E. (1979) *The future of science*. *Mezhdunarodnyi Ejegodnik*, 12. Moscow: Znanie.
- Von Hoerner, S. (1975) Population explosion and interstellar expansion. *Journal of the British Interplanetary Society*, 28, pp. 691-712.
- Yuan, C., Liu, S. and Xie, N. (2010) The impact on Chinese economic growth and energy consumption of the Global Financial Crisis: An input–output analysis. *Energy*, 35, pp.1805–1812.

FOOD AND BEVERAGES

THE INTERNATIONALISATION OF THE FOOD MANUFACTURING
INDUSTRY IN THE EMERGING CHINESE FOOD MARKET:

A CASE STUDY OF DAIRY PRODUCERS

By

Yuan Zhai

PhD Research Student, University of Sunderland, UK

Dr Derek Watson

Associate Professor, University of Sunderland, UK

In 2013 the Chinese Government introduced the 'One Belt One Road' strategy. This nationwide strategy was aimed at encouraging Chinese businesses to export globally. China's dairy products and its aspirations to fulfil the One Belt One Road strategy, were hindered due to serious food standards breaches and, in consequence, waning international confidence. This paper examines China's dairy industry strategy for export and identifies key initiatives, historical blocks and what steps are being taken to reinforce and encourage the export of its dairy products. The paper looks at 15 representative food producers, a cross-section of the 15,000 members of the Inner Mongolian Food Federation. These representatives were interviewed, using semi-structured interview questions via thematic analysis. The results reveal that many organisations operate without a recognised international certified food standard and, whilst wanting to export their produce, have mainly focused on their domestic markets. The paper concludes with commercial recommendations to stay local or go global.

Key Words: Culture, Food Safety Systems, Globalisation, Strategy.

Introduction

Since the introduction of China's One Belt One Road (OBOR) initiative – or Belt and Road Initiative (BRI) – the Chinese enterprise sectors have been encouraged to embrace this internationalisation strategy. In support, a series of policies have been adopted by the government to aid and advise enterprises to internationalise and export their products and services (Scullion, 2019). For example, the China-European train was constructed to gain transport efficiencies in terms of speed and capacity, and to fast-track export tax refunds to encourage wider participation.

For dairy enterprises to export their products, they must attain an internationally recognised food safety management certification by third-party food safety certification institutions, to reassure the markets of their adherence to safety and their proposed international supply chain. Whilst there are numerous certification bodies, the British Retail Consortium Global Standard (BRCGS), British Standards Institute (BSI) and Europe's International Food Standard (IFS) in Europe have a firm and expanding foothold in the market. However, due to the long-term commitment of Chinese food enterprises to focus predominantly on their domestic market, few enterprises have identified a business case to pursue the international certification route. As a result, the export of products has been further hindered (Guo et al., 2019).

The challenges to export were further exacerbated in 2018 when the United States (US) government commenced trade disputes against China, with the introduction of tariffs on goods exported from China. This political manoeuvring further agitated political relations between China and the US. Such tensions have broadened in scope, as the US and its political allies, such as Britain, Australia and other countries, have introduced additional policies to restrict the development of Chinese enterprises in their countries. For example, the US forced TikTok to sell its American company, and the British government announced the gradual replacement of Huawei equipment, and Woolworth, Australia's largest retailer, has announced that there will be no more Chinese-made goods in any of its stores. The collective actions have led to a slowdown in China's economic growth (Lester and Zhu, 2020).

In early 2020, the COVID-19 pandemic quickly spread across the globe. In response, countries around the world have implemented lockdown policies to limit social movement which has further restricted China's export market, especially within the food sector. Thus, given such barriers to international trade and growing economic turbulence, should China's dairy enterprises focus on the domestic market or pursue its internationalisation strategy?

Literature review

From 2012 to 2018, China's economic growth slowed to around 7% a year, compared to a previous growth rate of 10% (Chen et al., 2018). The primary reason for this is that the Chinese government was endeavouring to carry out a reform of its economic system, moving its economic development from infrastructural industries, to the service industry and to high-tech industries (Chen et al., 2018). Consequently, China has been seeking to source new markets for its investments, and output routes for its overcapacity of production, with the aim of stimulating its economic growth (Aoyama, 2016).

In order to make the national economy development sustainable, the Chinese government believes an increased level of export of Chinese goods is required. In consequence, China named its strategy as "One Belt, One Road" (Holland and

Scullion, 2019). The Belt and Road supply chain operates through the continents of Asia, Europe, and Africa, connecting the East Asian countries and developing the European economy, thus encompassing countries with a huge potential for economic development (Imomnazar, 2018). The One Belt, One Road strategy concept is considered as an essential driver to forming a diversified trade partnership in China's foreign trade.

Therefore, China's national strategy has shifted from seeking to expand domestic demand to focusing on global exports. This has clearly imposed pressure on Chinese businesses, not just in technology, e.g. Huawei's 4G/5G communication and DJI's drones but, also, in the food manufacturing sector such as seafood, vegetables and dairy products (Jia, 2017).

The Chinese government is specifically encouraging the involvement of small-scale milk producers and is also driving the current national and regional policies aimed at bolstering regional development as well as achieving poverty alleviation (Chen et al., 2019). This has been corroborated by revised policies, particularly those that boost investment in infrastructure and policies focusing on safety procedures in the rearing of animals (Azuyi, 2016). However, it must be emphasised that food safety challenges and breaches are a common occurrence in China. Most notable, was the melamine scandal that occurred in 2008, in which the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ) discovered that China's powdered milk production had been contaminated with melamine, resulting in 52,000 babies being admitted to hospital. Such a serious dairy food safety incident makes consumers lose trust in domestic dairy products (Chen, 2009a, 2009b).

According to the GAIN (2019) report, China's milk consumption in 2017 reached 37.7 million tons, an increase of 2.5% over that of 2018. The growth is mainly from consumers in China's second and third tier cities, such as Hefei, Hohhot, etc. China's per capita milk consumption is about 36 kg/person, 1/3 of the world average level and 1/10 of that of developed countries. With the development of China's economy, consumer preferences have gradually changed from having enough food to developing healthy eating habits, with consumers paying more attention to a healthy diet (Guo et al., 2019). Dairy products, as healthy foods, have received growing attention from consumers. In addition, consumers are increasingly critical of the quality and safety of the dairy products they consume (Jia, 2017). In short, China's consumption of high-quality dairy products seems to have room for substantial growth. Therefore, it will be necessary to improve the competitiveness and quality of dairy products so that consumers have confidence in the safety of dairy products and enterprises are able to win market share.

Chinese consumers are increasingly critical of the quality and safety of the dairy products they consume (GAIN, 2018). Guo et al. (2019) put forward a broad understanding, highlighting the limitations and obstacles of using third-party resources to implement the food regulatory system in China. The biggest difficulty in adopting the third-party food safety management certification is that enterprises need to increase their investment in food safety to meet the certification requirements. However, in the domestic market, there is no mandatory requirement that food enterprises must pass the third-party food safety certification, and enterprises are not required to carry out a third-party food safety certification (Guo et al., 2019). Xiong et al. (2017) explained that enterprise size has a significant impact on the implementation of third-party food regulation or food management systems, especially for developing countries such as China. Tian (2016) described the use of the Hazard Analysis and Critical Control Point (HACCP) system, which defined 38% of the implementation process, and provided positive results for the food regulatory system of China's food industry. Tian (2016) believes that the positive feedback of enterprises on the implementation of the third-party food safety management mode is not high. Although the third-party certification provides recognition for the food safety production of enterprises, because the enterprises that have passed the third-party food safety management certification are all large and medium-sized enterprises. Prior to passing certification, they already had strict food safety management measures, which weakened the advantages of implementing an internationally recognised Food Safety Management System (FSMS) such as British Standards Institute (BSI) and British Retail Consortium Global Standards (BRCGS). From an alternative point of view, Tse et al. (2017) believe that the 19% failure rate determines that the use of third-party certification is inappropriate, and that the Chinese food industry has not seen the expected results.

The failure of quality FSMS is usually attributed to emerging food risks, customs rejections due to safety non-compliance, emerging processing technologies, marketing and distribution difficulties, and other complex factors (Patrick et al., 2017). However, if dairy enterprises want to export their products to European countries, they must receive certification from the British Retail Consortium Global Standard (BRCGS) or the International Food Standard (IFS), to ensure the safety of imported food products (Xiong et al., 2017; Geng et al., 2013).

Despite the historic lack of trust in Chinese dairy products, the sustained development of China's economy, trade and science and technology has put the US, as the world's largest power, under pressure. Lester and Zhu (2020) argue that since 2018, the relevant departments of the US have launched a comprehensive investigation against China and, on the pretext of the survey results, substantially increased tariffs on goods originating in China, covering almost all Chinese

exports. China's total import and export volume in 2018 increased by 9.7% compared to that of 2017 (General Administration of Customs of P.R. China, 2019), but the total import and export volume in 2019 only increased by 3.4% year-on-year (General Administration of Customs of P.R. China, 2020). Hence, we can see that the impact of China and US trade friction on China's trade is significant. Liu (2020) argues the trade friction between China and the US has cast a shadow on the formulation and implementation of the internationalisation strategy of Chinese enterprises.

Methodology

In this study, 15 representatives of dairy production enterprises from 15000 members of the Inner Mongolia Food Federation were interviewed through semi-structured interviews and qualitatively analysed via thematic analysis. A decision was made to group the questions utilising the three factors of internationalisation; (1) Implementation of FSMS; (2) The influence of China and US trade friction on international strategy; (3) The impact of the COVID-19 epidemic on the internationalisation of enterprises. The anecdotal data collected from the research, will also form part of a final report to the Inner Mongolian Food Federation, pointing out the obstacles preventing China's dairy export industry and analysing key issues raised and providing recommendations. The interview responders' information is listed in appendix 1.

Results and discussion

Implementation of food safety management systems

Through interviews with representatives of the food federation, it can be concluded that third-party food safety certifications, such as HACCP and BRC, have been widely recognised by enterprises. This is consistent with the research results of Guo et al. (2019). However, because the Chinese government does not require enterprises to meet the third-party FSMS required by foreign countries, enterprises rarely take the initiative to certify the third-party FSMS. As a result, there are obstacles in the implementation of the third-party food supervision system. In particular, enterprises will try to avoid extra expenses, the conclusion also drawn by Xiong et al. (2017). Xiong et al. (2017) concluded the size of enterprises is the main factor affecting the third-party food safety certification. Only large and medium-sized enterprises will consider committing sufficient funds to invest in the third-party food management system certification. In addition, the respondents also believed that the implementation of the third-party FSMS in enterprises requires management training and credible supervision, otherwise, the effectiveness of the FSMS will be weakened. Many local enterprises lack effective staff training and efficient supervision mechanism. Even if the third-party FSMS is implemented, it cannot maximise its benefits. The above issues are reflected in the following interview statements:

Interviewee C

“Our enterprises have passed some third-party food safety certifications, such as HACCP and BRC and ISO series. However, we feel that when implementing the third-party food safety system, enterprises need to increase investment in staff training and management training. As middle-level leaders of enterprises, we are the most familiar with these food safety certifications, but we feel that higher-level leaders do not know much about the role of these safety certifications for food safety production. The front-line employees don't really understand the meaning of the code of practice they follow. We think that only when all the employees of the company fully understand the regulations on food safety certification and the benefits that can be brought by working according to the regulations, will the effectiveness of third-party food safety certification be maximised.”

Interviewee A

“Our company has hired a business planning team and market strategy team. For the third-party food safety certification, we mainly consider the market and consumer demand for this kind of certification. Our own enterprises have already implemented strict food safety management measures, and even reached the safety level of pharmaceutical production. Food safety

production can already be guaranteed through these measures. If we carry out these third-party certifications, some rules and regulations need to be adjusted and additional investment is needed for improvement and audit, etc. We pay more attention to the return on investment. At present, third-party food safety certification is mainly used when we advertise products to make consumers feel that we have more security than our competitors.”

Interviewee E

“As the department responsible for the market, R&D and investment, we need to consider how to maximise the profits of enterprises, which includes how to lead the competitors. At present, in the dairy industry, the first to bear the brunt is the competition for milk sources. The company that can control more milk sources, then this company has already taken the lead in the competition, because it can also control the cost of milk source, the followed competition is food safety. Domestic consumers are still worried about the melamine incident in 2008. As dairy products are more classified as nutritional products in the Chinese market, infant formula milk powder accounts for a large part of our total sales. The introduction of the third-party food safety management systems, especially the food safety certification systems in the United States, the United States and Europe, such as HACCP, BRC, IFS, etc., can help us to ease consumers’ concerns about the safety of domestic dairy products”.

Interviewee L

“We have been committed to the research on the latest international and domestic food safety standards for a long time, and have also helped many enterprises to transform and upgrade their food safety production compliance. In our experience, all the enterprises that have passed the international third-party food safety certification are large and medium-sized enterprises, because the government has no mandatory requirements for enterprises to obtain third-party food safety certification. In order to save costs, small enterprises will not voluntarily do third-party food safety certification.”

The influence of China-US trade friction on international strategy

Interviews revealed that the trade friction between China and the US has not brought difficulties to the operation of dairy enterprises for the time being, because China’s export volume of dairy products is very small, confirming the findings in the GAIN (2019) report. However, this kind of trade friction has a great impact on the formulation and implementation of enterprise’s internationalisation strategies. At present, China’s large dairy enterprises are currently in the process of international strategic planning. What can best reflect this point is that they have purchased a large number of farms in Australia and New Zealand, so as to obtain imported milk sources. Compared with domestic milk sources, the chemical residues of imported milk sources are less and the price is stable. Domestic milk sources are subject to land pollution and the increasingly strict environmental protection policies of the government, and the prices are rising steadily. Although Australia and New Zealand have not followed the US in adopting trade restrictions on China, it is difficult to guarantee that they will not adopt trade restrictions in the future, due to their close political relations with the US. Similar concerns were raised by Liu (2020) concerning Chinese company’s international strategies. In this study the interviewed dairy enterprises were cautious about exporting their products to European and American countries, mainly because of the uncertain factors in the current world trade environment, such as sudden increases of tariff and additional customs inspections which affect the price and shelf life of products. The above issues are reflected in the following interview statement:

Interviewee D

“In terms of quality control, we found that imported milk sources contain fewer chemical residues than domestic milk sources. The use of imported milk sources can improve our detection efficiency and reduce the possibility of food safety incidents such as food poisoning. Therefore, ensuring the supply of imported high-quality milk sources can help us better ensure the quality of our products.”

Interviewee B

“Our international layout is mainly divided into two parts: the first part is the import of milk sources, and the second part is the export of dairy products. In terms of milk source import, we mainly adopt the way of purchasing overseas pastures and raising dairy cows, and the imported milk sources are mainly concentrated in Australia and New Zealand. The export of dairy products is currently concentrated in Southeast Asia, because Southeast Asian consumers and Chinese consumers have similar eating habits. We do not need to make too many changes to the products before they can be directly sold in the Southeast Asian market. Although at present, no other countries except the United States have issued trade restrictions against China, we have been preventing possible trade friction. Therefore, we are more cautious in the formulation of our internationalisation strategy than before, and have greatly reduced the scale of overseas investment in the future plan.”

Interviewee H

“Our domestic milk source price is the biggest uncertainty factor for our whole enterprise. Due to the government’s requirements of environmental protection and ecological restoration, dairy feed is becoming more and more expensive, which leads to higher and higher feeding costs for dairy cows. The rise of raw material prices leads to the rise of costs, resulting in the lack of competitiveness of China’s dairy products in the international market. Some Southeast Asian countries often artificially extend the customs clearance speed of Chinese goods due to diplomatic friction with China, which greatly affects the shelf life of our products after entering the foreign market.”

The impact of the COVID-19 epidemic on internationalisation of enterprises

According to the above-mentioned interviews, the pandemic has not caused shrinking sales, confirming the findings in GAIN (2020). The quality inspection departments of Chinese dairy enterprises have strengthened virus detection of raw materials to prevent the virus from entering the production and processing chain. In terms of internationalisation, some governments have suggested that people should reduce going out and should work from home, which has caused difficulties for overseas factories. As COVID-19 is still at the pandemic stage, enterprises have chosen to postpone both their advertising in overseas markets and venture investment in expanding factories. The above issues are reflected in the following interview statements:

Interviewee G

“In terms of quality and safety, we have strengthened the detection of the COVID-19 virus in raw materials and employees, so as to ensure that the possibility of the virus entering the food processing chain is cut off from the source. For the raw materials that need to be imported, the General Administration of Customs of China are [sic] responsible for the inspection of the outer packaging, including containers, as well as the sampling and testing of the raw materials themselves. Therefore, our whole supply chain system is very safe and fundamentally prevents the spread of viruses through our products. The COVID-19 virus has not been detected in the products we export. Therefore, our food export has not been affected by food safety.”

Interviewee K

“COVID-19 has had a great impact on the internationalisation of our enterprises. Our overseas [sic] ranches need a large number of workers and Chinese management personnel, but because COVID-19 is still in the pandemic stage, a large reduction in direct flights has led to a surge in travel costs. Some countries suggest that people work at home and go out less. The lack of employees has brought great trouble to the normal production of our overseas factories. The expansion plans of some factories have been delayed beyond their original plans by at least six months.”

“Since the outbreak of COVID-19, the sales volume of dairy products in our domestic market has not decreased but increased. This is mainly because domestic consumers believe that dairy products can help improve their immunity and reduce the risk of being attacked by the virus. In the international market, the products we exported have not been detected as carrying the virus, so the export of goods was carried out normally. However, in terms of the expansion of the international market, due to the varying severity of the epidemic situation in different countries, and the measures adopted by the government to control the epidemic situation, we have postponed most of the international market promotion plans in order to avoid investment risks, including investment in advertisement, negotiation with local agents, etc.”

Conclusion

The results of this study support the opinions of Guo et al. (2019) and Xiong et al. (2017) on the implementation of the third-party FSMS by Chinese enterprises. Enterprise managers are not aware of the food safety benefits brought by the implementation of the third-party food safety system, because of the lack of effective and systematic staff training. Most enterprises give up the implementation of third-party FSMS due to enterprise operation costs, which is consistent with the research results of Tian (2016).

Trade friction between China and the US has made enterprises more cautious in import, export and overseas investment. Chinese dairy enterprises are cautious that more countries will be involved in trade frictions in the future, which will increase the variables of other countries' trade policies on Chinese goods, and bring the risk of tariff increase and customs inspection delays for import and export goods. Therefore, the management of enterprises intend to adjust the internationalisation policy and temporarily reduce and/or postpone overseas investment.

Surprisingly, the COVID-19 epidemic has not affected the domestic market sales of dairy enterprises, but has been limited by the different policies of other countries to deal with the epidemic situation, and the internationalisation process of enterprises has therefore slowed down. Through investigation and analysis, the double effect of trade friction and the COVID-19 pandemic the internationalisation process of Chinese dairy enterprises will be seriously restricted, which makes Chinese dairy enterprises inactive in introducing international third-party food safety certification.

Finally, the current research has limitations and needs further investigation. The data only represents the opinions of enterprise managers. Ideally, future research should try to include the opinions of government departments, such as the Food and Drug Administration and the Bureau of Commerce, so as to have a clearer understanding of the government's support for the internationalisation of enterprises and its judgment on the evolving international trade tensions.

- Aoyama, R. (2016). "One Belt, One Road": China's New Global Strategy. *J. Contemp. East Asia Stud.* AQSIQ, 2008, Infant formula Milk Powder Melamine special inspection report, 5, 3 – 22.
- Azuayi, R., (2016). Internationalisation Strategies for Global Companies: A Case Study of Arla Foods, Denmark. *J Account Mark*, 5, 191.
- Chen S. C., Hou J., and Xiao D., (2018). "One Belt, One Road" Initiative to Stimulate Trade in China: A Counter-Factual Analysis. *Journal of Sustainability*, 10, 32 - 42.
- Chen, J. S. (2009a). What can we learn from the 2008 melamine crisis in China? *Biomedical and Environmental Sciences*, 22(2), 109-111.
- Chen, J. S. (2009b). A worldwide food safety concern in 2008 melamine-contaminated infant formula in China caused urinary tract stones in 290,000 children in China. *Chinese Medical Journal*, 122 (3), 243-244.
- GAIN, 2018, China - Peoples Republic of, Fluid Milk Consumption Continues to Increase Dairy and Products Semi-annual. USDA Foreign Agricultural Service. Page 3.
- GAIN, 2019, China - Peoples Republic of, Dairy and Products Semi-annual Higher Profits Support Increased Fluid Milk Production. USDA Foreign Agricultural Service. Page 4.
- GAIN, (2020). Dairy and Products Semi-annual, USDA Foreign Agricultural Service, Report Number: CH2020-0063, 1-11.
- General Administration of Customs of P.R. China, (2019). People's daily (Overseas Edition): in 2018, the total import and export value exceeded 30 trillion yuan, and China's foreign trade once again led the world.
- General Administration of Customs of P.R. China, (2020). Press conference of the General Administration of Customs on import and export in 2019.
- Geng W., Trienekens H.J., and Wubben E.F.M., (2013). Improving Food Safety within China's Dairy Chain: Key Issues of Compliance with QA Standards, *Int. J. Food System Dynamics* 4 (2), 117-129.
- Guo, Z., Bai, L. and Gong, S., (2019). Government regulations and voluntary certifications in food safety in China: A review. *Trends in Food Science & Technology*.
- Imomnazar I., (2018). Impact of «One Belt, One Road» initiatives to the economy of Central Asian countries, *International Journal of Business and Economic Development*, 6 (2), 29-36.
- Holland, D. and Scullion, H., (2019). Towards a talent retention model: mapping the building blocks of the psychological contract to the three stages of the acquisition process. *The International Journal of Human Resource Management*, 1-46.
- Jia G., (2017). How to avoid the "Belt and Road" and "AIIB" evolving into a world for foreign investment, available at: <http://www.wywxwk.com/Article/jingji/2017/05/379528.html>.
- Lester S, Zhu H., (2020). The U.S.-China Trade War: Is There an End in Sight. *Cato Journal*; 40(1), 15-26.
- Liu K., (2020). China's Policy Response to the China US Trade War: An Initial Assessment. *Chinese Economy*. 53(2): 158-176.
- Patrick M. K. N., Opiyo B., Wangoh J., Wambui J., (2017). Scale of production and implementation of food safety programs, *Food Control*, 85, 85-97.
- Tian F., (2016). June. An agri-food supply chain traceability system for China based on RFID & blockchain technology. In 2016 13th international conference on service systems and service management (ICSSSM), IEEE. 1 – 6.
- Tse, D., Zhang, B., Yang, Y., Cheng, C. and Mu, H., (2017). December. Blockchain application in food supply information security. In 2017 IEEE International Conference on Industrial Engineering and Engineering Management IEEM. 1357 – 1361.
- Xiong, C., Liu, C., Chen, F. and Zheng, L., (2017). Performance assessment of food safety management system in the pork slaughter plants of China. *Food control*, 71, 264-272.

Note: P.R. China: People's Republic of China.

Appendix 1

Information regarding the interview responders:

Responder's code	Industry type	Job title	Years of current employee	Years of working in food industry
A	Dairy	Director of Strategic Planning	5	15
B	Dairy	CEO	13	20
C	Dairy	QC Manager	6	10
D	Dairy	QC Manager	8	10
E	Dairy	Marketing Manager	6	8
F	Dairy	CEO	10	25
G	Dairy	QC Manager	6	7
H	Dairy	Investment Manager	10	10
I	Dairy	R & D Manager	6	15
J	Dairy	QC Manager	8	8
K	Food Federation	Chief Secretary	5	5
L	Food Federation	QC Expert	4	20
M	Food Federation	President	5	10
N	Food Federation	Marketing Manager	3	6
O	Food Federation	QC Expert	3	15

HUMAN RESOURCE MANAGEMENT

AN INVESTIGATION INTO EMPLOYEE ENGAGEMENT IN THE PRIVATE SECTOR IN CYPRUS.

By

Ioanna Gleni

Data Protection Officer and End User Support Coordinator of SCF Management Services (Cyprus) Ltd

Dr Katerina Pavlou

Academic Director of the Cyprus Institute of Marketing (Limassol Campus)

Employee engagement is a very wide notion that touches on most facets of human resource management. The concept of employee engagement is built on the basis of different concepts, such as job satisfaction, organisational citizenship and employee commitment (Solomon and Sandhya, 2010). Managers agree that in the twenty-first century there is an ever greater need for more efficiency and productivity than ever before. Businesses are striving to increase their organisation's overall performance, while dealing with many challenges that they need to overcome to put their organisation ahead of their competitors. The main aim of the study was to identify potential differences in engagement levels between two hierarchical levels of employees, support and management.

The research sample was composed of 160 employees who were permanent residents of Cyprus and were employed in private sector organisations. Employees were recruited from different backgrounds, industries and hierarchy levels. Questionnaires consisting of close-ended questions were used to measure employee engagement levels. An independent samples t-test was performed to assess engagement differences between the two levels of employees. The findings revealed a statistically significant difference in engagement between support and management level employees. Specifically, management level employees were found to be more engaged than support level employees. These findings provide useful insights for the management of private sector organisations that seek to enhance engagement among their employees by adopting effective human resource practices that can ultimately lead to organisational competitiveness and increased performance.

Key words: Employee Engagement; Private Sector Organisation; Hierarchy Levels; Management Level; Support Level.

Introduction

In recent years, businesses have needed to continuously develop in a global environment which has become more and more complex, competitive and volatile with each passing day. Many different factors, such as innovation, technology, globalisation, diversifying markets and the complications of the political and social environment, can be considered equally as threats or opportunities for companies. Taking into consideration this competitive environment, businesses should give greater importance to enhancing their human resources. Human resource has a significant and strategic role for the well-being of organisations. Employees are the most strategic instruments for competitive companies (Oraman et al., 2011). The loss of human resources generates high costs for companies, that must devote time and resources to repeating the procedure of hiring and training new employees all over again (Adkins, 2015).

The concept of employee engagement has turned into a particularly popular concept in the sphere of human resource management over the last decade. Research reveals that organisations with engaged employees are financially healthier, which indicates that engagement and organisational performance are closely correlated (Perrin, 2008).

Employee engagement is one of the aspects in human resources which many academics have attempted to define, but there is still currently no single or universally preferred definition because of its multifaceted nature. The Chartered Institute of Personnel and Development (CIPD) (2012) supports the notion that engagement is "an umbrella concept" for capturing the different means by which employers trigger the willingness of employees to work beyond contract. However, as stated by Nohria et al. (2008), what motivates human beings seems like "a centuries-old puzzle".

Albeit limited, a few studies (Hackbarth et al., 2016; Adkins, 2015; Solis and Lavoy, 2015) have suggested a difference in engagement levels between support and management level employees. To date, however, no research has been conducted to examine such differences in the working population in Cyprus. By examining the level of employee engagement between support and management level employees, the study is designed to provide beneficial insights for the management of private sector organisations, with the purpose of taking corrective action and formulating or improving the strategies that could help them attract, engage and retain talent.

The aim of the present study was to investigate the current levels of employee engagement in private organisations in Cyprus, and to examine potential differences in the engagement levels between management level and support level

employees. In this regard, the study explored the following research questions:

- What are the current levels of employee engagement for management level and support level employees?
- Is there a difference in engagement levels between the different hierarchy levels of employees?

Based on the existing literature, it was predicted that the level of engagement of support level employees will be significantly lower than the engagement level of management level employees.

Literature Review

Definition of Engagement – Traditional and Modern Theories of Engagement

As defined by Shuck and Wollard (2009), employee engagement is an “emergent working condition and a positive cognitive, emotional and behavioural state directed toward organisational outcomes”. Another definition suggests that engagement is the readiness of employees to use their skills to help their organisation’s success by being flexible in different situations (Perrin, 2003). Similarly, Robinson et al. (2004) emphasised that employee engagement “...is a positive attitude held by the employee towards the organisation and its values”. Employee engagement is about the emotional commitment of the employee towards the organisation and its goals. Engaged employees are fully involved, willing to go the extra mile for the success of the organisation and are enthusiastic about their work.

The benefits of employee engagement have been widely accepted. However, highly engaged employees are more at risk of developing high levels of stress, which can lead to job burnout (Vitaud, 2018). A recent study from Yale University (Moeller et al., 2018) found that one in five highly engaged employees were at serious risk of burnout. Job burnout is defined “as a state of exhaustion in which an individual is cynical about occupational values and doubtful about his or her performance abilities” (Maslach and Schaufeli, 1993). In the literature, there are mainly two approaches towards employee engagement and job burnout. The first approach suggests that the two variables are opposite; employee engagement is the positive extreme whilst job burnout is the negative extreme (Maslach et al., 2001). However, the second approach suggests that the two variables are not necessarily opposites, since employees suffering from job burnout can also have high levels of engagement. This group of employees could be called an “engaged-exhausted” group (Seppala and Moeller, 2018).

A recent global study of more than 2,700 employees, performed by Harvard Business Review across more than 10 industries, revealed that there is a mental health crisis emerging as a result of the sudden shift to working from home and periods of quarantine. More specifically, 75 percent of employees feel more socially isolated, 67 percent of employees report feeling more stressed, 57 percent suffer from greater anxiety, and 53 percent of employees have felt more exhausted since the outbreak of the pandemic. These results are alarming, as it is evident that Covid-19 has had a negative impact on employees’ engagement (Smith, 2020).

Engagement is not a one-way relationship, but represents the mutual agreement between the employer and the employee. According to the social exchange theory, employees will engage themselves up to a certain limit as a response to the resources they have received from their company (Saks, 2006). To achieve engagement, managers need to stop demanding more from employees. Engagement is mostly about a work environment that promotes data flow and sharing, offers opportunities to learn and promotes a balance between work and life (Macey et al., 2009). Studying employee engagement is important as it is found to be related to a series of business success factors such as employee performance, productivity, efficiency, attendance, customer satisfaction, profitability and retention (Brownlee, 2019).

For a long time there was the perception that the fundamental interest of employees was a high salary and benefits (Taylor, 1914). However, academics have found that there are also other job characteristics in general, not merely remuneration, which influence employee engagement. Organisational behaviour commentators suggest that another equally important factor for engagement is matching the right employee to the right job (Kristof-Brown et al., 2005). Armstrong (2009) supported the view that successful organisations must have the capacity to hold onto a unique and skilful workforce. Matching the right employee to the right job is crucial because it determines whether or not the employee is suitable for a particular job (Zheng et al., 2010), and whether or not the employee will be productive and committed to the organisation (Rousseau and McLean Parks, 1992).

Further, Mayo (1945), who founded the human relation movement, stated that performance and engagement of employees are interrelated with job characteristics and the social environment. The author supported the notion that there is

an emotional dimension in work which influences employee's motivation and engagement. Maslow's approach is slightly different (1971). He determined a hierarchical approach to human motivation with his pyramid of a 'Hierarchy of Needs', such as psychological needs, safety, love, esteem, and self-actualization (Kenrick et al., 2010). Maslow stated that individual needs that are at the foundation of the pyramid are the more basic needs and must be met first, before progressing on to meet higher level growth needs.

Other motivational theories followed which were largely based on The Maslow model. Atkinson's (1964) theory of achievement states that human beings can be motivated only if their needs are satisfied and he classified those needs in four main categories: the need to succeed, the need of belongingness to a group, the need of autonomy and the need of power. From a different perspective, the concept of scientific management defined by Taylor (1914) proved to be very revolutionary for that time by suggesting ideas such as training and the implementation of best practices to improve productivity. Taylor's scientific management concept suggests that management must have dualistic objectives, in the sense that the maximisation of prosperity for both employers and employees are equally important, and one cannot exist without the other in the long term. In contrast to Mayo's and Maslow's theories, the scientific management theory states that the real motivation for both employees and employers is the same, 'prosperity'.

The self-determination theory of Deci and Ryan (1985) suggests that people become self-determined when their needs for competence and autonomy are satisfied. The most important assumption of this theory is that people's need for growth drives their behaviour, and while people are often motivated to do something by external rewards, such as money, the self-determination theory focuses mainly on internal sources that motivate people, such as the need to advance their knowledge or independence (Cherry, 2019). The theory analyses different types of motivation but gives specific attention to intrinsic and extrinsic motivation. Intrinsic motivation is about engaging in an activity or behaviour that is pleasant and rewarding in itself, whereas extrinsic motivation results from engaging in an activity or behaviour not because it is satisfying, but because of the expectation that it will lead to a distinguishable outcome or reward (Deci and Ryan, 2000). Human beings are by their nature curious and creative, but this natural tendency stems from their knowledge and skills, and this suggests that people are not intrinsically motivated by the same things (Deci and Ryan, 2000).

A sub-theory of the self-determination theory related to intrinsic motivation developed by Deci and Ryan (1985) is the Cognitive Evaluation theory. This considers the social variables that determine intrinsic motivation and emphasises the need of people to acquire autonomy and competence (Deci and Ryan, 2000). However, extrinsic motivation is also an important factor of engagement. According to Deci and Ryan (2000), people sometimes have the tendency to act without intrinsic motivation, doing the same tasks through extrinsic motivation, but with different objectives and autonomy.

Work by Skinner (1953) underlines the view that the behavior of some people is motivated by the expectation of receiving something in exchange, a reward. However, every organisation's reward strategy is different and there is no standard or perfect rewards practice (Armstrong, 2007). Skinner's view aligns with that of Nohria et. al. (2008) who suggest that a reward system is a very important part of organisational levels of motivation. The reward can be financial or even verbal (Deci et al., 1999). In support of reward theories, Rynes et al. (2004) found that employees consider salary as the first motivator at work. These findings, however, contradict Belli (2017) who argued that 81 percent of parents care more about work-life balance than remuneration. Additionally, Kovach's (1995) study showed that employees classified interesting work as the most important attribute, whilst good pay ranked fifth. Interestingly, when managers were asked what they thought their employees valued most, good wages came first and interesting work was in fifth place.

The Importance of Engagement

Researchers have identified multiple benefits of employee engagement for organisations. Highly engaged employees offer a high level of customer care and generate higher profits (Brownlee, 2019; Perrin, 2008). However, a Gallup study (2013) showed that two out of three employees feel that their work is not recognised and only 13 percent of employees are engaged globally, with this percentage being the lowest that it has ever been. In the USA, it is estimated that \$450 to \$550 billion are lost on an annual basis due to employee disengagement. Additionally, the Conference Board survey (2005) found that two-thirds of employees do not feel motivated to respond to the business goals that their employers set for them, 40 percent do not feel connected to their employers and 25 percent report that the only reason for going to their job is to collect a pay check. According to Perrin (2008), disengagement is the cause of numerous problems, such as lack of commitment to the targets of the organisation, absenteeism, bad performance, low trust, low customer satisfaction and financial problems.

In 2006, a ground-breaking global survey of 664,000 employees was conducted by the Society for Human Resource Management (SHRM) on employee engagement. The survey revealed that there was a differential of 52 percent for increased operational income between the organisations who had poorly engaged employees and those having employees who were highly engaged (Fegley, 2006). Similarly, another survey that took place in 2006 and surveyed 7939 business units in 38 countries, revealed that customer satisfaction, lower turnover, less work mishaps and profitability were due to a more highly satisfied and engaged staff (Nowack, 2006). Engaged employees serve customers better and contribute more to the ongoing profitability of an organisation.

Organisations with engaged employees are financially healthier, which shows that there is a close correlation between engagement and growth revenue, increase of share prices and customer satisfaction (Perrin, 2008). Employees want to be an active part of the solution, to create a better workplace and act in the best interests of the organisation. Perrin's (2008) study found that organisations with the highest average employee engagement results had a higher yearly income (14 percent versus 4 percent), and annual growth in earnings per company's share (28 percent versus 11 percent) than low engagement companies.

Evidence suggests that employee engagement increases overall performance and productivity, creates a more productive work environment, reduces absenteeism and turnover rates, and it is not surprising that high-performing companies are giving great emphasis to employee engagement by making efforts to promote it (Brownlee, 2019). Moreover, by improving employee engagement, companies are also addressing the issue of employee turnover. Turnover is not only costly for an organisation, but also, when an organisation's best people leave it usually creates a domino effect. Alfes et al. (2010) suggested that engaged people have a higher level of performance, are more innovative and there is a higher possibility that they will remain in their current employment.

Hierarchical Level and Engagement

According to the report of Hackbarth et al. (2016) for Quantum Workplace, during 2015 employee engagement remained flat followed by a slight year-over-year decline. The study looked into many different factors which affect engagement, such as age, level of education, demographic location, and also growth opportunities which turned out to be the number one driver of engagement for new employees. Besides the above factors, experience and position level was also investigated and the research revealed that engagement becomes greater when employees move up to higher-level positions in the organisation, with support level employees feeling 63 percent engaged and around 90 percent of executives feeling engaged, a 27-percentage point difference, which is remarkable. The position-level factor appeared to be the biggest divide in engagement levels across all demographics with six or more percentage points separating each group.

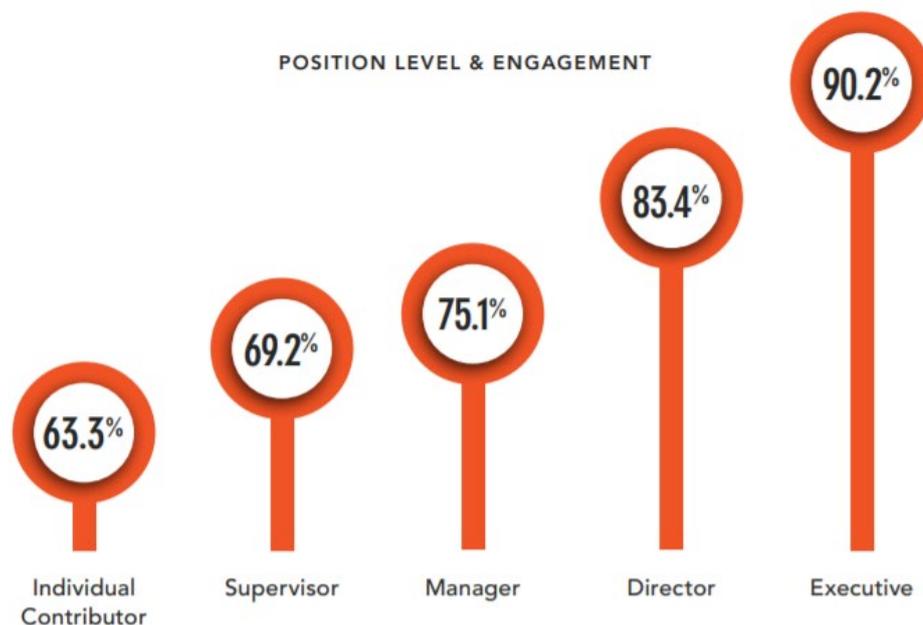


Figure 1: Position Level. Higher Ups Experience Higher Engagement (Quantum Workplace, 2016).

Additionally, it was found that interesting and challenging careers were more likely to drive engagement among managers and supervisors than any other position level. Specifically, supervisors and managers ranked interesting and challenging careers as the eighth highest driver of engagement.

A smaller effect was observed in a similar study by Gallup (Adkins, 2015). The results of the study showed that only around 30 percent of support level employees feel engaged, while the percentage of engagement for managers was 35 percent, 51 percent were not engaged, and 14 percent actively disengaged. Thus, we observe a five percentage point difference between engagement of support and management level employees. The Gallup (Adkins, 2015) estimates that the “non-engaged” group of workers costs the United States \$77 to \$96 billion on an annual basis, but the most worrisome factor is that the figures of “actively disengaged” workers jump to between \$319 and \$398 billion on an annual basis (Adkins, 2015). One of the managers’ greatest tasks is engaging employees, but 51 percent of managers do not care much, if at all, about their company or job, and the engagement of managers has a direct influence on their employees’ engagement. Adkins (2015) indicates that employees who are supervised by managers who are highly engaged are 59 percent more likely to be engaged than those supervised by disengaged managers.

A study by Solis and Lavoy (2015) investigated the engagement gap between employees and executives, and showed that employees at different hierarchical levels had different views about engagement and the ways it can be improved. However, in contrast to the Gallup study, 99 percent of executives reported that employees and the level of their engagement have a crucial impact on the success of the company. Moreover, the study showed that the belief of the employees that their work mattered had the most dramatic impact on engagement figures. Finally, the researchers examined how engagement programmes influence the engagement levels of employees and executives. Engagement levels of both employees and executives were tested - with and without engagement programmes - and the results in both cases suggested that executives were slightly more engaged compared to support employees.

The reports from Quantum, Gallup and Brian Solis and the Jostle Corporation are clear evidence that employee engagement levels have been in decline year-over-year, and that engagement becomes greater when employees move up to higher-level positions in the organisation. In addition, supervisors appear to have a catalytic role in fostering the engagement of employees.

Method

Participants

A total of 160 employees who are permanent residents of Cyprus took part in this study. The research targeted employees from a variety of business industries (e.g. shipping, corporate, legal, private education, accounting, retail trade and other industries). Participants were between the ages of 18 and 65 years old and with less than a year up to more than 20 years of service. The sample consisted of an equal number of responders from management and support level employees (80 employees in each group).

Materials

To measure employee engagement, questions were adapted from Preetinder (2012), Hughes (2013) and Boerrigter (2017). The first part of the questionnaire consisted of the demographic questions that aimed to identify participant’s gender, age group, industry, years of service and the level of hierarchy (management level and support level employees). The second part of the questionnaire comprised thirty-five statements that measured the level of engagement of management level employees and support level employees. Engagement was measured on a 5-point Likert scale ranging from “Strongly Agree” to “Strongly Disagree”. Cronbach’s Alpha coefficient (0.9) indicated a very good internal consistency for this instrument.

SPSS was used for the statistical analysis of the data. Descriptive statistics (frequencies and means) were used to describe the main characteristics of the sample and to calculate mean engagement levels for each group (management level and support level). To test the hypothesis that engagement levels will differ significantly between the two groups, an independent samples *t*-test was performed.

Results

Demographics

The descriptive statistics of respondents indicated that males accounted for 56.9% of total responses while females represented 43.1%. It was also found that 5% of the respondents belonged in the age group of 18-25, 54.4% fell in the age group of 26-35, 23.1% were between 36 and 45 years old, 15.6% belonged to the age group of 46-55, and 1.9% were 56 years old or above. The demographic results indicated that out of the 160 participants 26.9% had been working in their current company less than two years, 26.3% had been working for a period between 3-5 years, 23.1% had been working for a period between 6-10 years, 9.4% had been working for their organisation for a period between 11 to 15 years, 3.7% had been working for a period between 16 to 20 years, and 10.6% had been working to their companies for more than 20 years. The total number of participants' responses was 160 employees, consisting of equal number of responses from management level employees and support level employees.

Employee Engagement and Hierarchical Position

It was hypothesised that the level of engagement of support level employees will be significantly lower than the engagement level of management level employees. An independent samples *t*-test was conducted to compare engagement level of management level employees and support level employees. The results showed a significant difference in engagement levels between support level employees ($M=124.06$, $SD=17.7$) and management level employees ($M=130.2$, $SD=20.3$); $t(157) = -2.06$, $p = 0.041$ (See table 1). These results suggest that hierarchical position has an effect on employee engagement level.

Table 1. *t*-test Results Comparing Support and Management Level Employees on Engagement Level.

Hierarchical Level	n	Mean	SD	t-test	df	p
Support Level	80	124.06	17.76	-2.06	157	.041
Management Level	80	130.29	20.31			

Discussion and Conclusions

The study aimed to examine the current levels of employee engagement at management and support level, and to identify potential differences in engagement levels between the two hierarchical levels of employees. The findings indicated that the scores of the two groups present a significant difference. The engagement of support level employees is significantly lower compared to the engagement of management level employees. However, the overall engagement score of each of the two groups is above average. These findings are statistically significant as they reflect the engagement of

two major hierarchical levels in private sector organisations in Cyprus, but they also reflect the working culture of these organisations.

The results show that there is a need for action to improve the level of engagement of support level employees. Employee engagement is a key driver of organisational efficiency and success. Engaged employees are energetic and feel connected to their job, and they are better equipped to deal with the demands of their job (Schaufeli et al., 2006). Thus, it is very important for organisations to implement new strategies in order to improve work engagement. Evidence shows that improvement of engagement can be achieved by adopting certain workplace behaviour practices which are based on communication, job design, job support, working conditions, culture and leadership style (Attridge, 2009).

In anticipation of the challenges of the forthcoming years, organisations must achieve a higher degree of employee engagement in order to gain competitive advantage over competitors by enhancing their organisational performance and profitability (Halm, 2011). MacLeod and Clarke's (2009) research established that the role of management was very important in fostering engagement by giving clear purpose and respecting employees' efforts and contributions in a way that they feel valued and supported in doing their job. In addition, the CIPD report (2012) suggested that communication from management constitutes one of the most critical incentives of employee engagement. The CIPD states that information about the status of the corporation and the managers' dedication to the corporation were essential drivers. The need to have effective internal communication of the organisational strategy and goals is of vital importance. Evidence suggests that effective internal communication is a prerequisite for organisational success (Ruck and Welch, 2012). There are also a few authors who even suggest that employees should be treated as internal customers (Mishra et al., 2014).

Positive enforcement of work engagement practices should be incorporated into the culture of private sector organisations. Daily tasks can be turned into opportunities for employee engagement (Learner, 2011). As per Davila and Pina-Ramirez (2014), the foundation of employee engagement is, amongst other things, trust, respect and performance. One of the most important mechanisms for creating employee engagement is defining the employee's role in fulfilling of the organisation's goals, selecting capable employees who also have passion for work, supporting and valuing the employee, creating sustainable reward systems and developing feedback and reinforcement mechanisms (Halm, 2011).

This study provides some significant findings. However, there are some limitations which must be acknowledged and would offer opportunities for further research. The first limitation is the geographical limitation. This research was mainly focused in the city of Limassol, thus, a convenience sampling technique was used. This does not allow for everyone in the population to have an equal chance of being selected, since it is a non-probability sampling technique. In addition, there are more companies operating in Cyprus, which could have been selected. The sample of the research was only a part of the total number of companies operating in Cyprus and as a consequence, the results of this study cannot be generalised.

Another potential limitation is that around 54 percent of the participants belong to the group of 26-35 years old. Additionally, this age group along with the age group of 36-45 constitute 71 percent of the participants which means that the sample of this survey mainly constituted younger employees, and this may have possibly affected the results in some ways. As per the Quantum Workplace research (Hackbarth et al., 2016), for three years in a row employees 66 years old and older were the most engaged at 77.3 percent, followed by the employees aged 56 to 65, with 71.8 percent engaged. Nearly 10 percentage points behind baby boomers, employees between 26 and 35 years old were the least engaged at 67.3 percent. The correlation of age and engagement leads to the conclusion that the young employees below the age of 25 were engaged when entering the workforce, but as employees got older, engagement dipped before rising again. The fact that the majority of the participants were part of the 'least engaged' age group of 26 to 35 year olds may have also affected the results.

This research was conducted in a specific geographic area. Thus, it would be very interesting to replicate this research by broadening the investigation to other geographic areas where more employees from the population will have equal chances to be selected in order to obtain a wider generalisation of the study. Finally, it would be very interesting to recreate the study by combining more than one method of data collection, such as surveys and in-depth interviews, to gain a better understanding of employees' thoughts, concepts or experiences on the subject of employee engagement.

- Adkins, A. (2015). Only 35 percent of U.S. Managers Are Engaged in Their Jobs. *Gallup*. [Online] Available at: <https://www.gallup.com/workplace/236552/managers-engaged-jobs.aspx> [Accessed 12 April 2020].
- Alfes, K., Truss, C., Soane, E., Rees, C. and Gatenby, M. (2010). *Creating An Engaged Workforce*. London: CIPD.
- Armstrong, M. (2007). *A Handbook of Employee Reward Management and Practice*. 2nd ed. Glasgow: Kogan Page.
- Armstrong, M. (2009). *Armstrong's Handbook of Human Resource Management Practice*. 11th ed. London: Kogan Page.
- Atkinson, J. W. (1964). *An Introduction to Motivation*. 1st ed. New York: Van Nostrand.
- Attridge, M. (2009). Measuring and Managing Employee Work Engagement: A Review of the Research and Business Literature. *Journal of Workplace Behavioral Health*. 24(4), pp. 383-398.
- Bardwick, J. M. (2007). *The Psychological Recession: Why Your People Don't Seem All That Excited About Coming to Work These Days*. New York City: The Conference Board.
- Belli, G. (2017). 81 Per Cent of Parents Say Work-Life Balance is More Important Than Salary. *Payscale*. [Online] Available at: <https://www.payscale.com/career-news/2017/10/81-percent-of-parents-say-work-life-balance-is-more-important-than-salary> [Accessed 8 September 2020].
- Boerrigter, C. M. M. (2017). *What Makes Employees Highly Engaged and Performing? Leaders' Emotional Intelligence, Service Climate and Psychological Capital*. Enschede: University of Twente.
- Brownlee, D. (2019). How The 'Best Companies To Work For' Engage Employees and Retain Top Talent. *Forbes*. [Online] Available at: <https://www.forbes.com/sites/danabrownlee/2019/09/04/how-the-best-companies-to-work-for-engage-employees-and-retain-top-talent/#1a4519471eca> [Accessed 12 April 2020].
- Cherry, K. (2019). Self-Determination Theory and Motivation. *Verywellmind*. [Online] Available at: <https://www.verywellmind.com/what-is-self-determination-theory-2795387> [Accessed 11 September 2020].
- CIPD (2012). *Where Has All The Trust Gone?* London: CIPD.
- Davila, N. and Pina-Ramirez, W. (2014). What Drives Employee Engagement? It's All About the 'I' Public Manager. *Public Manager*. 43(1), pp. 6-9.
- Deci, E. L. and Ryan, R. M. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*. 25(1), pp. 54-67.
- Deci, E. L., Koestner, R. and Ryan, R. M. (1999). A Meta-Analytic Review of Experiment Examining the Effects of Extrinsic Rewards on Intrinsic Motivation. *Psychological Bulletin*. 125(6), pp. 627-668.
- Deci, E. L. and Ryan, R. M. (1985). *Intrinsic Motivation and Self-determination in Human Behavior*. 1st ed. New York: Plenum.
- Fegley, S. (2006). *Strategic HR Management*. Alexandria: Society for Human Resource Management (SHRM).
- Gallup (2013). *State of the Global Workplace: Employee Engagement Insights for Business Leaders Worldwide*. Washington DC: Gallup.
- Hackbarth, N., Harris, D. and Wright, H. (2016). *Employee Engagement Trends*. Omaha: Quantum Workplace.
- Halm, B. (2011). Employee Engagement: A Prescription for Organisational Transformation. *Advances in Healthcare Management*. 10 (1), pp. 77-96.
- Hughes, K. (2013). *An Investigation Into Employee Engagement in Ireland's Food Service Industry*. Dublin: National College of Ireland.

- Kenrick, D. T., Griskevicius, V., Neuberg, S. L. and Schaller, M. (2010). Renovating the Pyramid of Needs: Contemporary Extensions Built Upon Ancient Foundations. *Perspectives on Psychological Science*. 5(3), pp. 292-314.
- Kovach, K. A. (1995). Employee Motivation: Addressing a Crucial Factor in Your Organisation's Performance. *Employment Relations Today*. 22(2), pp. 93-107.
- Kristof-Brown, A., Zimmerman, R. and Johnson, E. (2005). Consequences of Individuals' Fit at Work: A Meta-analysis of Person-job, Person-organisation, Person-group, and Person-supervisor Fit. *Personnel Psychology*. 58(2), pp. 281-342.
- Learner, M. (2011). Turn Everyday Tasks Into Employee Engagement Opportunities. *Radiology Management*. 33(6), p. 16.
- Macey, W. H., Schneider, B., Barbera, K. M. and Young, S. A. (2009). *Employee Engagement*. 1st ed. Malden: Wiley-Blackwell.
- MacLeod, D. and Clarke, N. (2009). *Engaging for Success: Enhancing Performance Through Employee Engagement*. London: Department for Business Innovation and Skills.
- Maslach, C. and Schaufeli, W. (1993). *Professional Burnout: Recent Developments in Theory and Research*. Philadelphia: Taylor & Francis.
- Maslach, C., Schaufeli, W. B. and Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology*. 52(1), pp. 397-422.
- Maslow, A. H. (1971). *The Farther Reaches of Human Nature*. 1st ed. New York: Penguin.
- Mayo, E. (1945). *The Social Problems of an Industrial Civilization*. 1st ed. Cambridge: School of Business Administration, Harvard University.
- Mishra, K., Boynton, L. and Mishra, A. (2014). Driving Employee Engagement: The Expanded Role of Internal Communications. *Journal of Business Communication*. 51(2), pp. 183-202.
- Moeller, J., Ivcevic, Z., White, A. E., Menges, J. I. and Brackett, M. A. (2018). *Highly Engaged but Burned Out: Intra-individual Profiles in the US Workforce*. New Haven: Yale University.
- Nohria, N., Groysberg, B. and Lee, L. E. (2008). Employee Motivation: A Powerful New Model. *Harvard Business Review*. [Online] Available at: <https://hbr.org/2008/07/employee-motivation-a-powerful-new-model> [Accessed 4 September 2020].
- Nowack, K. (2006). *Employee Engagement, Job Satisfaction, Retention and Stress*. Santa Monica: Envisia Learning.
- Oraman, Y., Unakitan, G. and Selen, U. (2011). Measuring Employee Expectations in a Strategic Human Resource Management Research: Job Satisfaction. *Procedia Social and Behavioral Sciences*. 24(1), pp. 413-420.
- Perrin, T. (2003). *Working Today: Understanding What Drives Employee Engagement. The 2003 Towers Perrin Talent US Report*. New York City: Towers Perrin.
- Perrin, T. (2008). *Corporate Social Responsibility: It's No Longer An Option*. Stamford: Towers Perrin.
- Preetinder, S. G. (2012). *An Investigation of Employee Engagement and Business Outcomes at an Engineering Services Firm*. Ypsilanti: Eastern Michigan University.
- Quantum Workplace (2016). *Employee Engagement Trends*. Omaha: Quantum Workplace.
- Robinson, D., Perryman, S. and Hayday, S. (2004). *The Drivers of Employee Engagement*. Brighton: Institute for Employment Studies.
- Rousseau, D. and McLean Parks, J. (1992). The Contracts of Individuals and Organisations. *Research in Organisational Behaviour*. 15(1), pp. 1-47.
- Ruck, K. and Welch, M. (2012). Valuing Internal Communication; Management and Employee Perspectives. *Public Relations Review*. 38(2), pp. 294-302.
- Rynes, S. L., Gerhart, B. and Minette, K. A. (2004). The Importance of Pay in Employee Motivation: Discrepancies Between What People Say and What They Do. *Human Resource Management*. 43(4), pp. 381-394.

- Saks, A. M. (2006). Antecedents and Consequences of Employee Engagement. *Journal of Managerial Psychology*. 21(6), pp. 600-619.
- Schaufeli, W., Bakker, A. B. and Salanova, M. (2006). The Measurement of Work Engagement With a Short Questionnaire: A Cross-National Study. *Educational and Psychological Measurement*. 66(4), pp. 701-716.
- Seppala, E. and Moeller, J. (2018). 1 in 5 Employees Is Highly Engaged and at Risk of Burnout. *Harvard Business Review*. [Online] Available at: https://hbr.org/2018/02/1-in-5-highly-engaged-employees-is-at-risk-of-burnout?utm_campaign=hbr&utm_source=twitter&utm_medium=social&gig_events=socialize.login [Accessed 10 September 2020].
- Shuck, B. and Wollard, K. (2009). Employee Engagement and HRD: A Seminal Review of the Foundations. *Human Resource Development Review*. 9(1), pp. 89-110.
- Skinner, B. F. (1953). *Science and Human Behavior*. 1st ed. New York: Macmillan.
- Smith, R. (2020). How CEOs Can Support Employee Mental Health in a Crisis. *Harvard Business Review*. [Online] Available at: <https://hbr.org/2020/05/how-ceos-can-support-employee-mental-health-in-a-crisis> [Accessed 5 September 2020].
- Solis, B. and Lavoy, D. (2015). *The Engagement Gap: Executives and Employees Think Differently About Employee Engagement*. Vancouver: Brian Solis + Jostle Corporation.
- Solomon, M. and Sandhya, S. (2010). Employee Engagement: The Key to Improving Performance. *International Journal of Business and Management*. 12(5), pp. 89-96.
- Taylor, F. (1914). *The Principles of Scientific Management*. 1st ed. New York: Harper.
- The Conference Board (2005). *U.S. Job Satisfaction Keeps Falling The Conference Board Reports Today*. New York City: The Conference Board.
- Vitaud, L. (2018). *Engagement and Burnout: Being Too Engaged Can Kill You! Medium*. [Online] Available at: <https://medium.com/willbe-group/engagement-and-burnout-being-too-engaged-can-kill-you-6a89e2afca6b#:~:text=Highly%20engaged%20workers%20are%20more,higher%20risk%20of%20heart%20failure> [Accessed 10 September 2020].
- Zheng, W., Kaur, S. and Zhi, T. (2010). A Critical Review of Employee Turnover Model and Development in Perspective of Performance. *African Journal of Business Management*. 19(4), pp. 4146-4158.

ONLINE GAMING

ARE OUR BATTLES IN ONLINE GAMES ENOUGH
TO ATTAIN PEACE ACROSS THE GLOBE?

By

Alena Terekhova

Senior Business Development Manager of Wargaming

Dr Constantinos Constantinou

Director of Research at the Cyprus Institute of Marketing

Imagine a world where disputes between conflicting parties could be settled in the online virtual gaming arena – one created by an organisation whose online game developer (creative) teams would successfully avoid bloody battle scenes. This futuristic outlook could potentially be set in a business organisation that would be characterised by competitive advantage as a point of reference for others to emulate, should they also opt to step into the business of peace. Beyond any shadow of doubt, the business of killing has throughout history proven time and again just how good humans can be at exterminating their own species in ‘offline’ battlefields. Here they have performed all kinds of atrocious acts, human nature being what it is. But what if humanity could let off steam by merely blowing things up online, with the winner relishing any previous gains in an effort to maintain peace? From a commercial perspective, this could prove to be a stunning business in the future, given how the industry is growing in popularity so rapidly. Thus, anyone who may be currently involved in the defense industry could simply shift their focus from military weapons manufacture to game software development. In this article, therefore, an examination of alternative outlets of violence will be addressed in an attempt to promote peace. This might be by playing videogames to relieve stress, in lieu of resorting to acts of physical violence. At the same time, we should take into consideration the salient drawbacks that online gaming brings with it, exploring such limitations for the purpose of objectivity. The role of ethics is very important to the consideration of this issue of online gaming, however, we will not be incorporating a discussion of this broader issue in this present analysis. We do not wish to avoid the issue of the normalisation of violence and, instead, we encourage further research into the subject-matter. This is particularly as the technological advancements of tomorrow appear next to impossible to us today.

Key words: marketing, online, peace, videogames, war.

Introduction

The main focus (or *research question*) of the present article is whether online gaming helps promote or mitigate violence. So, certain propositions will be stated here, with the aim of raising possibilities that could be of possible interest in the near future. *Secondary points* include whether the gaming industry as a whole may prove to be an attractive investment, in terms of anticipated profit margins.

First, we delve into the topic of war by briefly defining it in an endeavor to elucidate such a key concept to the reader. Then, we discuss moving war online, so as to preserve peace offline, before covering an overview of how gaming in general is capable of doing this; that is, showing that there is good potential. Afterwards, we try to place the discussion in the context of what is happening to date with the ongoing pandemic (Covid) and, also, provide some other instances and discuss celebrities found in the games created by the organisation that serves as our case study. Finally, after describing the benefits of online games using recent studies, we will turn our focus to different marketing examples.

To begin with the words of George Orwell, ‘war is peace’.¹ In a similar vein, then, one can follow this line of thought and maintain that selling war is selling (or marketing) peace. In regard to war, it is worth noting here the pure (realist) Clausewitzian tradition of ‘continuing a national policy by other means’. Put differently, war comprises nothing more than a continuation of political intercourse with a combination of other means. Or an alternative view is that war is not a continuation of policy but a failure of policy.²

The character of war continuously changes,³ so perhaps, online gaming will soon form the new way the phenomenon of warfare will manifest itself in the real world. The current world is already characterised by a blurry physical-virtual dimension. A case in point being how the world will soon witness not just virtual reality, but also augmented reality, where games can only be expected to become ever more indistinguishable from reality.⁴ Indeed, we need to be flexible, and as the ancient Chinese military strategist Sun Tzu wrote in *The Art of War*, ‘just as water retains no constant shape, so in warfare

¹ George Orwell, *Nineteen Eighty-Four* (London: Penguin Books Ltd, 2003), 6, 19, 31, 118 & 214-230.

² Carl von Clausewitz, *On War* (London: Penguin Classics, 1982), 36, 402 & 413.

³ Christopher Coker, *Rebooting Clausewitz: ‘On War’ in the Twenty-First Century* (London: Hurst & Company, 2017), 57.

⁴ Jillian D’Onfro, “Here’s the question Elon Musk talked about so much that he now refuses to discuss it in hot tubs”, *Business Insider*, 2 June 2016, <https://www.businessinsider.com/the-question-elon-musk-refuses-to-talk-about-in-hot-tubs-2016-6>.

there are no constant conditions.⁵ Hybrid actors blur the typical borders of global politics and operate in the interfaces between, say, peace and war, with an ambiguity (which characterizes hybrid action) that is being shaped by amalgamating conventional and unconventional ways, from cyber operations to critical infrastructure disturbances, in addition to attacks.⁶ To take the example of augmented reality technologies, Niantic Labs, along with Nintendo Co. Ltd, The Pokémon Company and Google, have exploited a latent market (i.e. a market that no other firm had yet exploited), utilizing Artificial Intelligence (AI), and created a worldwide phenomenon in almost no time.⁷

Besides people, leaders also turn to war to attain their objectives when other means fall short, and they formulate strategies that they trust will achieve their aims via force of arms. Throughout history, atrocities have been carried out by every type of regime.⁸ Of course, the number of individuals who become desensitized to violence is a troublesome thought.⁹ Moreover, from the moment that war came into the minds of people, this was the very first theater of war, and consequently peace should also be situated and shaped from within.¹⁰ Following that line of thought, domestic violence (which has been exacerbated, as we shall see later on, during the Covid-induced lockdown) is but one expression of violent activity that is worthy of investigation, if we are striving to reach peace within, before without. In other words, if an aggressive thought occurs in an individual's mind before it actually turns into a violent act in the external environment, then, so should the process of peace begin in the mind.

Before stepping into the main part of the current paper, it is worth stating that the ideas expressed by Tolstoy during the 19th century regarding war, remain relevant to the contemporary world. So, albeit everlasting peace sounds quite intriguing, nevertheless, it is not something really possible.¹¹ Furthermore, Aristotle would remind us that nobody (prepares or) selects to go to war for the sake of war.¹²

Political communication and videogames: A synopsis

The 21st century surely epitomises the element of instant communication,¹³ with modern times easily characterised as a media-savvy age.¹⁴ One may fathom, then, the salience of videogames by merely going back to October 2008, when former US President Barack Obama became the first political candidate to advertise in a videogame; more specifically, his campaign utilized Microsoft's Xbox 360 network to reach video-game players in battleground states.¹⁵

The advantages associated with playing videogames: A broad perspective

In line with the claims made by scientists at the University of Oxford, playing videogames may have a positive impact on the well-being of an individual.¹⁶ Actually, in a recent report from the Oxford Internet Institute, a relationship between aggressive behavior in teenagers and the amount of time spent playing violent videogames was not to be found. Similar to other media, games may comprise a refuge, joy, distraction and an experiment. It is perhaps needless to add that, a lot of things may potentially become detrimental in the absence of mechanisms for exploring and comprehending them in a safe manner. We may neither put the blame on videogames for the shortfalls of society, nor abandon our kids to games, if we are not bothered with them.¹⁷

⁵ Dimitris Bourantas, "Prologue", in Sun Tzu, *The Art of War* [translated by: Rena Lekkou-Dantou] (Athens: Publications MINOAS, 2013), 7-20 (19).

⁶ "Hybrid threats as a concept", *Hybrid CoE: The European Centre of Excellence for Countering Hybrid Threats*, <https://www.hybridcoe.fi/hybrid-threats-as-a-phenomenon/>.

⁷ David Jobber and Fiona Ellis-Chadwick, *Principles and Practice of Marketing* (London: McGraw-Hill, 2020), 10-11.

⁸ Donald Kagan, *The Peloponnesian War* (London: Harper Perennial, 2003), 51, 466.

⁹ David G. Myers, *Psychology* (New York: Worth Publishers, 2007), 754-755.

¹⁰ S.M. Farid Mirbagheri, *War and Peace in Islam: A Critique of Islamic/ist Political Discourses* (New York: Palgrave Macmillan, 2012), 42, 83, 91, 116 & 126.

¹¹ Leo Tolstoy, *War and Peace*, translated by Anthony Briggs (London: Penguin Classics, 2007), xix, 12.

¹² The Collector's Library of Essential Thinkers, *Aristotle: Selections from Nicomachean Ethics & Politics*, Introduction by Hugh Griffith – Book 10 (London: CRW Publishing Limited, 2004), 180.

¹³ Henry Kissinger, *Diplomacy* (New York: Simon & Schuster Paperbacks – Rockefeller Center, 1994), 24.

¹⁴ Sherrie A. Madia, *The Social Media Survival Guide for Political Campaigns: Everything You Need to Know to Get Your Candidate Elected Using Social Media* (New Jersey: Full Court Press, 2011), 54.

¹⁵ Monica Ancu, "Online Political Advertising", in R. Mann and D.D. Perlmutter (eds.) *Political Communication* (Baton Rouge: Louisiana State University Press, 2011), 190-196 (194).

¹⁶ Bhvishya Patel, "Good news for gamers: Playing video games BENEFITS mental health, Oxford University scientist claims", *Daily Mail*, 17 November 2020, <https://www.dailymail.co.uk/news/article-8952277/Playing-video-games-BENEFITS-mental-health.html>.

¹⁷ Tom Chatfield, "Violent video games are not to blame for our own failings", *The Financial Times*, 16 February 2019, <https://www.ft.com/content/35ce3b0c-304e-11e9-80d2-7b637a9e1ba1>.

Additionally to the ideas we have already mentioned, a recent study from Cardiff University supports the notion that it may not be plausible for someone to be addicted to videogames.¹⁸ Indeed, a lot of studies claim a wide variety of benefits from gaming, including improved attention and the ability to manage difficult emotions (such as, fear and anger) in addition to developing higher creativity.¹⁹ Based on a recent study, it may be concluded that research falls short of supporting the assertion that the type of videogame played is linked with levels of problem use, thereby challenging the idea that videogames *per se* are ‘addictive’.²⁰

Another recent study argued and provided evidence for the proposition that the effects of videogames on well-being significantly depend on the presence of moderation, the aspects involved (perhaps social aspects, violence or physical activity), and the motivations behind playing the game. By examining these facets individually, the study was able to demonstrate that not only do videogames have positive effects, but also, each has its own unique effects that cannot be examined as a singular phenomenon and, as such, must be studied as multifaceted phenomena.²¹ In fact, certain videogames may even make young individuals more empathetic, helpful and more willing to share.²² Last but not least, it was discovered that videogames ameliorate performance in training for pilots and surgeons, with Nintendo having done the best job of getting gamers up and active with the Nintendo Wii Console (a motion-controlled system designed to encourage physical activity) and with active games like Wii Fit employed in the medical fields to improve balance training in home and clinical settings alike.²³

All in all, there is evidence that disputes the long-held claims of the social displacement hypothesis that frequently places emphasis on games’ potential to negatively impact by displacing offline relationships and, as a result, detrimentally affecting “offline” social support. Instead, the evidence suggests that social online videogame playing does not have negative real-world consequences on players’ offline friendships or their levels of offline social support.²⁴

Videogames in combatting domestic violence amidst the pandemic

Another arena that online gaming helps transcend is the domestic one. According to Bill Gates, governments must learn from the way that states prepare for war; specifically how NATO plays war games so as to ensure that individuals are well-trained and prepared. What is now necessary is to have germ games.²⁵ Bill Gates had in fact warned that a viral pandemic, comparable to the Covid outbreak, could occur every two decades.²⁶ Further, we can worry about too much gaming, but there are several worse ways somebody might spend their time during lockdowns.²⁷ For instance, the pandemic lockdown measures resulted in augmented incidences of domestic abuse, since couples and families became more isolated from the outside world.²⁸ To take an example within the broader region, in Iraq domestic violence and particularly violence against women has been exacerbated in 2020 due to the lockdown measures.²⁹ Leaders around the globe have already called for action in order to put a halt to the abuse which has escalated in the course of 2020 due to Covid.³⁰

¹⁸ Lindsay Dodgson, “Being hooked on video games isn’t necessarily an addiction — here’s why”, *Business Insider*, 2 November 2017, <https://www.businessinsider.com/being-hooked-on-video-games-isnt-necessarily-an-addiction-this-study-explains-why-2017-10>.

¹⁹ Edward Helmore, “Ethical gaming: can video games be a force for good?”, *The Guardian*, 12 April 2014, <https://www.theguardian.com/technology/2014/apr/12/ethical-video-gaming-games-for-change-festival>.

²⁰ Gavin J.M. Entwistle, Alexander Blaszczynski and Sally M. Gainsbury, “Are video games intrinsically addictive? An international online survey”, *Computers in Human Behavior* 112: 106464 (2020), 1-9 (1).

²¹ Yemaya J. Halbrook, Aisling T. O’Donnell and Rachel M. Msetfi, “When and How Video Games Can Be Good: A Review of the Positive Effects of Video Games on Well-Being”, *Perspectives on Psychological Science* 14:6 (2019), 1096-1104 (1101).

²² Nic Fleming, “Why video games may be good for you”, *BBC*, 26 August 2013, <https://www.bbc.com/future/article/20130826-can-video-games-be-good-for-you>.

²³ Joe Todd, “Video games can add to kids’ learning during COVID-19 pandemic”, *The Conversation*, 1 October 2020, <https://theconversation.com/video-games-can-add-to-kids-learning-during-covid-19-pandemic-143959>.

²⁴ Emese Domahidi, Johannes Breuer, Rachel Kowert, Ruth Festl and Thorsten Quandt, “A Longitudinal Analysis of Gaming- and Non-Gaming-Related Friendships and Social Support among Social Online Game Players”, *Media Psychology* 21:2 (2018), 288-307 (288).

²⁵ Jane Wakefield, “TED 2015: Bill Gates warns on future disease epidemic”, *BBC*, 19 March 2015, <https://www.bbc.com/news/technology-31956344>.

²⁶ James Crump, “Bill Gates warns viral pandemic could happen every 20 years”, *Independent*, 11 April 2020, <https://www.independent.co.uk/news/world/americas/bill-gates-coronavirus-pandemic-again-future-disease-spread-a9459986.html>.

²⁷ “Playing video games in lockdown can be good for mental health”, *The Economist*, 27 November 2020, <https://www.economist.com/graphic-detail/2020/11/27/playing-video-games-in-lockdown-can-be-good-for-mental-health>.

²⁸ Lone Grotheer, “Lockdowns, Christmas holidays and domestic violence: A dangerous mix”, *Deutsche Welle*, 29 November 2020, <https://www.dw.com/en/lockdowns-christmas-holidays-and-domestic-violence-a-dangerous-mix/a-55762710>.

²⁹ “Iraq MP warns of rise in domestic violence in 2020”, *Middle East Monitor*, 26 November 2020, <https://www.middleeastmonitor.com/20201126-iraq-mp-warns-of-rise-in-domestic-violence-in-2020/>.

³⁰ Raf Casert and Angela Charlton, “Global push to end domestic violence, worse amid COVID-19”, *Associated Press*, 25 November 2020, <https://apnews.com/article/international-news-pandemics-violence-coronavirus-pandemic-france-438ab8d652eddd44ce0e3772d9c755c3>.

Thanks to coronavirus lockdowns, an unprecedented number of individuals are playing online games as a means of bonding with friends as well as family.³¹ Consumers have had various ways of spending their extra time at home (e.g. playing games on consoles, computers, or even their smartphones). Intriguingly, approximately 70% of the American population plays some kind of video or mobile game.³² To be more specific, according to Michael Cai, President of Interpret (a global video game insights agency): “Video game engagement and revenue across all platforms, including console, PC, mobile, and VR, grew globally during the Covid-19 lockdown. Video gaming is considered an affordable and accessible form of entertainment, and existing and new gamers across all demographic groups found emotional and social support in these virtual worlds.”³³ This has proved that the video gaming industry is worth attention and investment from a business perspective.

It suffices to demonstrate the above-mentioned point regarding the attractiveness of the gaming industry. Based on the latest report by Newzoo’s senior market analyst Tom Wijman, in 2020 the international gaming market will generate \$159.3 billion in revenue. This marks a 9.3% year-over-year growth, with Newzoo estimating that in 2023 the industry will exceed \$200 billion in revenue.³⁴

Undoubtedly, online gaming can be a space for continued learning within an online environment, offering many benefits for players, while keeping them indoors as well. So, in line with existing curricula, subjects (e.g. English) can benefit from videogames in the classroom, as they may supplement, but not substitute, any existing school system. For example, playing games can form a fun learning environment designed to retain physical distancing at home, while remaining social and allowing individuals to continue to learn.³⁵

As a matter of fact, a recent survey from the United Kingdom’s National Literacy Trust has revealed that more than a third (35.3%) of the children who play videogames stated that they believe videogames make them better readers. Research has also unearthed the fact that more than three quarters of the participants (79.4%) read materials related to gaming at least once per month.³⁶ With regards to the latter participants, to be more specific, 4,626 young individuals aged 11 to 16 from around the UK took part in the aforementioned survey through BounceTogether between November and December 2019.³⁷ So, games bolster creativity and stimulate literacy, two qualities of an excellent English class.³⁸ To return to the subject of war, though, we next explain further how the lifestyle of a particular age segment (millennials) involving online game playing may bring about positive effects by acting as an outlet that lessens verbal aggression.

Benefits derived from playing videogames: Further elaborated

Based on a study of millennial gamers, playing videogames turns out to be a fundamental strategy for coping with stress. The General Manager of the Dave TV channel, Luke Hales, has said about gaming that “It’s [also] a great way to interact with people who have similar interests, to socialise and make friends, and it’s a shame this side of the pastime is [sic] often passed over by the media in favour of a negative headline.”³⁹ A parenthesis here is that employing videogames as a form of mental health therapy is not really a novel idea.⁴⁰

Despite the fact that some gamers exchange hate speech over their headsets while on the virtual battlefield,⁴¹ recent research reveals that videogames lower the prospect of creating hate material online on social networking sites. Researcher Jim Hawdon (Professor of Sociology and Director of the Virginia Tech Center for Peace Studies and Violence Prevention) has stated that “this finding suggests that violent videogames may serve as an outlet for aggression, not a precursor.”⁴² The positive effects pertaining to playing videogames are becoming ever more evident.

³¹ Leah Nylen, “Online gaming flourished during the pandemic. So have Apple’s antitrust troubles”, *Politico*, 10 November 2020, <https://www.politico.com/news/2020/11/10/online-gaming-flourished-during-pandemic-apple-antitrust-435818>.

³² Mike Vorhaus, “Gaming Industry Sees Big Growth While People Stay Home”, *Forbes*, 22 June 2020, <https://www.forbes.com/sites/mikevorhaus/2020/06/22/gaming-industry-continues-big-growth-due-to-stay-at-home-americans/?sh=115b1c3f43a1>.

³³ Vorhaus, “Gaming Industry Sees Big Growth”.

³⁴ Field Level Media, “Report: Gaming revenue to top \$159B in 2020”, *Reuters*, 12 May 2020, <https://www.reuters.com/article/esports-business-gaming-revenues-idUSFLM8jkjMI>.

³⁵ Todd, “Video games can add to kids’ learning”.

³⁶ Alaa Elassar, “Video games help children improve literacy, communication and mental well-being, survey finds”, *CNN*, 5 September 2020, <https://edition.cnn.com/2020/09/05/health/video-games-literacy-creativity-children-trnd/index.html>.

³⁷ “Video game playing and literacy: a survey of young people aged 11 to 16”, *National Literacy Trust*, 12 August 2020, <https://literacytrust.org.uk/research-services/research-reports/video-game-playing-and-literacy-survey-young-people-aged-11-16/>.

³⁸ Todd, “Video games can add to kids’ learning”.

³⁹ Grant Bailey, “Playing video games is a key strategy for coping with stress, study finds”, *Independent*, 9 February 2018, <https://www.independent.co.uk/life-style/video-games-stress-playing-strategy-key-gamers-study-a8202541.html>.

⁴⁰ Josh Pappenheim, “How video games helped me in my battle with anxiety”, *BBC*, 8 May 2017, <https://www.bbc.co.uk/bbcthree/article/968b997f-4150-4fad-a6e4-997081d87c8d>.

⁴¹ Nicholas K. Geranioli, “Hate speech corrodes online games”, *The Associated Press – NBC News*, 15 April 2010, <https://www.nbcnews.com/id/wbna36572021>.

⁴² Virginia Tech, “Violent video games may serve as an outlet for aggression, not a precursor, says Virginia Tech expert”, *Medical Xpress*, 22 February 2018, <https://medicalxpress.com/news/2018-02-violent-video-games-outlet-aggression.html>.

Present-day customers expect firms to deliver value in a socially and environmentally responsible manner, with corporate ethics and social responsibility having become pressing issues for nearly all businesses.⁴³ That is to say, individual marketers need to practice a “social conscience” in particular when dealing with customers as well as stakeholders – with corporate philanthropy as a whole being on the rise.⁴⁴

Marketing in Action: A Case Study

Wargaming forms a good example of how a company may, at first glance, appear to be associated with violence and brutality but, in reality, be all about commemorating history at a time where the involved warring parties are at peace. Furthermore, Wargaming is one of the companies that have generously supported the War Child charity, a UK-based non-governmental organisation (NGO), established in 1993, which aids children in war zones. This has helped the charity to amplify its impact. Being true history fans, they have carried out other projects that support veteran organisations, including fundraising to preserve history through a range of campaigns, including approaching numerous museums and assisting in raising money to aid save the battleship ‘Texas’.⁴⁵

Remaining with CSR, experiential technologies like virtual/augmented reality tend to lie beneath the majority of Wargaming CSR’s undertakings. It is therefore worthwhile highlighting how various museums have stated that their visitor numbers have doubled (or even tripled) since the launch of Wargaming’s “World of Tanks” game. This is a flagship title dedicated to fierce tank warfare of the mid-20th century, proving that the power of technology can add significantly to promoting or igniting an interest in history.⁴⁶

With regards to the role of sports in gaming, and their connection to bringing about peace, sport is antagonistic in nature, and may even showcase aggressive elements (e.g. martial arts). However, generally, sports entail a spectacular (rather than a violent) component. Sports have become an everyday part of peoples’ lives in the real world, and videogames strengthen this by providing us with something as close as possible to real life actual people, as found on our favorite physical sports fields. For example, Wargaming’s collaborations attempt to be close to the everyday hobbies and interests of their players. Hence, all Wargaming games collaborate with non-war related brands, such as Hot Wheels, football celebrities or hockey’s Stanley Cup winners. In an article in *The Washington Post*, the author, who had decided to contact Alexander Ovechkin to be the face of the online naval warfare game “World of Warships”, stated how surveys showed that sport was among the main interests of Wargaming’s users. Previously in that year the company had collaborated with legendary Italian soccer goalkeeper Gianluigi Buffon, making him a playable captain in one of its other free-to-play titles, “World of Tanks.”⁴⁷ Thus, the reason why a sport celebrity may be seen in a war-oriented game is in an effort to show that the same competitive spirit can be found in both sports settings and the online battlefield stadia. Esports now comprises a growing industry, in the sense not only of the revenues it generates, but also in terms of attracting individuals’ attention, especially the young audience.⁴⁸ In addition to this, the online sports arena does not need stadia that will guarantee spectator safety, as it does in actual life. Suffice to mention the need that arose for the creation in the 1980s of the *European Convention on Spectator Violence and Misbehaviour at Sports Events and in particular at Football Matches*.⁴⁹

Victor Kislyi, the CEO of Wargaming.net (with the company headquartered in Nicosia and operating from many parts of the world) mentioned in an interview that the company at the time had over 150 million registered players, adding that Wargaming has games on mobile devices as well.⁵⁰ Wargaming’s games have low age-rating, as there is no blood and violence, and the sessions are short (i.e. 12-15 minutes), thereby avoiding any addiction, whilst maintaining the competitive spirit by offering tournaments, ranked battles, and so on. Hence, it can be shown that online games do not cause addiction. Such games are good illustrations of how a desire to explode things and demonstrate power within the

⁴³ Philip Kotler and Gary Armstrong, *Principles of Marketing* (Harlow: Pearson Education Limited, 2018), 53.

⁴⁴ Philip Kotler and Kevin Lane Keller, *Marketing Management* (New Jersey: Pearson Education, Inc., 2009), 678, 680.

⁴⁵ For more info, please visit: <https://www.warchild.org.uk/who-we-are> & <https://wargaming.com/en/csr-projects/helping-out-through-direct-support/>.

⁴⁶ “Mixed Reality: Making Up for the History Lost. Part 1”, *Wargaming.net*, <https://wargaming.com/en/csr-projects/mixed-reality-experiences/>.

⁴⁷ Scott Allen, “Why in the World of Warships is Alex Ovechkin the face of an online naval warfare game?”, *The Washington Post*, 8 November 2018, <https://www.washingtonpost.com/sports/2018/11/08/why-world-warships-is-alex-ovechkin-face-an-online-naval-warfare-game/>.

⁴⁸ Jaume García and Carles Murillo, “Sports video games participation: what can we learn for esports?”, *Sport, Business and Management* 10:2 (2020), 169-185 (182).

⁴⁹ For more info, please visit: Europe’s Human Rights Watchdog, “Spectator Violence”, <https://www.europewatchdog.info/en/spectator-violence/>.

⁵⁰ “Interview Victor Kislyi Wargaming CEO (ENG) balkan subtitles”, *YouTube video* – Klan RUR, 18 April 2016, <https://www.youtube.com/watch?v=DXL6wRTVA18>.

fantasy realm can be easily managed online, without any actual violent crime being committed. Games that have more than 170 million registered players worldwide (having increased significantly over recent years) develop communities of like-minded smart people that reside (during playing time) in a realm that is closer to the real-world, as compared to the dimension they enter when playing other fiction fantasy online worlds. At the time of writing, a new season of Action Heroes from action movies of the 1980s is underway. Essentially, there will be a crew of war-related characters that offer players the unique opportunity to be in the shoes of veterans from the Vietnam War. So, in closing, even though everything is based on actual world events, Wargaming selects to reveal scenes online instead of featuring explosions offline, with history unfolding in great detail.⁵¹

Conclusion

War is a powerful force that produces many social changes,⁵² but other more peaceful means should always be sought to settle differences between warring parties. Pacifist John Maynard Keynes posited that for an everlasting peace to take place, economic cooperation the world over is needed to stop any economic causes of war.⁵³ Online gaming challenges certainly present another possible point of departure, as playing games developed by, say, Wargaming, involve explosions without exposing the player to any bloody scenes. And, as the above-mentioned evidence clearly corroborates, playing videogames does not necessarily normalise violence, as the activity in question carries a plethora of advantages along with stress alleviation, as has already been mentioned.

In summary, in accordance with the observation made by Thucydides, the great historian of the Peloponnesian War (431-404 BC), 'war is a violent teacher' (3.82.2).⁵⁴ Learning a lesson during a videogame battle sounds far more appealing than the learning journey experienced during a real battle. On a practical level, bearing in mind that schools could go online, staying inside and playing videogames will continue to offer learning opportunities, friendships and, above all, fun.⁵⁵ Thus, the new generation can learn in a safe virtual environment any lessons that can be derived from war. The main conclusion that is drawn here, then, is that online games may generate peace and reduce wars offline by helping an individual (player) be a better expression of themselves after playing a game. As already seen from the above analysis, games not only aid in stress relief, but also help in mitigating domestic violence, as pointed out in the course of the ongoing pandemic (and, by extension, acting as one way of preventing violence from becoming normalised). Therefore, further research could concentrate upon what other positive attributes can emanate from playing online games, so as to, hopefully, reach as closely as possible to a state peace the world over. To be sure, future research (or, even, a series of future papers) could place emphasis on a single topic, such as COVID-19 and videogames or videogames as the next generation of daily phenomena (i.e. encapsulating not only sport, but also music bands and even political campaigns in games).

Authors' declaratory note: Any opinions that may have been expressed in the present paper are entirely those of the authors.

⁵¹ For more info, please visit: <https://eu.wargaming.net/en/games/wot>.

⁵² Robert D. Putnam, *Bowling Alone: The Collapse and Revival of American Community* (New York: Simon & Schuster, Inc – Rockefeller Center, 2000), 271.

⁵³ Donald Markwell, *John Maynard Keynes and International Relations: Economic Paths to War and Peace* (New York: Oxford University Press Inc., 2011), 194 & 254-255.

⁵⁴ Kagan, *The Peloponnesian War*, XXII, 85, 175 & 484. Note: the above-mentioned reference number that is placed inside the bracket refers to the traditional division by book, chapter and section.

⁵⁵ Todd, "Video games can add to kids' learning".

POLITICAL MARKETING

DRIVERS OF COMPETITIVE PRESIDENTIAL CANDIDATES

By

Dr Nicos Antoniadis

St John's University, New York

What makes the difference between one presidential candidate and another? Despite several studies attempting to answer questions related to political competitive advantage, limited attention has been given to presidential candidates' competitive advantage via the resource-based view model (RBV). The purpose of this study is to test the relationship between specific resources, the capabilities of presidential candidates and their competitive advantage. Using the RBV tool, it was hypothesized that each proposed factor (i.e., knowledge, experience, personality, adaptation to the voters' needs, relationship-building with the voters, and development of proposals that would reduce the cost of living) is positively related to the achievement of a presidential candidate's competitive advantage. Data was collected from 80 Cypriot registered voters, aged 18 or over. Correlation analysis was used. The results of the study show that a presidential candidate's knowledge, personality, and ability to adapt to the voters' needs are statistically significant factors and have a strong positive impact on the achievement of competitive advantage. Several implications can be drawn from this study's findings for presidential and other political candidates, elected politicians, and scholars, and interesting directions for future research are provided.

Keywords: Presidential Candidates, Political Capabilities, Resource-Based View, Competitive Advantage

1. Introduction

Using the resource-based view tool (RBV), this study aims to strengthen political marketing theory by measuring the relationship between a presidential candidate's resources, capabilities and their competitive advantage. The researcher examines the correlation between specific factors (i.e., knowledge, experience, personality, the ability to build relationships with the citizens, the ability to adapt to the citizens' needs, and the ability to develop proposals that would reduce the cost of living) and competitive advantage. This paper moves on to a brief review of the literature and the methodology behind this quantitative survey follows. The study proceeds with an analysis and presentation of the results and closes with discussion and suggestions for future research.

Political Marketing and the RBV

Political marketing is the way politicians use a variety of marketing tools to communicate with their political markets (Antoniades, 2020). It relates to candidates, politicians, leaders, parties, governments, government departments and programs, NGOs and interest groups (Lees-Marshment, 2014). It is a constantly ongoing process to identify and satisfy society's needs (Antoniades and Mohr, 2020). Marketing concepts can easily apply to political marketing (Antoniades and Haan, 2019; Shama, 1975). One such concept is the resource-based view (RBV). According to Penrose (1959), the RBV is a basis for the competitive advantage of a firm and lies primarily in the application of a bundle of valuable tangible or intangible resources (and capabilities) at the firm's disposal.

Important research has been carried out on political marketing via the use of the RBV tool. Voola and O' Cass (2010), O' Cass (2009), and Lynch, Baines, and Egan (2008) focused on political parties' performance. Antoniades and Haan (2019) dealt with government capabilities as drivers of performance and prosperity. Antoniades and Mohr (2020; 2019a; 2019b) and Antoniades and Haan (2019; 2018) expanded the theory of RBV in political marketing by examining politicians' capabilities as drivers of performance and voters' satisfaction (as consumers). Last, but not least, Antoniades (2019) builds on three important capabilities and developed the CIS Model; packaging government ideas: capabilities to create, inform, and support.

Lynch et al. (2008) argue that a political party's resources (i.e., policies, leadership, and communications skills) need investment and development. O' Cass (2009) supports the notion that value and value creation are major characteristics of a party's political marketing strategy, adding that the success of parties depends on the extent to which they create what is of value for the voter-citizen. Voola and O' Cass (2010) state that the RBV platform on political market orientation is important to better understand its role within the resource-based view of the party. Antoniades and Haan (2018) support the idea that experiential, physical resources and innovative and adaptive capabilities have a positive effect on the

achievement of a politician’s overall performance. However, another study by the same researchers argues that entrepreneurial and adaptive capabilities not only have a strong positive relationship to performance, but they also result in a country’s prosperity (Antoniades and Haan, 2019). Organisations or individuals can gain a competitive advantage by offering clients (and/or voters) better and greater value by improving the quality of their products (services/ideas/proposals), and by developing more superior products than their competitors, in order to create/build (Antoniades 2019), lead (Antoniades and Haan, 2019, 2018; Leonidou et al. 2012), and innovate (Wang and Ahmed, 2007). More recently, Antoniades and Mohr (2020; 2019) introduced the suggestion that social media is the main bridge between political capabilities and political performance, stating that adaptation and relationship-building, as well as the ability to lead and innovate, have a positive impact on social media. The same research shows that the use of social media has a strong positive effect on politician’s popularity, reputation and citizen’s loyalty.

Research Gap

Despite the significant contributions of the abovementioned studies, both in theory and practice, RBV research has not discussed the role of specific resources and capabilities in the achievement of a presidential candidate’s competitive advantage. Leonidou et al.’s study (2012) presented an example which has been used to build the questions of this study and to transfer the theory to the political marketing activities of presidential candidates. Leonidou et al. (2012) define competitive advantage as (a) increased popularity, (b) superiority over competitors, and (c) leadership.

Research Hypotheses

The conceptual model comprises six hypothesised associations between key constructs and competitive advantage (Figure 1).

2. Research Methodology

This quantitative study took place in the Republic of Cyprus, one of the 28 members of the European Union. Cyprus was chosen as the subject of this research due to its 2018 presidential elections. The questionnaire was based on the 2018 Cyprus presidential candidates. Cypriot voters who participated in the study completed an on-line questionnaire. A questionnaire link was designed with Survey Monkey online software (Survey Monkey, 2018); Survey Monkey automatically exports data into an Excel spreadsheet. According to the official page of the Cyprus government (Cyprus Gov., 2018), there were 550,876 registered voters in 2018. A total of 500 invitations (with a Survey Monkey link) were sent by email. Email addresses were randomly selected from the Cyprus Telecommunications Authority finder (CYTA, 2018); the selection was based on the population of each city. For example, Nicosia, the capital of Cyprus, represents approximately 40% of the population (Worldometer, 2020).

Thus, two hundred questionnaires (40% on 500 invitations) were randomly selected (one invitation out of every ten names on the lists). The process resulted in 80 completed questionnaires. The questionnaire was distributed and returned between 20 December 2017 and 15 January 2018.

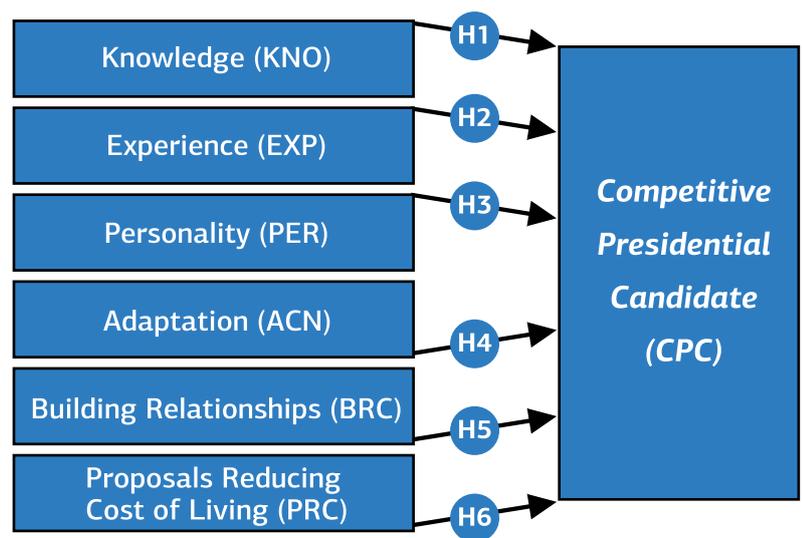


Figure 1. The conceptual model

The questionnaire used a structured approach with closed statements and was based on a 7-point Likert rating scale (1932) ranging from 1 (totally disagree) to 7 (totally agree). Thus, the range captured the intensity of the voters' feelings for a given item (i.e., Personality). The Excel spreadsheet was copied to RStudio (2015), a statistical program, for further statistical analysis. The statistics used in this study were as follows: (a) the mean; (b) correlations (Pearson, 1895) to measure the linear relationship between the variables, and (c) statistical hypothesis testing (a p-value \leq 0.05 indicates strong evidence against the null hypothesis). According to Shortell (2001), correlations above 0.40 are relatively strong, correlations between 0.20 and 0.40 are moderate, and those below 0.20 are considered weak. The statistical analysis and results are presented in Tables 1 and 2.

Table 1
Statistical Analysis

Variables	Mean	Pearson Cor. (CPC)	p-value
Knowledge (KNO)	5.173	0.67	0.045
Experience (EXP)	4.963	0.68	0.360
Personality (PER)	3.494	0.86	0.001
Adaptation (ACN)	3.877	0.87	0.002
Building Relationships (BRC)	4.049	0.84	0.774
Proposals Reducing Cost of Living (PRC)	3.741	0.81	0.636
Competitive Presidential Candidate (CPC)	3.784		

Table 2**Regression Analysis**

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.919461
R Square	0.845408
Adjusted R Square	0.832874
Standard Error	0.913522
Observations	81

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	6	337.7145	56.28575	67.44669	5.35E-28
Residual	74	61.75464	0.834522		
Total	80	399.4691			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.20423	0.278153	-0.73425	0.465119	-0.75847	0.349999	-0.75847	0.349999
KNO	0.148798	0.072903	2.041049	0.044813	0.003536	0.29406	0.003536	0.29406
EXP	0.066278	0.071936	0.921342	0.359866	-0.07706	0.209615	-0.07706	0.209615
PER	0.337884	0.082235	4.108737	0.000102	0.174026	0.501741	0.174026	0.501741
ACN	0.361749	0.114791	3.151355	0.002346	0.133022	0.590476	0.133022	0.590476
BRC	0.032497	0.112818	0.288046	0.774117	-0.1923	0.257292	-0.1923	0.257292
PRC	0.046811	0.09857	0.474897	0.636259	-0.14959	0.243216	-0.14959	0.243216

3. Data Analysis and Presentation of the Findings**Respondents' Demographics**

Respondents were asked to answer for their political orientation on a 1-7 scale (where 1, 2, and 3 equal to "left-oriented thinkers", 4 equals to "center-oriented thinkers", and 5, 6, and 7 equal to "right-oriented thinkers"). This measurement helped the researcher to have a view of the respondent's political orientation; the average was 4.20 which indicates that the sample was very well balanced, as regards the political orientation of the respondents. All the demographic information is presented in Appendix A.

Hypothesis Testing**1) There is a positive relationship between a presidential candidate's knowledge and competitive advantage**

The correlation value (0.67) shows a strong positive relationship between knowledge and competitive advantage. The results are significant with a p-value of 0.045.

2) There is a positive relationship between a presidential candidate's experience and competitive advantage

The correlation value (0.68) shows a strong positive relationship between experience and competitive advantage. The results are not significant with a p-value of 0.360.

3) There is a positive relationship between a presidential candidate's personality and competitive advantage

The correlation value (0.86) shows a strong positive relationship between personality and competitive advantage. The results are significant with a p-value of 0.001.

4) There is a positive relationship between a presidential candidate's ability to adapt to the voters'/citizens' needs and competitive advantage

The correlation value (0.87) shows a strong positive relationship between the ability to adapt to the voters'/citizens' needs and competitive advantage. The results are significant with a p-value of 0.002.

5) There is a positive relationship between a presidential candidate's ability to build relationships with the voters/citizens and competitive advantage

The correlation value (0.84) shows a strong positive relationship between the ability to build relationships with the citizens and competitive advantage. The results are not significant with a p-value of 0.774.

6) There is a positive relationship between a presidential candidate's ability to develop proposals that would reduce the cost of living and competitive advantage

The correlation value (0.81) shows a strong positive relationship between the ability to develop proposals that reduce the cost of living and competitive advantage. The results are not significant with a p-value of 0.636.

4. Discussion and Recommendations for Further Research

A presidential candidate's knowledge, personality, and ability to adapt to the voters'/citizens' needs have a significant, strong positive impact on the achievement of competitive advantage (i.e., popularity, superiority, and leadership). Several theories have attempted to describe personality, as a set of several characteristics like behaviors, emotions, and environmental factors. Knowledge describes the information and skills acquired by a person (or a politician) through experience or education; how well someone understands theory and practice. Regarding adaptation, it is the ability to understand and follow any changes; an extremely important political resource (Antoniades and Haan, 2018).

Agreeing with Lynch et al. (2008), leadership and communication skills are valuable traits of a politician's personality and knowledge. Furthermore, the results of this study support Antoniades and Haan (2019) who argued that entrepreneurial capability (as a business's personality/branding characteristic) and adaptive capability, not only have a strong positive impact on political performance resulting in a country's prosperity, but they also have a strong relationship with the achievement of competitive advantage (i.e., political popularity, superiority and leadership).

The current study also agrees with Antoniades and Haan (2018) who found that experiential and adaptation capabilities in the USA also play a significant role in the achievement of politicians' performance. Not only in a small country like Cyprus, but in a superpower like the United States of America, these political capabilities play a key role in political marketing. Knowledge consists of educational and experiential characteristics, whereas adaptation is the ability to identify what the voters (citizens) need (Antoniades and Mohr, 2020; Lees-Marshment, 2014).

In conclusion, the political marketing goal is simple: (1) to build strong relationships (as in marketing); 2) to identify people's needs (as in marketing); and, 3) to satisfy people's needs by giving value to these people (as in marketing). Thus, a politician's personality and knowledge cannot stand alone. Politicians need to consider "value", the benefit behind people and society. And most importantly, they need to adapt to their people's needs. Continuous research and 24/7 feedback from their people will give them the right answers. Personality and knowledge will only become great facilitators if combined with adaptation skills and when politicians answer some crucial questions: how does the political environment react to specific issues like COVID-19, climate change, health care, the Cyprus problem, the economy, etc.? The ability to adapt to the economic, political, and technological environment will act as a great facilitator to their political knowledge and will lead them to achieve a competitive advantage over their political rivals (i.e., increased popularity, superiority, leadership).

This study applied important organisational capabilities from business to politics; however, many questions still remain unanswered. How do these capabilities relate to the various marketing communication tools (i.e., PR, political advertising, media, and social media)? According to Antoniadou and Mohr (2020; 2019a), social media is the main bridge between political capabilities and political performance. These researchers stated that adaptation and relationship-building, and the ability to lead and innovate have a positive impact on social media, resulting in increased political popularity, enhanced reputation and higher citizen loyalty. Therefore, new studies could test the relationship between “personality” and “knowledge”, and social media, and measure the impact of these capabilities on voter’s decision-processes.

The resource-based view is a valuable tool both in business and in politics and opens up great opportunities for political marketing. Further studies can use this study’s determinants (i.e., knowledge, personality and ability to adapt to the voter needs) to build on the marketing of political parties, democratic governments, and other political candidates (i.e., Members of the Parliament, Council Members, etc.) both in Cyprus and other democratic countries.

References

- Antoniades, N. (2020). *Political Marketing Communications in Today’s Era: Putting People at the Center*. Society. Vol. 57, No. 6. December 2020, Springer U.S.
- Antoniades, N. & Mohr, I. (2020). *Strengthening U.S. Politicians’ Reputation*. Society 57, 41-52 (2020). <https://doi.org/10.1007/s12115-019-00439-5>.
- Antoniades, N. (2019). *Packaging Government Ideas to Achieve Citizen Satisfaction and Loyalty: Creating, Informing, and Supporting*. JOEBM 2020, Vol. 8(1): 59-62 ISSN: 2301-3567 DOI: 10.18178/joebm.2020.8.1.613.
- Antoniades, N. & Mohr, I. (2019a). *Presidential Candidates’ Popularity and Voter Loyalty in the Age of Social Media*. Society, Vol. 56, No 5: pp 445. Springer US.
- Antoniades, N. & Mohr, I. (2019b). *Political Capabilities as Drivers of Consumer Satisfaction: Approaching Millennial Needs*. Youth Voice Journal. ISSN: 2056-2969, <https://wp.me/p3pv0f-Di>.
- Antoniades, N. & Haan, P. (2019). *Government Capabilities as Drivers of Performance: Path to Prosperity*. Heliyon. Volume 5, Issue 2.
- Antoniades, N. & Haan, P. (2018). *Facilitating Political Performance in the USA*. Economics Bulletin. Vol. 38(4), pp. 1762-1768.
- Cyprus Government Official Page (2018). elections.moi.gov. <http://results.elections.moi.gov.cy/>.
- CYTA (2018). *Cyprus Telecommunications Authority Phone Finder 2018*. <https://www.cyta.com.cy/id/m113/en>.
- Leonidou et al. (2012). *Resources and Capabilities as Drivers of Hotel Environmental Marketing Strategy: Implications for Competitive Advantage and Performance*. Department of Public and Business Administration, School of Economics and Management, University of Cyprus, P.O. Box 20537, CY-1678 Nicosia, Cyprus.
- Likert, R. (1932). *A Technique for the Measurement of Attitudes*, 1-55.
- Lynch, R., Baines, P., & Egan, J. (2008). *Long-Term Performance of Political Parties*. Journal of Political Marketing, 2008, 5:3, 71-92, DOI: 10.1300/J199v05n03_04.
- O’ Cass, A. (2009). *A resource-based view of the political party and value creation for the voter-citizen: an integrated framework for political marketing*. Marketing Theory, Volume: 9 issue: 2, pp. 189-208, Article first published online: June 4, 2009; Issue published: June 1, 2009. <https://doi.org/10.1177/1470593109103066>.
- Pearson, K. (1895). *Notes on regression and inheritance in the case of two parents*. Proceedings of the Royal Society of London, 58: 240-242.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*, Oxford: Basil Blackwell.
- RStudio (2015). *Why RStudio?* RStudio.com. Retrieved 2015-12-15.
- Shama, A. (1975). *An Analysis of Political Marketing in SV - Broadening the Concept of Consumer Behavior*. Association for Consumer Research. <http://acrwebsite.org/volumes/12061/volumes/sv03/SV-03>.

Shortell, T. (2001). *An Introduction to Data Analysis and Presentation*. Sociology, Brooklyn College.

Survey Monkey (2018). *Survey Software Features*.

https://www.surveymonkey.com/mp/take-a-tour/?ut_source=header.

Voola, R., & O' Cass, A. (2010). *Implementing competitive strategies: the role of responsive and proactive market orientations*. *European Journal of Marketing*, 2010: Vol. 44 Issue: 1/2, pp.245-266, <https://doi.org/10.1108/03090561011008691>.

Wang, C. & Ahmed, P. (2007) *Dynamic capabilities: A review and research agenda*. *International Journal of Management Reviews* (2007). Blackwell Publishing Ltd. <https://doi.org/10.1111/j.1468-2370.2007.00201>.

Worldometer (2020). <https://www.worldometers.info/world-population/cyprus-population/>.

Appendix A

Demographic Profile

Group	Participants (%)
Gender	
Men	62
Women	38
Other	-
Ages	
18-25	23
26-45	47
46-60	21
60+	9
City	
Nicosia	30
Limassol	30
Famagusta	5
Larnaca	27
Kyrenia	3
Paphos	5
Political Orientation	
Left-Oriented Thinkers (1-3)*	32
Center-Oriented Thinkers (4)*	22
Right-Oriented Thinkers (5-7)*	46

*Based on a Likert Scale

POLITICAL MARKETING

KNOWLEDGE AS A MEDIATOR TO SOCIAL MEDIA: PATH TO CYPRUS GOVERNMENT CHANGE PERFORMANCE

By

Georgia Yiangou

University of West London / Cyprus Institute of Marketing

Abstract

Limited attention has been given to the effect of the ADKAR management model on a Government's social media change performance. To fill this gap, the current study aims to examine how society can influence the Cyprus Government to change (strengthen) its performance using the social media. It is hypothesised that each element of the ADKAR Change Management Model (i.e., Awareness, Desire, Knowledge, Ability, and Reinforcement) has a positive linear association with Social Media. Data was collected from 100 Cypriot registered voters to reveal that all elements have a positive relationship with social media, though only Knowledge is statistically significant.

Keywords: Political Marketing; ADKAR Change Management Model; Social Media; Cyprus Government; Political Performance

1. Introduction

Political marketing is all about identifying and satisfying voter needs. It is the way politicians use marketing tools and concepts to understand, respond to, involve, and communicate with their political markets to achieve their goals (Lees-Marshment, 2001). Politicians and governments work as companies, they produce ideas and proposals as political products, whereas voters react as consumers and consume those products (Antoniades 2020; Antoniades and Mohr 2020; Antoniades 2019; Antoniades and Mohr 2019a; Antoniades and Mohr 2019b; Antoniades and Haan 2018; Antoniades, Haan, and Allayioti 2018; Antoniades 2016, p.5). This parallelism between business products and political products is crucial in identifying how marketing theories in general, use managerial concepts and models in favour of the public.

The current study aims to address how and in what ways the use of the ADKAR Change Management Model (Prosci Inc 2020) and social media could increase Cyprus Government change performance. The limited emphasis given to this specific topic is the major complication to obtaining precise and valid results. The current research was inspired by a Paper Presentation by Antoniades, Allayioti, and Bisca (2019) in the United States (U.S.); a study that first introduced the ADKAR Change Management Model to the political marketing of democratic governments.

Aims of the Study

As mentioned above, limited emphasis has been given to the effect of a government's change performance on citizens; thus, the current study will attempt to fill this gap by researching the relationship between the five elements of the ADKAR Model and the Cyprus Government social media change performance. Throughout the study, it will be apparent that the ADKAR Change Management Model is a valuable goal-oriented tool, not only for increasing the connection of an organisation's change performance with its employees (Boca 2013), but also, it's a possibility for Governments to bridge the gap with their public and improve their political change performance. Additionally, the present study aims to converge on the effects of digitalisation and specifically the impact of social media on the current era.

2. Methodology

The researcher collected data from Cyprus. Cyprus has a population of just 1.19 million (February 2019) and 1.01 million are internet users (Contentworks, 2020). According to statistics of the national register of Cypriot voters, there were 550,876 registered voters in 2018 (Cyprus Gov., 2018); this determined the population of this study. Seven hundred online invitations were sent with a 14% response rate. Email addresses were randomly selected from the Cyprus Telecommunications Authority finder (CYTA 2018). The current study's confidence level is 95% (<0.05). The sample size was 100 registered Cypriot voters. The particular questionnaire was built online via the Survey Monkey platform. Every potential participant was able to view the survey page through a specific URL (Uniform Resource Locator), respond, and submit it online (Hewson and Laurent 2008, p.62). The survey was spread through random e-mails from 13 May 2019 to 26 May 2019.

The questionnaire consisted of 15 closed questions and was focused on a 5-point Likert scale (1932). Respondents had to indicate on a scale of 1 to 5, from strongly disagree to strongly agree, how close is the statement to what they believe. The specific study used the statistical program SPSS Exports via Survey Monkey that provided the following measurements: (1) the mean; (2) the standard deviation; (3) Cronbach's Alpha test (Anon, 2020); and (4) Pearson correlation coefficient test (Social Science Statistics, 2020). Once the data was set, numerous statistical values were exported (e.g., df - degrees of freedom, probability of test result - p-value, one-way ANOVA) (Table 1) (Saunders et al. 2016, pp. 450-458). For such studies, the correlation coefficient is more difficult to measure (Shortell, 2001). Thus, correlations above 0.40 are considered relatively strong; correlations between 0.20 and 0.40 are moderate, and those below 0.20 are considered weak.

3. Presentation of results

In the following paragraphs, the Hypotheses results are presented as well as the strength of each correlation.

H1. There is a positive association between Awareness (AW) and Social Media Performance (SMP).

The value of r is 0.426 which indicates a relatively strong positive linear association between Awareness and Social Media. The p -value is 0.656 so the results are not significant (Tables 1 & 2).

Regression Statistics								
Multiple R	0.485							
R Square	0.235							
Adjusted R Square	0.194							
Standard Error	0.819							
Observations	100							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	5	19.441	3.888	5.793	0.0001			
Residual	94	63.086	0.671					
Total	99	82.527						
Coefficients								
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.727	0.268	6.441	0.000	1.194	2.259	1.194	2.259
AB	0.374	0.839	0.445	0.656	-1.292	2.041	-1.292	2.041
DS	-0.096	0.093	-1.027	0.306	-0.282	0.089	-0.282	0.089
KN	0.237	0.110	2.153	0.033	0.018	0.455	0.018	0.455
AB	-0.143	0.852	-0.168	0.866	-1.837	1.549	-1.837	1.549
RF	0.103	0.117	0.878	0.381	-0.129	0.335	-0.129	0.335

Table 1: Regression Analysis

Variables	Mean	Standard Deviation	Cronbach's Alpha	Pearson Correlation (r)	p-value
Awareness (AW)	2.5	0.979	0.828	0.426	0.656
Desire (DS)	2.78	1.087	0.897	0.191	0.306
Knowledge (KN)	2.35	0.998	0.878	0.429	0.033
Ability (AB)	2.49	0.958	0.829	0.422	0.866
Reinforcement (RF)	2.33	0.964	0.871	0.354	0.381
Social Media Performance (SMP)	2.835	0.913	-	-	-

Table 2: Statistical Analysis

H2. There is a positive association between Desire (DN) and Social Media Performance (SMP).

The value of r is 0.191 which indicates a relatively moderate positive linear association between Desire and Social Media. The p -value is 0.306 so the results are not significant.

H3. There is a positive association between Knowledge (KN) and Social Media Performance (SMP).

The value of r is 0.429 which indicates a relatively strong positive linear association between Knowledge and Social Media. The p -value is 0.033 so the results are significant.

H4. There is a positive association between Ability (AB) and Social Media Performance (SMP).

The value of r is 0.422 which indicates a relatively strong positive linear association between Ability and Social Media. The p -value is 0.866 so the results are not significant.

H5. There is a positive association between Reinforcement (RF) and Social Media Performance (SMP).

The value of r is 0.354 which indicates a moderately high positive linear association between Reinforcement and Social Media. The p -value is 0.381 so the results are not significant.

4. Conclusion and recommendations for further research

The above-mentioned results and findings are influential in establishing the Cyprus Government's efforts in the modification of performance activity. Based on the ADKAR Change Management Model, respondents have indicated a statistically significant relationship between the Cyprus Government Knowledge and Social Media Performance.

The findings of the current study fill an important gap in the existing literature; however, future researchers could take into consideration the following recommendations, which will provide more vital results.

Specifically, the researcher suggests that more research could be made based on the ADKAR Change Management Model to measure individual politicians' performance. Furthermore, more research could be made with a larger sample to

re-examine all other elements of the ADKAR Model (besides the element of Knowledge) as well as to take into consideration socio-demographics that could not be compared and evaluated in detail in the current study. Adding to that, more research is essential in examining and establishing a broader image of how the Cyprus Government handles and performs important issues, such as climate change and humanitarian crisis.

New studies could also take into account that the current study reviewed social media in general, thus examining certain social networks (e.g., Facebook, Twitter, YouTube) could enhance the existing literature by exporting similarities and differences between the social channels. Equally important is that due to the small geographical and population size of Cyprus, the generalisation of results might be prominent, hence more research could be made in other countries. Finally, future research could focus on the effects of social media, not only on the political performance, but on political competitive advantage and credibility.

References

- Anon (2020) *Cronbach Alpha - Free Statistics and Forecasting Software (Calculator)* [Online]. Available at: https://www.wessa.net/rwasp_cronbach.wasp [Accessed: 1 April 2020].
- Antoniades, N. (2016) *4 P's 4 a P: The Political Marketing Mix (A Guide for Politicians and Voters)*. [Kindle version]. Available at: <https://www.amazon.com> [Accessed: 8 September 2019].
- Antoniades, N. (2019) Happiness Vs Abstention: Leading Teenage Students to the Ballot Box. *Journal of Teaching and Education*. 9(1), pp.87–100. *University Publications* [Online]. Available at: <http://www.universitypublications.net/jte/0901/pdf/H9V159.pdf> [Accessed: 6 February 2020].
- Antoniades, N. (2020) Packaging Government Ideas to Achieve Citizen Satisfaction and Loyalty: The CIS Model (Creating, Informing, and Supporting), *Journal of Economics, Business and Management*, 8(1), pp.59-62. *JOEBM* [Online] Available at: <http://www.joebm.com/vol8/613-CM3022.pdf> [Accessed: 25 February 2020].
- Antoniades, N. and Haan, P. (2018) Facilitating Political Performance in the USA. *Economics Bulletin*, 38(4), pp.1762-1768. *AccessEcon* [Online]. Available at: <http://www.accessecon.com/Pubs/EB/2018/Volume38/EB-18-V38-I4-P164.pdf> [Accessed: 8 September 2019].
- Antoniades, N. and Mohr, I. (2019a) Political Capabilities as Drivers of Consumer Satisfaction: Approaching Millennial Needs. *Youth Voice Journal*, pp.1-26. [Online]. Available at: <https://youthvoicejournal.com/2019/09/27/nicos-antoniades-iris-mohr-2019-political-capabilities-as-drivers-of-consumer-satisfaction-approaching-millennial-needs/> [Accessed: 3 April 2020].
- Antoniades, N. and Mohr, I. (2019b) Presidential Candidates' Popularity and Voter Loyalty in the Age of Social Media. *Society*, 56 (5), pp.445-452. *Springer Science and Business Media LLC* [Online]. Available at: <https://www.springerprofessional.de/presidential-candidates-popularity-and-voter-loyalty-in-the-age-/17154808> [Accessed: 3 March 2020].
- Antoniades, N. and Mohr, I. (2020) Strengthening U.S. Politicians' Reputation. *Society*, 57 (1), pp.41-52. *Springer Science and BusinessMedia LLC* [Online]. Available at: <https://doi.org/10.1007/s12115-019-00439-5> [Accessed: 3 March 2020].
- Antoniades, N., Allayioti, M. and Bisca, A. (2019) *Lasting Political Change Performance: Awareness, Knowledge, and Reinforcement*. Accepted in the Twentieth International Conference on Knowledge, Culture and Change in Organisations. [Online] Available at: https://cgscholar.com/cg_event/events/M20/proposal/40714/proposal_details?fbclid=IwAR20hE550xeG0omobi00xuc-9-R9PQAWxkmNE8FzJNj0-Y9X4EpxxWLe4f0 Chicago Conference, May 2020 [Accessed: 8 September 2019].
- Antoniades, N., Haan, P. and Allayioti, M. (2018) USA: Pricing the Product of an Elected Politician. *International Journal of Interdisciplinary Innovative Research @ Development*, 2(2), pp.87-96. *IJIIRD* [Online]. Available at: <http://ijiird.com/wp-content/uploads/2018/05/020212-USA-Pricing-the-Product-of-an-Elected-Politician-.pdf> [Accessed: 8 September 2019].

Boca, G. D. (2013) *ADKAR Model Vs Quality Management Change*.

International Conference "Risk in Contemporary Economy", 14(1)[Online]. Available at: https://www.researchgate.net/publication/266310181_ADKAR_Model_vs_Quality_Management_Change [Accessed: 3 April 2020].

Contentworks, 2020. Retrieved from:

<https://contentworks.agency/social-media-in-cyprus-the-stats-you-need-to-know/#:~:text=There%20are%201%20million%20active%20social%20media%20users%20in%20Cyprus,island%20published%20in%20January%202019.>

Cyprus Gov. (2018) *Cyprus Government Official Page*. elections.moi.gov, [Online] Available at: <http://results.elections.moi.gov.cy/> [Accessed: 30 March 2020].

CYTA, 2018. *Cyprus Telecommunications Authority Phone Finder*. <https://www.cyta.com.cy/id/m113/en>.

Hewson, C. and Laurent, D. (2008) *Research design and tools for internet research In: The SAGE handbook of online research methods*. pp.58-78. Los Angeles: SAGE.

Lees-Marshment, J. (2001). *The Marriage of Politics and Marketing*. *Political Studies*. Vol. 49, No. 4 (pp. 692-713). Available at: doi:10.1111/1467-9248.00337.

Likert, R. (1932) *A Technique for the Measurement of Attitudes*. *Archives of Psychology* 140: pp.1-55.

Prosci Inc. (2020) The Prosci ADKAR® Model. *Prosci.com*. [Online]. Available at: <https://www.prosci.com/adkar> [Accessed: 29 March 2020].

Saunders, M., Lewis, P. and Thornhill, A. (2009) *Research Methods for Business Students*. 5th ed. Pearson Education Limited.

Shortell, T. (2001) *An Introduction to Data Analysis @ Presentation*. Brooklyn College, New York: Sociology.

Social Science Statistics (2020) *Pearson Correlation Coefficient Calculator*. [Online]. Available at: <https://www.socscistatistics.com/tests/pearson/> [Accessed: 1 April 2020].

POLITICAL MARKETING

THE CIS MODEL AS A MEDIATOR TO CLIMATE CHANGE GOVERNMENT PERFORMANCE

By

Dr Nicos Antoniadis

St John's University, New York

Dr Iris Mohr

St John's University, New York

Dr Constantinos Constantinou

The Cyprus Institute of Marketing, Nicosia - Limassol

According to the CIS Model*, a government needs to capitalize on three major capabilities to communicate an idea/proposal (political product) to its people effectively: (1) the capability to **Create** a political product; (2) the capability to **Inform** people about the political product; and (3) the capability to **Support** the political product. Despite several studies in politics attempting to examine how a government/political party/politician can market a message with regard to specific political issues (especially, in periods of crisis), no attention has been given to testing the CIS Model as a mediator of a government's higher climate change performance (i.e., productive proposals/ideas that contribute to the climate change issue). To fill this gap, the researchers aim to test the impact of the CIS Model on the U.S. government's performance in matters relating to climate change by focusing on the relationship between each element of the CIS Model and the U.S. government's performance on climate change. Managerial implications and directions for future research are provided, based on the study's findings.

Keywords: Climate Change, U.S. Government, Political Performance, The CIS Model

1. Introduction

In the early 1970s, the first concerns for environmental issues began to appear, increasingly shifting attention to ecological issues among business and academic communities alike (Leonidou et al., 2012: p. 94). Since then, the lack of long-term investment in green energy has accelerated global warming to the extent that the UN Intergovernmental Panel on Climate Change has warned that there is only one decade remaining for the planet to avoid its irreversible effects. Though policymakers have tried to tackle climate change through incentives and disincentives, such as carbon taxes and green investment choices, they have stopped short of issuing the kind of compulsory regulations that are required to prevent a catastrophe by 2030 (Mazzucato, 2020). Moving beyond 2030, Harari (2019: p. 138) argues that in the following decades humankind will face a new existential threat, ecological collapse. In an interview with Tom Bilyeu, Dr. Yuval Noah Harari explained that climate change is a big challenge to mankind in the 21st century and must be on the political agenda of every country. It is worth mentioning that President-Elect, Joe Biden, is taking America back into the Paris Climate Agreement, a global pact that was signed between almost 200 states, which became effective on Earth Day, 2016 at the UN Headquarters in New York with the goal of strengthening the global response to the threat of climate change (*UN: Climate Change*). A letter to the UN (taking effect 30 days later) would be the sole prerequisite for recommitting the U.S. to the Agreement (Friedman, 2020).

1.1 Political Marketing – An overview

Political marketing is the way politicians use marketing tools and concepts to understand, respond to, involve, and communicate with their political markets to achieve their goals (Antoniades and Haan, 2019: p. 2; Lees-Marshment, 2001). Political and marketing procedures play a major role in nearly all societies (O'Cass and Voola, 2011: p. 627), with the application of marketing to apply to voters and politicians. Market research is among the main tools of marketing for determining the characteristics of a market (Palmer, 2012: p. 156); thus, it is the main tool for identifying what citizens/voters want. According to Antoniades and Mohr (2019a), in the new era of technology, the use of social media also plays an important role in politics and can have a positive impact on a presidential candidate's popularity and voter/citizen loyalty by keeping people engaged and interested. With the use of social media, political players participate in conversations to influence voters' opinions. Additionally, virtual "offerings" and "people-centered" electronic videos and articles offer tremendous points to strengthen political performance and add value to the political marketing strategy (Antoniades, 2020).

1.2 The CIS Model

In 2019, Antoniades reported how political apathy is growing daily, due to a lack of political capabilities (i.e., politicians, parties, government, and candidates). For a government to build on its current capabilities and effectively communicate its political products (ideas/proposals), Antoniades (2020b) developed the CIS Model; a model on how to package a gov-

ernment idea. The CIS Model consists of three political determinants: the ability to Create, the ability to Inform, and the ability to Support (Antoniades, 2020b; Antoniades and Mohr, 2019b: p. 4). Antoniades (2020b: p. 61) supports the view that the CIS Model, not only in theory, but also in practice, assists government officials, elected politicians, political parties, and political candidates to understand that simply having an idea is not sufficient. Citizens need to be sufficiently informed about the idea, and more importantly, politicians need to be clear on how it will support and benefit citizens if it is to result in voter/citizen satisfaction and loyalty.

Presenting the CIS Model at the 7th International Conference on Management and Education, Antoniades (2020b) presented two Crunchie chocolate bars, and asked the audience: “This one is wrapped, and this one is not; which one would you buy?” By applying this idea to the Resource-Based View (RBV) tool, Antoniades (2020b) demonstrated that creating an idea (i.e., a political product), informing citizens about the idea, and supporting the idea are vital in the attainment of citizen satisfaction and loyalty. Specifically, creating a political idea represents the development of a new consumer product (i.e., a chocolate bar); informing the electorate about the political idea represents the chocolate wrapper and the information provided (i.e., ingredients, cholesterol, sugar, etc.); and, finally, supporting the political idea represents the ways to convince voters (as consumers) that the product is competitive. The product, in this case, is “Climate Change”, which demonstrates the versatility of the application of the CIS Model. A focus on climate change as a product serves as a competitive advantage, as in the case of one study which found that it resulted in more votes and a long-term relationship with Millennials, a huge market of 73 million young people (Antoniades and Mohr, 2019b: p. 17).

1.3 Political Performance

Although a plethora of studies have emphasized the impact of leading communication tools on political performance, limited academic attention has been given to study the influence of a communication strategy on voters as consumers. Recently, Antoniades (2020a) examined the relationship between each of the four main communication tools, i.e., public relations (PR), media, advertising, and social media with political performance. He supported the idea that PR, media, and social media have a significant positive effect on political performance; in turn, PR and social media have a significant positive impact on the “offering” of products that focus on voters. These results demonstrate a significant positive relationship between political performance and the “offering” of political products that concentrate on voters (Antoniades, 2020a). Antoniades and Mohr (2019b: p. 9) state that in business, marketing an idea consists of an attempt to communicate about a product or service to the general public by creating an effective message. Further, Antoniades and Haan (2018) support the notion that experiential and physical resources (including, computers and smartphone devices) in addition to innovative and adaptive capabilities, have an important positive effect on the attainment of a politician’s strengthened performance (i.e., voter satisfaction, voter loyalty, and popularity). The same researchers point out that entrepreneurial and adaptive capabilities are statistically significant and have a strong positive relationship with a government’s performance, thereby, leading a country to prosperity, in terms of raising per capita income, reducing the unemployment rate, and lowering the levels of poverty.

It is worth mentioning that artificial intelligence, the Internet, big data, and the expansion of networks has created a revolution in marketing that is rendering the 4 Ps of the 1960s ever more obsolete (Rust, 2019: p. 15). Applying the 4Ps of Marketing in politics, Antoniades, Haan, and Allayioti (2018) suggest that the adoption of the “political product” (i.e., a political idea or proposal that satisfies people needs) and “price” (i.e., a political product that reduces the cost of living) lead politicians (as sellers) to satisfy their voter’s needs (as consumers) and achieve superior political performance. Antoniades (2020a; 2020c) argues that politicians must place people at the center. In the new era of technology, voters have a role to play and they must be at the center of political attention, with the use of social media to maintain the interest of individuals. Thus, any world leader must be willing to change their current agenda by prioritizing climate change (Lyons, 2019). If scientists developed effective COVID-19 vaccines in less than a year, it is possible for the climate change crisis to also be addressed in a similarly effective fashion on a collective level (van Lierop, 2020).

1.4 Climate Change

Critics of marketing point to cases where greed and mismanagement have created long-lasting or permanent ecological damage (Palmer, 2012: p. 63). Concerning the ecological environment, issues affecting the natural ecology of humans have captured the public’s imagination in recent years. They have witnessed the destruction of tropical rain forests and the depletion of the ozone layer, leading to global warming, with its serious implications for our quality of life, and especially for future generations. A parenthesis within the context of marketing and social responsibility means that, it is

ever more important to satisfy the needs of a wider range of stakeholders in society regarding the depletion of the ozone layer, causing potentially catastrophic climate change (Palmer, 2012: p. 28). Further, climate change includes a long list of impacts that are harmful to human beings, which include more extreme weather, heat, drought, flooding, sea-level rise, longer allergy seasons, and increases in water and foodborne illnesses. Drought and further sea-level rise will lead to more antagonism for scarce resources in the developing nations, promoting conflicts, and potential migration (Roser-Renouf & Maibach, 2018: p. 169). According to Harari (2019: p. 139), climate change comprises a current reality; no one can know for sure how much carbon dioxide humankind may continue to pump into the atmosphere without causing an unalterable cataclysm. Needless to say, more carbon dioxide is being absorbed into the ocean as humankind emits more carbon dioxide into the atmosphere (NASA, 2020). Further, based on UN Environment projections, global temperatures may be prevented from increasing more than 1.5 degrees Celsius by decreasing emissions by 7.6% each year between 2020 and 2030 (Andrew, 2020). Education is required for accomplishing sustainable development, and is key for good governance, informed decision-making, and promoting democracy. Education for sustainable development advances and ameliorates the ability of people, groups, communities, organizations and nations to think and act in favor of sustainable development (Goldbach et al., 2020: p. 40). Harari (2019: p. 302) would argue here, however, that much of what children learn at present will most probably be irrelevant by 2050.

A vocal minority of perhaps one in five Americans is causing a grave hindrance to collective climate action, as it believes that the politically charged issue of climate change is a myth, or that human beings are not accountable for this phenomenon. This minority is being strongly supported by others in the Middle East, in parts of Asia, and particularly, China. The majority of Americans support a role for scientists in deciding climate policy (*Pew Research Center*, 2016). Predicting what a person's attitude to climate change might be, we are better off asking what their politics are than asking about science (McKenna, 2019).

Climate science is in urgent need of better marketing, regardless of whether researchers think that science sells itself. Numerous politicians are actively persuading individuals that science is not that serious, creating an additional need to persuade the public that the aforesaid politicians are wrong and that the climate scientists are correct. Fortunately, some marketing tools can be employed to do this, such as thinking about how climate change is framed. For instance, in the same way that a good marketer fits their message to their audience, a good science communicator must recognize that when communicating such an all-encompassing matter affecting so many different people, it makes sense to frame climate change in different ways to diverse groups of persons (McKenna, 2019).

Alongside all of this, the HBO TV series *Game of Thrones*[®] (GOT) has become a metaphor for climate change, with the literature on climate change communication and politics providing an essential issue-specific context for grasping political communication efforts that connect a popular television show to the politics of climate change (Milkoreit, 2017: pp. 61-63). In an interview, George R. R. Martin, the writer of GOT, mentioned that in regard to what he thinks of the interpretation on how plenty of observers have indicated that GOT provides a perfect metaphor for comprehending climate change, that: "It's kind of ironic because I started writing "Game of Thrones" back in 1991, long before anybody was talking about climate change. But there is – in a very broad sense – there's a certain parallel there" (Sims, 2018). Humans are storytellers and GOT is offering its predominantly U.S. audience a wealth of storytelling material that individual political commentators employ for interventions in ongoing political debates regarding climate change. The concept of pop-cultural mobilization – i.e., the deliberate, instrumental appropriation of a pop-cultural phenomenon to mobilize an audience for specific political goals – requires an active interpretation of a pop-cultural narrative on behalf of a political actor in order to create meaning for their audiences. Specifically, it entails packages of knowledge, values, and beliefs that will favor a certain policy goal or political agenda (Milkoreit, 2017: pp. 79-80). Adding to this, according to the UN, time is of the essence as humanity merely has until 2030 to possibly curtail disastrous climate change; thus, marketers must now play their part in addressing the pressing issue of climate change (Lyons, 2019).

1.5 Aims of the study

The purpose of this research is to examine the impact of the CIS Model on the U.S. government's performance in matters relating to climate change. Specifically, this study aims (1) to contribute to the formation of solutions by advancing the literature on the challenge of Climate Change; an issue that deserves immediate attention from leaders and policymakers around the world, given how the prospect of climate change remains a salient threat (Harari, 2019: p. 139); (2) to show in a holistic way that the CIS Model may prove useful for a government to create, inform, and support an innovative political product (an idea or proposal) that can help fight climate change; and (3) to provide productive solutions regarding the issue of Climate Change.

Based on the above literature, the researchers concluded with the following hypotheses (Figure 1):

H1: The more use that is made of the CIS Model, the smaller the environmental problem will be.

H2: The greater the relationship of the CIS Model to government performance, the greater the positive impact will be.

Fig. 1: The Conceptual Model



2. Research Methodology

According to the New York City Comptroller (2016), today New York City is home to 1.6 million millennials, nearly one-fifth of the city's population. Their future economic well-being is critically important to New York's long-term ability to thrive. Eight hundred online invitations were randomly sent via social media to New Yorkers aged 18-25. The final sample was 104 completed questionnaires, reaching a 15% response rate. The survey took place between 10 June 2019 and 23 September 2019.

The researchers used a structured approach with closed statements based on a 7-point Likert rating scale (1932) ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) [Appendix A]. The range captured the intensity of millennial consumers' feelings for a given item of the CIS Model (i.e., the ability to Create). The statistical methods used were as follows: (a) the mean; (b) correlations to measure the linear relationship between the variables; and, (c) statistical hypothesis testing at a 95% confidence level (Tables 1 and 2). Regarding correlations measurement, those above 0.40 are considered relatively strong, between 0.20 and 0.40 are moderate, and below 0.20 are considered weak (Shortell, 2001). Statistical results are presented in Table 3.

3. Presentation of Results

Hypothesis Testing

H1: *The more use that is made of the CIS Model, the smaller the environmental problem will be.*

The correlation value (-0.24) shows a moderate negative relationship between the CIS Model and the Environment problem. The results are significant with a p-value of 0.001. This result confirms that the more use that is made of the CIS Model, the smaller the environmental problem will be.

Table 1: Regression Analysis (Climate Change)

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.855806
R Square	0.732404
Adjusted R Square	0.722695
Standard Error	2.036669
Observations	104

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1169.362	1169.362	281.9084832	4.03E-31
Residual	103	427.246	4.148019		
Total	104	1596.608			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
ENV	0.531721	0.031669	16.79013	2.99089E-31	0.468914	0.594529	0.468914	0.594529

Table 2: Regression Analysis (The CIS Model)

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.966754
R Square	0.934613
Adjusted R Square	0.924904
Standard Error	1.045143
Observations	104

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1608.157	1608.157	1472.236188	1.99E-62
Residual	103	112.5093	1.092323		
Total	104	1720.667			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
CIS	1.00361	0.026156	38.36973	8.06635E-63	0.951736	1.055485	0.951736	1.055485

Table 3: Statistical Analysis

Variables	Mean	Pearson Correlations	p-value
Environment (ENV)	6.19		
		(0.24)	0.001
The CIS Model (CIS)	3.50		
		0.82	0.001
Government Performance (GPE)	3.75		

H2: The greater the relationship of the CIS Model to government performance, the greater the positive impact will be.

The correlation value (0.82) shows a very strong positive relationship between the CIS Model and Political Performance. The results are significant with a p-value of 0.001. This result confirms that the greater the relationship of the CIS Model to government performance, the greater the positive impact will be.

4. Conclusions and recommendations for further research

The CIS Model could lead the political world to identify several public needs and build value-driven strategies to satisfy these needs. Adapting the CIS Model, a model composed of key political determinants (i.e., Create, Inform, and Support), the current research presented how the U.S. government can effectively sell their “Climate Change” product to millennial consumers. According to the findings of this study, the more a government uses the CIS Model, the smaller the environmental problem will be. In turn, the more use is made of the CIS Model, the higher the government’s political performance will be regarding products that will solve the climate change problem. Specifically, the U.S. Government may first create innovative political products (i.e., ideas, proposals) that can fight climate change (CIS - C) followed by detailed information to the general public on how climate change affects their lives (CIS - I), before coming full circle by taking actions to support its climate change political products (CIS - S). Certainly, all three political determinants in the CIS Model must be evident: the ability to Create, the ability to Inform, and the ability to Support. Thus, the last stage that entails the U.S. Government walking its talk (Support) is vital in convincing people about the advantages of following a particular product (i.e., any ideas or/and proposals). As in the case of climate change (as a political product), new CIS strategies could offer solutions/political products on health care, COVID-19, immigration, foreign policy, anti-terrorism, professional development, the economy, and so forth.

Politicians and political advisors face several marketing problems and opportunities. In this new era of technology, there is an increasing professional digital marketing activity in political campaigns. Adding to this, it is critical to build models in political marketing that examine structural characteristics (i.e., nature of the product, the organization, the market, and the marketing management implications of these), and process characteristics (i.e., the procedures and systems which govern marketing activity and the appropriate strategic responses for each). These models will facilitate governments, politicians, and parties in strengthening their political competitiveness and performance.

To advance these findings, new research may validate the preliminary results of this study by obtaining data from each U.S. State or other democratic countries. Future research could also further these preliminary findings by collecting a larger sample of millennial consumers and scrutinizing convergences and divergences between these consumers and other demographic groups, such as Baby Boomers and/or Generation X. Lastly, new studies could explore the relationship between the CIS Model and several social media tools by investigating the impact of each social media tool on millennial consumer satisfaction. This could include, for instance, differences in the effectiveness of social media platforms in “informing” and/or “supporting” climate change political products. For example, in alignment with the Paris Agreement, political leaders can inform their citizens using the most relevant social media channels in an attempt to achieve the highest possible impact (UN: Climate Change).

- Andrew, S. (19 May 2020). "Covid-19 lockdowns drop global carbon emissions to lowest level in 15 years". *CNN*. Available at: https://edition.cnn.com/world/live-news/coronavirus-pandemic-05-19-20-intl/h_027b100ba3c22ec08d7adf487236761f.
- Antoniades, N. (2020a). "Political Marketing Communications in Today's Era: Putting People at the Center". *Society*. Vol. 57, No. 6. December 2020, Springer U.S.
- Antoniades, N. (2020b). "Packaging Government Ideas to Achieve Citizen Satisfaction and Loyalty: The CIS Model (Creating, Informing, and Supporting)". *Journal of Economics, Business and Management*. Vol. 8, No. 1 (pp. 59-62).
- Antoniades, N. (9 June 2020c). "Republicans Vs Democrats: Who Are More 'People-Centered'?" *Business Bulletin*. Available at: <https://cima.ac.cy/2020/06/09/republicans-vs-democrats-who-are-more-people-centered/>.
- Antoniades, N. and Mohr, I. (2020). "Strengthening U.S. Politicians' Reputation". *Society*. Vol. 57 (pp. 41-52). Available at: <https://doi.org/10.1007/s12115-019-00439-5>.
- Antoniades, N. (2019). "Happiness Vs Abstention: Leading Teenage Students to the Ballot Box". *Journal of Teaching and Education*. Vol. 9, No. 1. ISSN: 2165-6266.
- Antoniades, N. and Haan, P. (2019). "Government capabilities as drivers of performance: path to prosperity". *Heliyon*. Vol. 5, No. 2 – Article Nr e01180 (pp. 1-18).
- Antoniades, N. and Mohr, I. (2019a). "Presidential Candidates' Popularity and Voter Loyalty in the Age of Social Media". *Society*. Vol. 56 (pp. 445-452). Available at: doi: 10.1007/s12115-019-00397-y.
- Antoniades, N. and Mohr, I. (2019b). "Political Capabilities as Drivers of Consumer Satisfaction: Approaching Millennial Needs". *Youth Voice Journal*. ISSN (online): 2969.
- Antoniades, N. and Haan, P. (2018). "Facilitating Political Performance in the USA". *Economics Bulletin*. Vol. 38, No. 4 (pp. 1762-1768).
- Antoniades, N., Haan, P. and Allayioti, M. (2018). "Pricing the Product of an Elected Politician". *International Journal of Interdisciplinary Innovative Research & Development (IJIRD)*. ISSN: 2456-236X. Vol. 2, Issue 2 (pp. 87-96).
- Friedman, L. (17 November 2020). "9 Things the Biden Administration Could Do Quickly on the Environment". *The New York Times*. Available at: <https://www.nytimes.com/2020/11/08/climate/biden-climate.html>.
- Goldbach, I.R., Barbu, F.I., Constantinescu, M. and Bidireanu, A. (2020). "Trends in the Romanian education and training system in the context of international sustainable development". *The Market: International Journal of Business*. Vol. 1 (pp. 37 – 41). Available at: <https://market.cima.ac.cy/>.
- Harari, N.Y. (2019) *21 Lessons for the 21st Century* (London: Vintage).
- Lees-Marshment, J. (2001). "The Marriage of Politics and Marketing". *Political Studies*. Vol. 49, No. 4 (pp. 692-713). Available at: doi:10.1111/1467-9248.00337.
- Leonidou, C.L., Leonidou, N.C., Fotiadis, A.T. and Zeriti, A. (2012). "Resources and Capabilities as Drivers of Hotel Environmental Marketing Strategy: Implications for Competitive Advantage and Performance". *Tourism Management*. Vol. 35 (pp. 94-110).
- Likert, R. (1932). "A Technique for the Measurement of Attitudes". *Archives of Psychology*. Vol. 22, No. 140 (pp. 1-55).
- Lyons, E. (29 May 2019). "It's time for the ad industry to address climate change". *Marketing Week*. Available at: <https://www.marketingweek.com/erin-lyons-ad-industry-address-climate-change/>.
- Mazzucato, M. (2 October 2020). "Capitalism After the Pandemic". *Foreign Affairs*. Available at: <https://www.foreignaffairs.com/articles/united-states/2020-10-02/capitalism-after-covid-19-pandemic>.
- McKenna, R. (16 December 2019). "Climate change: three ways to market the science to reach the sceptics". *The Conversation*. Available at: <https://theconversation.com/climate-change-three-ways-to-market-the-science-to-reach-the-sceptics-128744>.

- McKenna, R. (16 December 2019). "Climate change: three ways to market the science to reach the sceptics". *The Conversation*. Available at: <https://theconversation.com/climate-change-three-ways-to-market-the-science-to-reach-the-sceptics-128744>.
- Milkoreit, M. (2017). "Pop-cultural Mobilization: Deploying *Game of Thrones* to Shift US Climate Change Politics". *International Journal of Politics, Culture, and Society*. Vol. 32, pp. 61–82. Available at: <https://doi.org/10.1007/s10767-017-9273-7>.
- NASA (16 December 2020). "Climate Change: How Do We Know?". *NASA: Global Climate Change*. Available at: <https://climate.nasa.gov/evidence/>.
- New York City Comptroller (2016). *New York City's Millennials In Recession and Recovery*. Available at: <https://comptroller.nyc.gov/reports/new-york-citys-millennials-in-recession-and-recovery/#:~:text=Today%20the%20city%20is%20home,long%2Dterm%20ability%20to%20thrive>.
- O'Cass, A. and Voola, R. (2011). "Explications of political market orientation and political brand orientation using the resource-based view of the political party". *Journal of Marketing Management*. Vol. 27, Nos. 5-6 (pp. 627–645).
- Palmer, A. (2012). *Introduction to Marketing: Theory and Practice*. 3rd Edition (Oxford: Oxford University Press).
- Roser-Renouf, C. and Maibach, W.E. (2018). Chapter 6: Strategic Communication Research to Illuminate and Promote Public Engagement with Climate Change. In: Hope, D. A. and Bevens, R. A. (eds.), *Change and Maintaining Change*, Nebraska Symposium on Motivation 65, pp. 167-218. Springer Nature Switzerland AG. Available at: https://doi.org/10.1007/978-3-319-96920-6_6.
- Rust, T.R. (2019) "The future of marketing". *International Journal of Research in Marketing*. Vol. 37, No. 1 (pp. 15–26). Available at: <https://doi.org/10.1016/j.ijresmar.2019.08.002>.
- Shortell, T. (2001). "An Introduction to Data Analysis & Presentation". Sociology, Brooklyn College.
- Sims, J. (16 October 2018). "George R. R. Martin Answers Times Staffers' Burning Questions". *The New York Times*. Available at: <https://www.nytimes.com/2018/10/16/t-magazine/george-rr-martin-qanda-game-of-thrones.html>.
- "The Politics of Climate". Pew Research Center – Science & Society, 4 October 2016. Available at: <https://www.pewresearch.org/science/2016/10/04/the-politics-of-climate/>.
- UN: Climate Change, "What is the Paris Agreement?" Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>.
- Van Lierop, W. (19 December 2020). "We Need An Operation Warp Speed To Battle Climate Change". *Forbes*. Available at: <https://www.forbes.com/sites/walvanlierop/2020/12/19/we-need-an-operation-warp-speed-to-battle-climate-change/?sh=4157ad1378bf>.

Appendix A: Conceptualization of Constructs

The CIS Model (CIS)

Create

The U.S. Government creates innovative political products (i.e., ideas, proposals) that can help fight climate change (CIS - C1)

The U.S. Government produces innovative political products (i.e., ideas, proposals) that can help fight climate change (CIS2 - C2)

The U.S. Government generates political products (i.e., ideas, proposals) that can help fight climate change (CIS - C3)

Inform

The U.S. Government provides detailed information on how climate change affects my life (CIS - I1)

The U.S. Government offers enough resources to inform me about political products that can help fight climate change (CIS - I2)

The U.S. Government provides detailed information on the new roles and responsibilities associated with climate change (CIS - I3)

Support

The U.S. Government takes actions to support its climate change political products (CIS - S1)

The U.S. Government encourages me to contribute in the implementation of its climate change political products (CIS - S2)

The U.S. Government proves that my involvement in the implementation of its climate change political products is important (CIS - S3)

Adapted from Antoniadou, N. & Mohr, I. (2019b)

Government Performance (GPE)

I am satisfied with the U.S. Government performance to deal with major issues (GPE1)

The way the U.S. Government deals with major issues increased its popularity (GPE2)

I am loyal to the U.S. Government (GPE3)

Adapted from Antoniadou, N. & Haan, P. (2019; 2018)

SHIPPING

THE EVOLUTION OF DIGITALIZATION IN THE MARITIME INDUSTRY

By

Daniil Sourianos

CIM MBA Shipping Scholar

The fast growth of technologies and the generation of data have created interest in digital transformation and in a technology-push environment. The Internet of things (IoT) has a significant role in this evolution of digitalisation in shipping. The utilisation of IoT, data analysis and techniques of artificial intelligence within the maritime industry will lead to several enhancements for companies based on data-driven technology applications. These include daily operations, safety, connectivity and profit maximisation.

The current paper aims to provide insights into the importance of digitalisation in the maritime industry. This survey is based on the opinions of employees working in shipping companies with regards to the significance that data and connectivity can bring to day-to-day activities. Additionally, there is research into the extent to which it is a priority for companies to analyse gathered data and find ways to increase operations efficiency. Collected data needs to be used effectively by data-driven technologies to create seamless interactions and profit maximisation for shipping companies.

Among other valuable findings, during this research it was found that some companies have started adopting emerging technologies (such as AI, cloud-based solutions, IoT etc.), and professionals expect that digitalisation will enhance various aspects of their daily tasks.

Leading players and several start-ups in the industry have a significant role in the push for emerging technologies by promoting new processes, operations and applications. The IoT, artificial intelligence, machine learning and predictive analytics bring revolutionary changes to traditional processes and the overall strategy of a company. With multiple sources generating data in abundance, data analytics is an essential technology improving the operations of the shipping industry by deriving a correlation between the data collected from various sources (for instance maritime accident data, oceanographic data etc.) and applying relevant and new algorithms automatically on the establishment of any correlation between pieces of information.

Also, with the implementation of certain technologies, methodologies and frameworks, successful improvements can be made within a short period of time, by pushing maritime digitalisation forward. Moreover, long-term improvements will increase competitiveness within the industry, by continuously increasing quality.

Keywords: Emerging Technologies, IoT, Connectivity, Data, Digitalisation, Digital Transformation.

1. Introduction

1.1 Area of interest

The concept of digitalisation has recently been the subject of considerable discussion and much consideration, due to the fast growth of technology and the significant amount of data collected, albeit that sometimes this is without it being processed and used appropriately.

Emerging technologies are still not applied in various operations in the maritime industry. Their value has been discussed, while pioneers and first movers in the industry have started to digitalize procedures to save time, reduce human errors, increase safety and minimise overall effort while maximising profit.

The purpose of this paper is to explore the importance of digitalisation in the maritime industry and to get insights into the potential implementation of digital transformation. One of the main concerns of this survey is to identify what types of data are being collected and how they could be used effectively by data-driven technologies to create seamless interactions and profit maximisation for shipping companies.

2. Framework and methodology

Primary data was collected over a period of five weeks by an online questionnaire, consisting of 20 questions, followed by quantitative analysis. In total, 37 replies were gathered from shipping professionals, who hold different levels and varied expertise within their organisation, and have at least two years of professional experience.

This research aims to explore potential applications of the incoming data-driven digitalisation and digital transformation in the marine industry. The collected data, technology architecture, the investment priorities of each company and the thoughts of every participant may significantly differ from time to time. Thus, the survey assesses the current situation and recommendations are based on the author's perspective.

The **research rationale** concentrates on the importance of implementing emerging technologies, the collection and efficient usage of gathered data, as well as identifying how the use of digital technology would contribute positively to employees' day-to-day activities. The research evaluates the current main challenges, including the importance of digital solutions for companies and the potential adaptation to new processes by investing in digitalisation.

The **objectives** are as follows:

1. Identify the type of data which is collected onboard, and how effectively it is used to maximise optimisation.
2. Analyse the willingness of employees to adopt digital technologies in day-to-day tasks.
3. Identifying factors that challenge the effective use of digital methods and data.
4. Explore applications of collected data and their significance within the maritime industry.
5. Provide strategic recommendations to management level regarding increasing the effectiveness of data usage and digitalisation.

The **research question** "Will digital transformation cause an evolution in shipping?" comes with the **hypothesis** (anticipation) that digitalisation and the implementation of emerging technologies will have a unique impact in the maritime industry.

3. Discussion and survey results

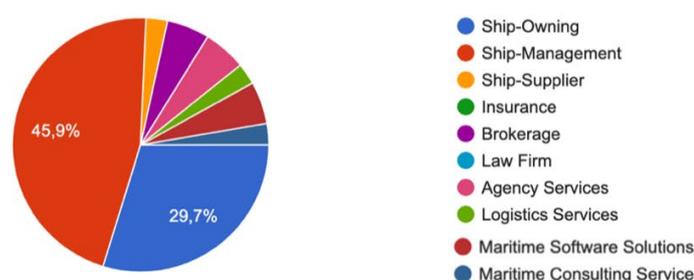
The survey questionnaire is based on the following questions:

- Identification of the company and shipping professional/ employee (general activity, job title/ position of the employee, number of vessels)
- Importance of the IoT and data gathering
- Types of data and methods of data collections
- Existing use of data and relevant optimisations
- Critical questions regarding use and adaption of technology and digitalisation
- Compliance with "Resolution MSC.428(98)" (Maritime Cyber Risk Management in Safety Management Systems) regulation

Below, all questions will be presented, analysed and critically discussed, providing some examples in some cases. The main focus is given to data collection and data-driven technologies since they are a fundamental element for the implementation of Maritime 4.0. Seeing that digital solutions are not a priority for a few companies was unexpected, and it is very interesting to investigate how they would prioritise their technology investments.

Please state your Company's activity

37 responses

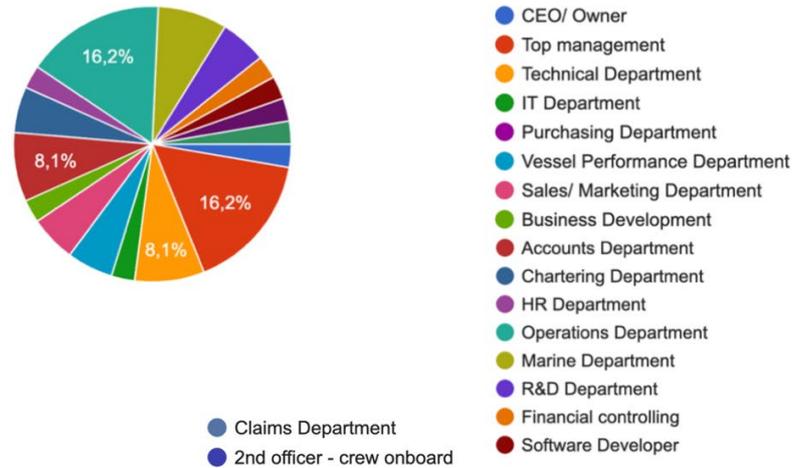


Graph 1: Company's activity

Graph 1 shows information about the company’s activity. The largest segment of participants, at 45.9% of total replies, work in Ship-Management companies. The second biggest segment refers to employees of Ship-Owning companies, at 29.7% of the total participants. The remaining 24.4% reflects the opinions of employees who work in other related activities, such as brokerage, agency services, software solutions (5.4% each), etc. Ship-management and ship-owning companies are a strong interest in this research, since they often need to make varied decisions, mainly for vessels’ operations, which directly affect the enterprise. Decision-making is based on how actual and accurate data can further improve the use of digitalisation, enhance the automation of operations and leverage profit maximisation.

Please state your job title/ position in the company

37 responses

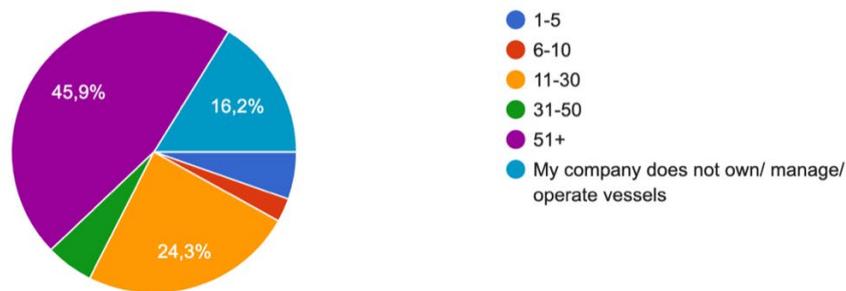


Graph 2: Participant’s positions in the organization

Graph 2 describes the job-position of participants. It is noticeable that most of the replies come from top management (C-suite) and operations departments (accounting for 16.2% each), followed by accounts and technical department (8.1% each). It is worth mentioning that among the responses many answers come from CEOs/ owners, on-board officers, an officer of a claims department, brokers, and also from employees of the vessel performance department (representing 18.9% of the overall chart). The remaining 32.5% of the answers are obtained from various other departments, as can be seen in the legend of Graph 2.

Please state the number of vessels your company owns/operates

37 responses

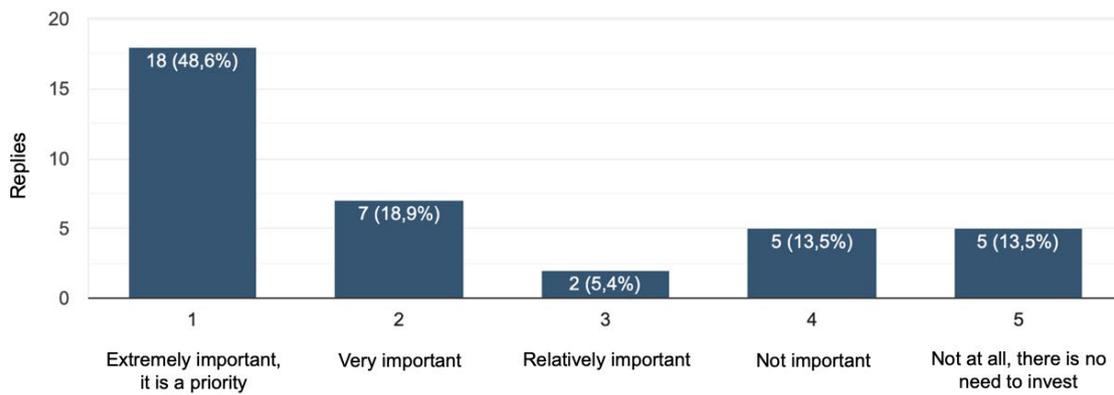


Graph 3: Fleet size of the company

This pie chart presented in Graph 3 provides information about the number of vessels that the company owns and/ or operates (if any). These are classified according to the size of the companies, depending on the acquired fleet (number of ships, as per legend of the Graph 3). The purple segment, which accounts for 45.9% shows that the professionals who took part in this survey work for big shipping companies (owning/ managing 51+ vessels). The second biggest group comes from companies that have 11-30 vessels (24.3%), while 5.4% of the participants of this survey work for companies that own 31-50 vessels. A small number of participants, accounting for 8.1%, work for companies that have a fleet of less than 10 ships. It should be mentioned (and considered) that 16.2% of the overall replies reflect the perceptions of employees who work for companies which do not own, manage or operate any vessels. Some examples of those companies are maritime solution services, agency services, brokerage and ship-suppliers.

For the company, how important is the use of Internet-of-Things (IoT) and data collection from vessels?

37 responses

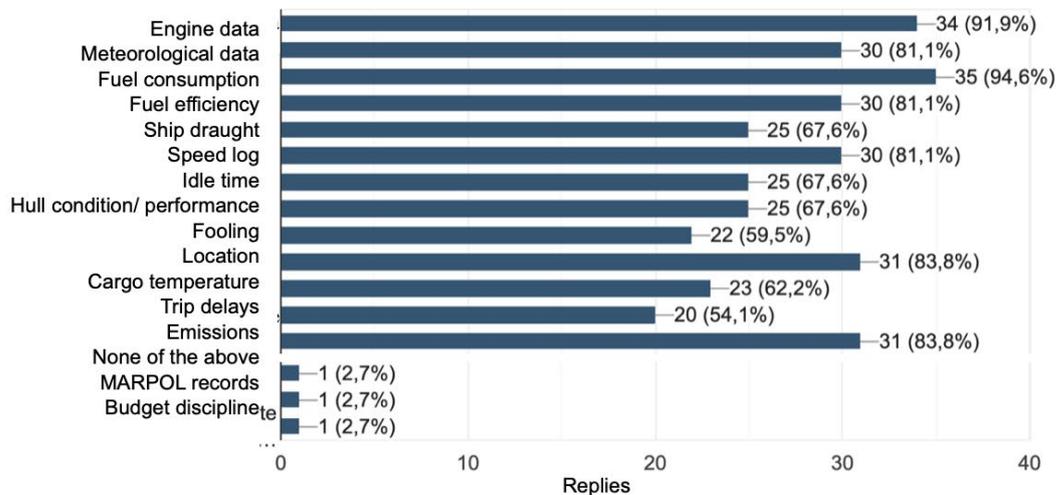


Graph 4: Importance of IoT and data collection from vessels

Graph 4 describes the importance of IoT and onboard data collection for the companies. Overall, a significant majority of 67.5% (level 1 and 2) state that the IoT and data collections are really important for the company, and can be considered as a priority for their next decisions, initiatives and activities. On the other hand, 27% (level 4 and 5) support the view that there is no need for companies to invest in those technologies. This opinion may reflect participants' replies for those whose companies do not operate vessels, or professionals whose activities are not affected by those technologies (i.e. people who work in claims or the accounts department). Furthermore, for companies that manage a small number of vessels (<5) or vessels that are quite old and will be delivered for scrapping within the next two to three years, it might not be worth investing in data-driven technologies. Without doubt, making an investment in an old vessel, companies most probably would not anticipate the expected return on investment (ROI). Likewise, if the company works with only a few vessels and needs to keep them in drydock for additional days for system installations, that can cause trading absence, which has to be considered very carefully. However, the results of this survey reflect big companies (dealing with 51+ vessels) that work traditionally and have not invested in new resources and/or skills.

What type of data does the vessel collect?

37 responses



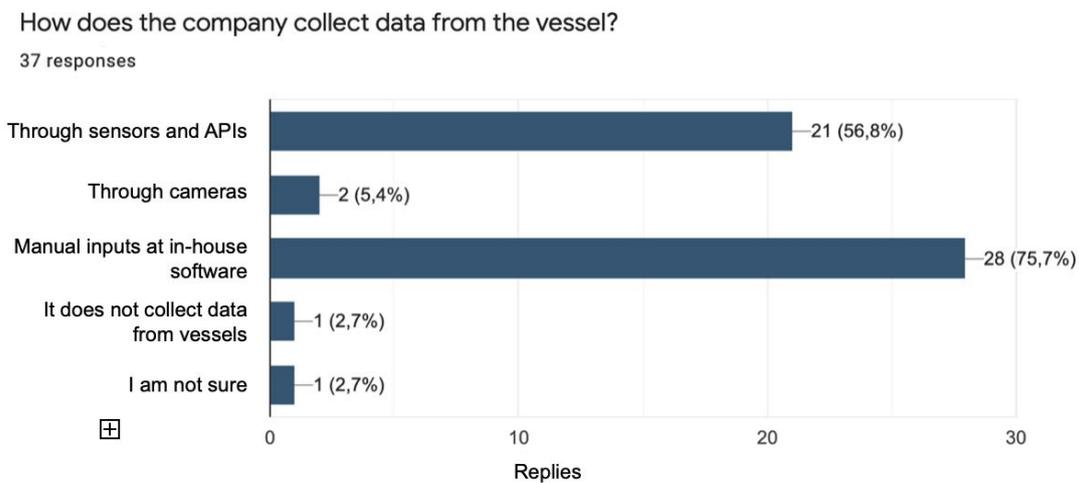
Graph 5: Raw collected data from vessels

Graph 5 gives information about raw data collection onboard. The vast majority of companies (94.6%) dealing with vessel operations are interested in fuel consumption. This output is very logical since it is the biggest cost of the vessel while it is sailing. Most companies (91.9%) also gather engine data, such as temperature, engine speed and power, propulsive power, propeller pitch, etc. Engine data is directly connected with the ship's fuel consumption, which is affected

by the condition of the engine. Thus, it is highly important to keep a track and maintain a high level of engine condition. A significant majority of the companies keep track of data related to meteorological/ oceanographic data, fuel efficiency, speed log (81.1%), location tracking and emissions (83.8% each). All of the above data is highly important in considering the fuel consumption plan, measuring safety and complying with regulations. Most of this data is collected by purchased or in-house software that is used for fleet management. Having collected all the above data and by using it as an input in data science algorithms, companies can detect patterns of sailing paths so that, according to estimated weather conditions, operators can efficiently manage the sail and optimise the route.

Around two thirds (67.6%) of the companies collect data regarding the ship draught, idle time, hull condition/ performance. 62.2% keep track of cargo temperature, which is useful while carrying some specific cargoes (such as some chemicals, frozen or raw goods etc.).

It is worth highlighting that only 54.1% of the companies keep track of whether the vessel is falling behind schedule. Emerging technologies could help with increasing the vessel performance and port operations efficiency. Idle time could be reduced by setting an accurate plan of loading and discharging. Based on the current questionnaire, only a quarter of the companies collect the necessary data that could be useful for further investments and analysis.

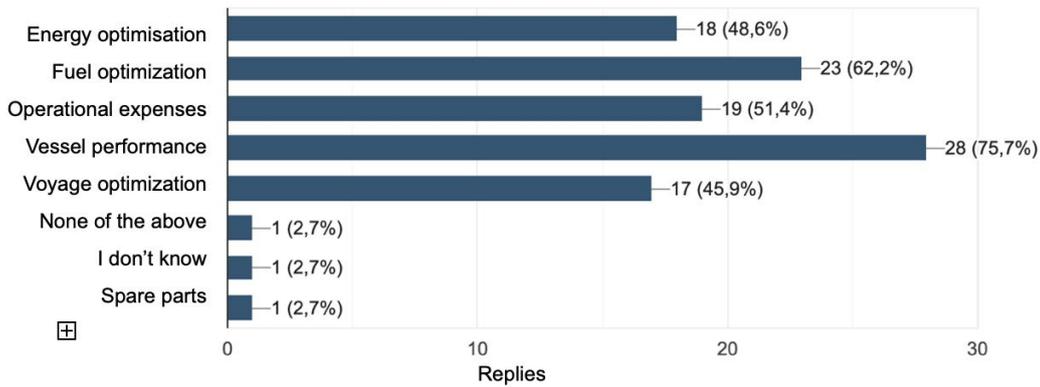


Graph 6: Methods of data collection from vessels

According to Graph 6, it seems that most of the companies have vessels in which data gathering is being performed through manual inputs on in-house software. There are only a few cases, most probably related to older vessels, where owners wanted to find a way to enhance the data collection. In this case, the collection process is achieved by utilising cameras to identify machine indicators, process the image and transform the analogue signal into digital. Even though image processing is a promising technology, there is a need for investment in good quality cameras for collecting accurate results, especially when equipment might be old and be operating with analogue signals. If results are not accurate and only estimations are being collected, it can prove of some value to a general optimisation, but further investment would not be recommended (i.e. investments in vessels that will soon be scrapped). Half of all vessels are new enough, or owners have invested money in system installation, to collect data seamlessly through sensors and by taking advantage of application programming interfaces (APIs).

In your company, in which parts of the shipping operations is data collection effectively used to maximise optimisation?

37 responses



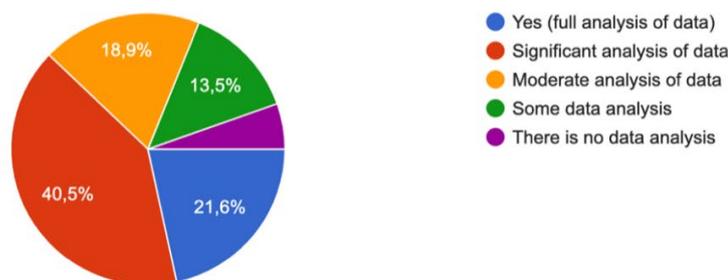
Graph 7: Areas that data are effectively used

Graph 7 shows that most companies (75.7%) seem to be interested in analysing the overall vessel performance. 62.2% of the sector is investing time and resources in fuel optimisation, which helps to significantly increase the profit of the company. However, only half of the companies pay attention to their operational expenses (51.4%), while fewer organisations note value on energy (48.6%) or voyage optimisation (45.9%), with the aim of identifying the optimal route for future voyages. Energy is something that will attract a lot of attention within the coming years, whilst there are International Maritime Organization (IMO) and Sustainable Agenda Goals due by 2030. A few of those goals, such as the affordable and clean energy (goal #7), the responsible consumption and production (goal #12), climate action (goal #13) and life below water (goal #14) are directly linked and can be affected by a vessel's operations (IMO, 2020).

A highly interesting output of this survey is that not all companies try to optimise vessel operations, or budgeting. Thus, this survey shows clearly that there is a lot of space for improvements, new initiatives and further investment within the industry.

Does the company effectively analyse data collected onboard?

37 responses

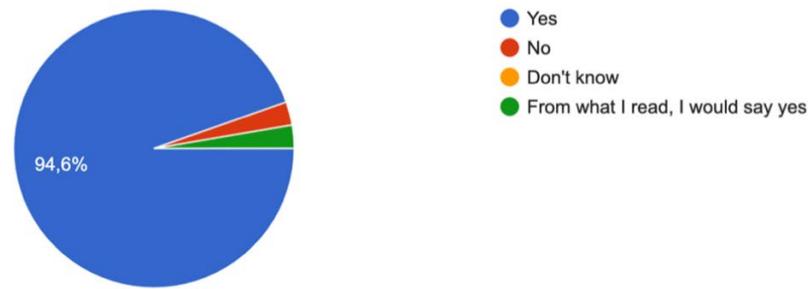


Graph 8: Evaluation of analysis of data onboard

Graph 8 illustrates the level of data analysis that is being done by the company. Only one in five companies makes a full analysis of their data. A little less (40.5%) than half of businesses make a significant analysis, while 18.9% declare that they only proceed with a moderate analysis of their data. 19% of the enterprises do a partial or no data analysis at all.

Can the use of digital technology positively contribute to the optimisation of vessels' performance and shipping operations?

37 responses



Graph 9: Evaluation of digital's technology's contribution

Graph 9 clearly shows that the utilisation of digital technologies can positively affect the optimisation of vessels' performance, as well as other shipping operations. Only a small percentage (5.4%) of the participants in this survey are not yet convinced of technology's impact.

One of the open-ended questions that participants were requested to respond to was stated as follows: "In your opinion, where do you feel that the use of digital technology would contribute positively to your day-to-day activities?"

Among all replies, more emphasis was given in the following sections: (1) vessels operations and relevant optimisations, (2) data, (3) crewing and (4) automation with regards to daily tasks. Professionals mainly see a lot of value in starting to effectively use collected data and apply its impact after analysis on several vessel operations. For instance, operators need to monitor the vessel and its safety, as well as the crew's safety and needs.

The proper use of data is essential for the company to stay competitive within the market and achieve scalability. Predictive data can contribute to those processes, such as when a dry-dock maintenance is preferred (having the least possible absence offshore), or analysis of seaborne commodity trades can easily affect chartering and trading.

A lot of data is collected through sensors and transmitted via satellites, but still, its accuracy is not precise. This might be one of the biggest challenges in the industry. Communications allow massive volumes of data to be transmitted at a reasonable cost. This digital information can assist in a better evaluation of the ship's performance, such as evaluating hull condition, engine performance and the overall vessel's condition.

For operators in small companies that do not use any software, it seems that the instant tracking of vessels (speed, consumption, location, condition, etc.) as well as identifying optimal routes would have a significant effect. For instance, there is a real need for companies to be able to assist immediately in any agency service that might be time-consuming. Additionally, it is essential to monitor the vessel's purchases (quantities, costs and supplier). Processes need to become simpler and be automated.

Digital technology could contribute positively to navigation, communication with the vessel, the delivery of spare parts, improvements in the performance of the fleet and to acquiring control of all processes on board. Overall vessel performance monitoring is essential for each company. Participants point out that monitoring (fuel consumption, energy optimisation, engine and overall vessel performance, as well as meteorological data, voyage optimisation, vessel tracking and status) needs to be easier and faster in terms of analysis.

Marine, cargo operations and vessel capacity could be optimised as well, aiming to save time by automating loading and discharge at ports. For instance, tanker companies rely on letters of guarantee from charterers when discharging. A digitalised bill of lading could be an ideal solution to enhancing this process. Another example is the shipping and storage cycle of products that can take up to 30-40 days. The current way of funding logistics transactions relies on paper core documents (white papers). If the bill of lading and warehouse receipts could be digitalised, then structure financing could become seamless. Thus, demurrage and other fees in shipping contracts could be paid and authenticated automatically. Digitalisation could also assist in the reduction of operational expenses by giving a better view of procurement processes and other standard costs (Macdonald, 2020).

It is clearly stated by professionals that there is a need for understanding the actual performance of the vessel. Further, ease of daily operations, procurement and the safety of life at sea should be areas for further enhancement.

Regarding data, participants mentioned that there is still a considerable potential for improvement, almost in every aspect of shipping. Particularly, there should be more accurate data collection from the vessel and its analysis needs to be speeded up. Some professionals raised the importance of generating and constantly monitoring KPIs, as well as proceeding with data mining of incoming information from the ship and mapping it with external data sources, aiming to achieve maximum operational and commercial efficiency.

With regards to crewing, participants raised the matter of utilising AI systems for recruitment to enhance the quality of selected seafarers. Additionally, it was pointed out that digital technology could contribute to improving efficiency on board, as well as crew welfare and well-being.

Many participants commented about the unique importance of automating manual processes. By automating procedures such as alternative ways of communication, rather than exchanging emails, the overall performance and satisfaction of employees could be further enhanced. Moreover, an emphasis was placed on the increased efficiency if processes become automated, reducing the cost and the time needed for traditional procedures. In this way the productivity of the entire company could be increased.

Automation can assist particularly with early awareness of potential problems, that may affect overall performance. Also, a continuously updated data bank could be created for record-keeping and future reference, in both the ship and ashore. Essentially, the limitation of manual entries and the effective utilisation of data could lead to a more effective decision-making process. Timely detection of problematic situations should be established giving a holistic view of the company and its fleet. As a consequence, after reviewing this question, it can be seen that digital technology could help the shipping industry to improve.

The second open-ended question that participants were requested to answer critically, was stated as follows: "In your opinion, what is the biggest challenge for the effective use of data gathering from the various software programs and tools?".

Many professionals focused on the accurate collection, analysis, correlation and interpretation of the data. Apart from the previously mentioned processes, participants highlighted the significance of data accuracy and reliability, and mentioned that occasionally there are manual inputs whose accuracy cannot be verified. This data (information) is transmitted from sea to shore. Once data is stored in various databases, heterogeneity needs to be carefully examined. Before any data analysis takes place, proper filters should be applied for data cleansing, noise reduction and to ensure uninterrupted collection.

Participants highlighted the need for having proper systems in place to manage all data with safety. There should be effective integration of various software, which monitors and collects data. The level of technologies currently in use in some cases is not enough. Another identified issue is related to officers (offshore) who focus on specific data, without taking into consideration other aspects that may affect the vessel's performance while at sea.

Additionally, it was mentioned that "there is poor understanding from software developers of the marine industry", which may refer to the development of in-house systems. Hence, the most significant challenge seems to be the accuracy of data and the reliability of the various software programs.

Even if there is a lot of data available, companies are not using the proper software with an intuitive interface for data analysis. It is essential to have appropriate data analysis on tight operational budgets and time-frames. Due to the big volumes of data, companies need to automate data processing and drive a data culture. For businesses to survive in a competitive marketplace, the use of data for economies of scale should also be kept in mind.

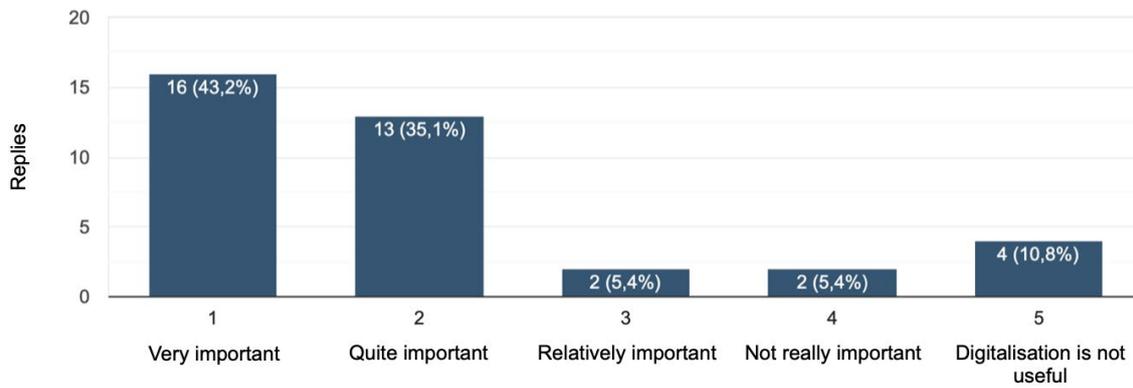
Another challenge is related to technological issues on board and the crew's operational level, regarding the detailed and daily observation of vessels. For the time being, the human factor is still of the utmost importance.

Notably, organisations need to set up initial requirements, familiarize the operators with systems in place and follow up with relevant compliance. In many cases it is clearly stated that, ship-owners are naturally cautious when it comes to new technology, especially when it takes time to adapt it. Possible cyber-attacks bring higher risk. But a lack of funding and proven return on investment is often the biggest challenge.

68% of participants stated that the biggest challenge with AI is the lack of acquired skills regarding the use of technology. In fact, around a third declared there was a lack of cases that had proven advantages for the business.

How important are digital solutions for your company?

37 responses



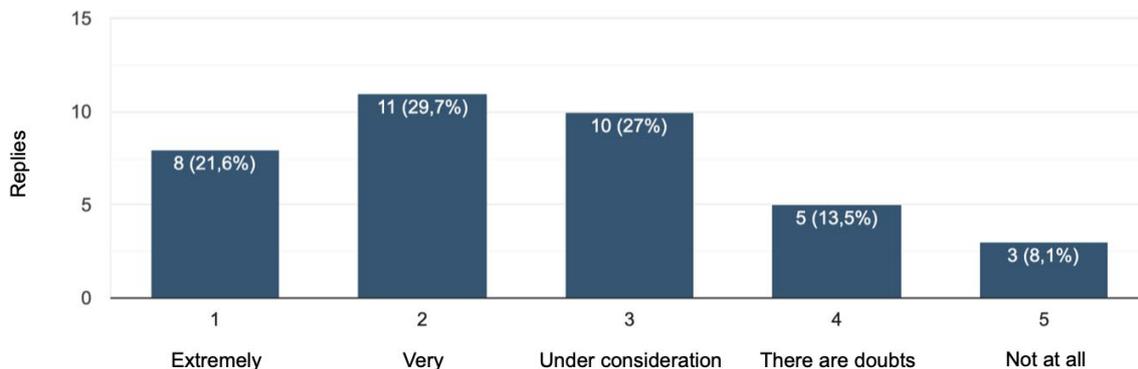
Graph 10: Importance of digital solutions for the company

Graph 10 depicts the percentages of participants who believe that companies could leverage digital solutions. Most of the professionals (78.3%, scale 1 and 2) believe that digital solutions are vital for companies. Such solutions could offer value in the protection of systems, increased productivity and efficiency, enhanced profitability and increased employee satisfaction. Security is one of the main issues that every IT department has to deal with. Especially when new devices, applications and programs emerge daily, and the vessel is overseas carrying a million-dollar cargo. The IT head needs to ensure that a cyberattack does not threaten any identity. Further, employees can undoubtedly get benefit from the implementation of new technologies in companies. As a result, a cost-benefit for each business is obtained, by setting the right digital transformation strategy.

21.6% (scale 3-5) of the participants, do not see the importance of digital solutions within the company. The business can be profitable without utilising digital solutions necessarily. Nonetheless, technology can help to smooth activities, operations and overall efficiency. New human resources, with a fresh mindset, skillset and ideas, need to be hired by the company to leverage technology.

How willing is the company to upgrade its systems and processes by investing in new data-driven technologies for further digitalization?

37 responses

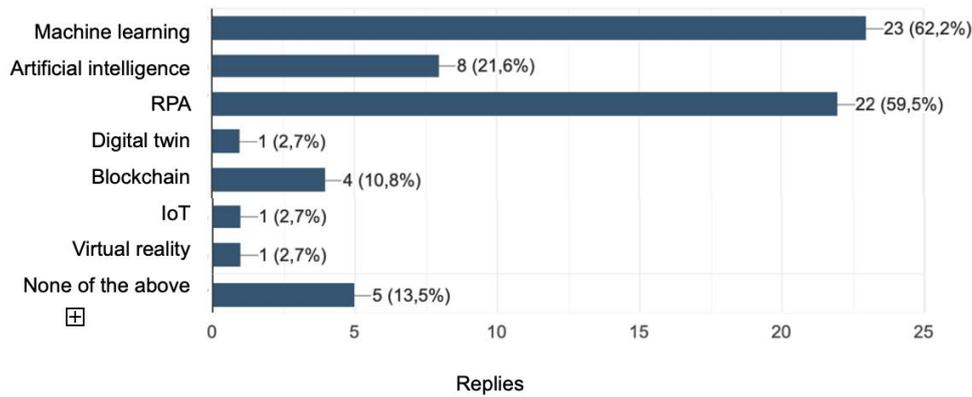


Graph 11: Willingness of the company to invest

Complementary to the previous question about the importance of digital solutions, Graph 11 illustrates the willingness of the company to upgrade its systems and processes by investing in data-driven technologies for further digitalisation. Even if the results tend to show that half of the businesses (51.3%) are willing to do that, it seems that the remaining half is very cautious about their next steps. Technology and digitalisation are slowly being introduced and used in the industry. The maritime industry is based on supply chains, and technology needs some time to prove the potential impact that it can bring in motion. Companies might be hesitant to invest because ROI cannot be easily defined yet.

Which of the following data-driven technologies is a priority for the company?

37 responses



Graph 12: Priorities of the company for new digital applications

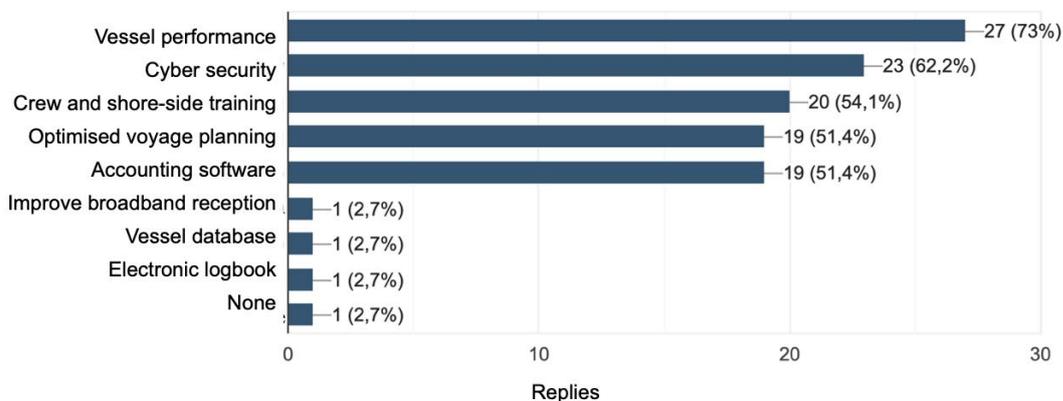
Graph 12 compares the data-driven technologies that are priorities for various shipping companies. Most of the participants (62.2%) preferred investment in machine learning (i.e., predictive maintenance and systems integration). Companies also showed significant interest (59.5%) in automating their processes by using robotic process automation (RPA) (i.e., keeping an electronic logbook) aiming to simplify existing traditional procedures. It seems that digitalisation and digital transformation should be put in place at the soonest opportunity. Likewise, AI (21.6%), blockchain (10.8%) and digital twinning (2.7%) should follow.

However, AI should have been a priority for each company because automation and the rest of the proposed activities are based on it. By implementing the IoT and generating accurate data and reliable transmission, companies will be able to rely on their activities in advanced technologies such as machine learning, digital twinning and blockchain.

About 13.5% of the professionals clearly stated that companies do not have a plan to evolve new technologies soon. Shipping trading relies on several different elements of the supply chain. Thus acquiring, implementing and integrating advanced technologies is not a very easy step, but still possible after conducting proper feasibility and financial research.

What kind of digital solutions has the company invested in so far?

37 responses



Graph 13: Evaluation of current utilised digital solutions

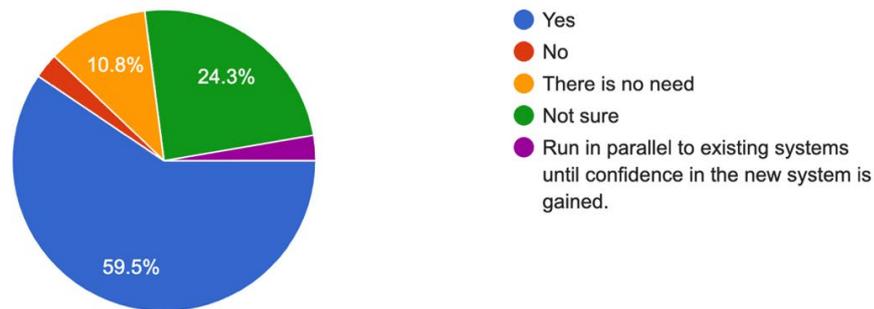
Graph 13 describes the digital solutions that companies have already invested in. Notably, most of the companies (73%) are aware of the value of enhancing vessels' operations and performance optimisation. 62.2% have invested in cybersecurity so far, which is linked with the incoming "Resolution MSC.428(98)" legislation. As technology finds more and more applications in the maritime industry, it is extremely important for companies to prevent any potential hacks and secure their processes and data.

Half of the companies have started to apply digitalisation in areas of crew and shoreside training, accounting processes, and voyage planning optimisation. The value of technology adaptation could be realised once the crew and employees are aware of systems and their importance, and then trained in how to use them properly. Acquisition of the proper skill set is particularly important, and companies have started becoming aware of the need to invest in their people. Accounting processes used to be very bureaucratic and time-consuming, however, RPA systems can be implemented in numerous applications, creating easier, faster and sometimes more accurate results.

Voyage calculation, planning and optimisation are carried out automatically by software that most companies already use. There are basic versions, but in many cases, there is customised software which provides a variety of data for more efficient and accurate fleet management. A small portion (2.7%) has started investing in blockchain, data exchange, electronic logbooks, the IoT and virtual reality. Also, participants stated that it is essential to upgrade databases on vessels, improve their in-house software, and also improve broadband reception.

Would you be willing to start using new software in your day-to-day activities?

37 responses



Graph 14: Willingness of participants to use new software

Graph 14 illustrates the willingness of professionals to start using new software in their day-to-day activities.

Through this question, the willingness to adapt to a new process is being evaluated. A majority of participants (59.5%) appeared willing to incorporate software into their workflow. Whilst the remaining 40.5% of the professionals seemed reluctant to adopt such tools and are uncertain or sceptical about how they would affect performance.

Would you trust a drone and/or image processing to replace the human element in various activities in the shipping industry?

37 responses



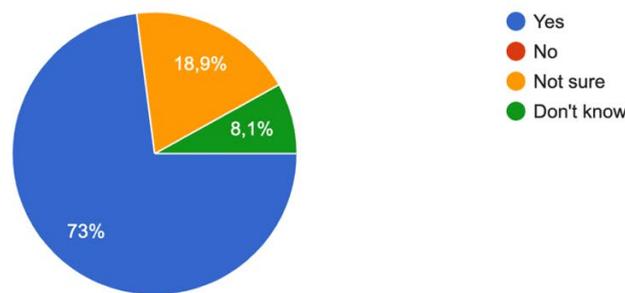
Graph 15: Evaluation of image processing versus human perception

Graph 15 represents the trust of professionals in a drone to take over the action of a human. Some activities, such as hull inspections, are very challenging, demanding and entail serious health and safety hazards if the proper precautions are not taken. A drone and/or image processing could potentially replace this human activity. Only a quarter (24.3%) of those in the survey felt confident to trust a drone and/or image processing software to replace the human element in various activities. Thus, even if technology has proven its value in other industries, professionals are not yet convinced that

drones and image processing could be applicable in the shipping industry. 16.2% of the participants gave a clear answer that they cannot trust any drone and/or image processing, while 37.8% stated that human inspection cannot be replaced. They believe that the personal experience of professionals is crucial, and that accurate inspection cannot be transferred to any processor. Some professionals believe that these actions cannot rely only on the action of drones. About 8.1% of the participants replied, 'Don't know', which at least leaves some space in the industry for research. It seems that professionals are not convinced yet about the accuracy and efficiency of these processes being left to technology alone. A small portion of professionals, 13.6%, believe that it would be better to have technology assisting humans in their day-to-day tasks. This hybrid model can be utilised as we slowly progress towards having complete trust in machines to accurately complete the tasks assigned to them. Given the above, for the time being, technology could assist human actions, but not replace them completely. A few professionals are reluctant to use technology to replace the human element, concerned about hacking risks and ransomware attacks such as those experienced in recent years. One professional mentioned that "it is not possible, for the time being, to replace the human eye and perception. For instance, during COVID-19 pandemic, classification societies were unwilling to carry out class surveys remotely, regardless of the extended information and the data imaging reported from the vessel."

Has your company taken all the necessary steps and actions in order to comply with the adopted 'Resolution MSC.428(98)' (Maritime Cyber Risk Management in Safety Management Systems) regulation that will be implemented after 1 January 2021?

37 responses

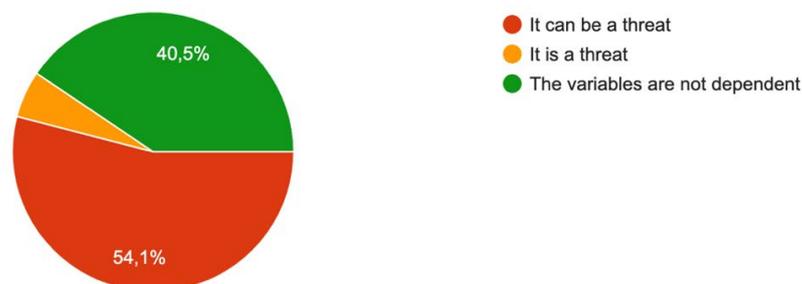


Graph 16: Evaluation of compliance to "Resolution MSC.428(98)"

Taking a look at the Graph 16 above, it looks like most of the companies (73%) have already taken all the necessary steps and actions to comply with the incoming legislation Resolution MSC.428(98) (Maritime Cyber Risk Management in Safety Management Systems), which becomes effective after January 1st 2021. The percentage that replied 'not sure' or 'don't know' come from professionals whose companies are not affected by this legislation and hence they are not aware of its requirements.

In your opinion, do you believe that the use of digital technology will cause increased unemployment rates in the shipping industry?

37 responses



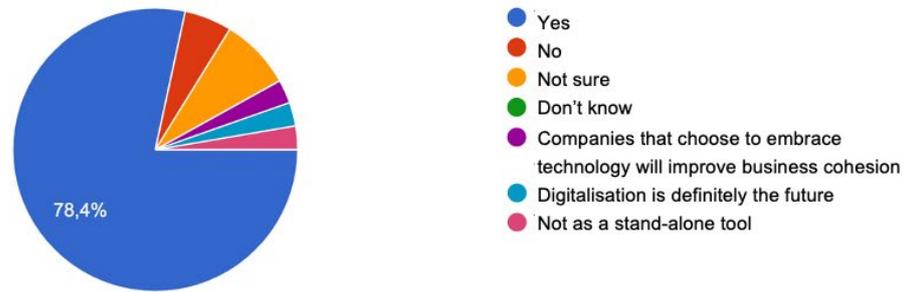
Graph 17: Evaluation of the effect of digital technology in unemployment rates

Based on Graph 17, it seems that more than half of the participants think digitalisation might pose a threat to their employment, while 5.4% are certain of it. In contrast, about 40.5% of the professionals consider digital technology and unemployment are two variables, that are not correlated. Even if technology is considered to be a threat for some employees, it is a fact that when possible, through digitalization, demanding tasks could be simplified. Thus, the accuracy of produced

data and its results could be increased, as well as making procedures paper-less. Therefore, thanks to the digitalisation, several operations in the industry would see improved efficiency. At least, for the time being, digital technologies cannot replace humans, but they can be used as complementary tools.

Finally, do you believe that digitalization is the future in the maritime industry?

37 responses



Graph 18: Evaluation of the importance of digitalisation in the maritime industry

Based on the above Graph 18, it looks like a significant 81.1% of professionals in the industry believe that digitalisation is the future. But, as was mentioned by the participants, data collection must be accurate and processed using a well-designed and precise software program. Companies should be cautious about their next moves and technological areas of investments because such initiatives need considerable funds and are expected to obtain a tangible return on investment. Companies that choose to embrace technology will be able to create digital workplaces that will improve business cohesion, reduce cost and optimise their procedures and workflows. It is worth mentioning that another participant believes that digitalisation is the future, but not as a stand-alone “tool”. Well trained and educated crews are major components for successful operation and safety. In contrast, only a small percentage of 13.5% are not yet convinced of the added value digitalisation can bring in the maritime industry.

4. Conclusion

Although the survey asked a relatively small pool of 37 shipping professionals, this could be taken as an indication that the industry is giving serious consideration to what the future has to offer. Even though digitalisation will meet the future needs of companies and help them remain competitive, it will take a while for the maritime industry to fully adopt digitalisation and become compliant. First-movers and pioneers in the industry are aware of incoming data-driven technologies and thus have started implementing new methods and processes to manage their fleets efficiently. In contrast, companies who manage smaller fleets, use more traditional operations, without analysing and making sufficient use of their data. It's only a matter of time, though, before companies start investing in new solutions, processes and tech-savvy human capital. Digitalisation had not yet been fully implemented by companies, because only limited regulatory frameworks are in place, the investment is risky and there is a lack of available resources.

There is a lot of raw data collected onboard. Firstly, companies need to proceed with data cleansing, and evaluation, and form a visionary data and analytics strategy. Secondly, they need to identify the relevant KPIs that need to be measured, and thirdly form a digital transformation strategy. It is essential for companies to proceed with a multiphase investment plan and start by hiring proper human resources, utilising analytics tools and installing equipment (software and hardware, offshore and onshore). Each company needs to make an assessment and form an effective digital transformation strategy to achieve tangible benefits.

One of the biggest challenges is the accuracy of data, particularly data collected from old vessels in the form of manual entries. Recently built ships have installed advanced and accurate sensors, enabling connection with software (APIs) and enforcing automated processes. The viability of onboard IoT sensors allow a good connection between vessels and offices. As data becomes widely available, companies need to start building data lakes, and engaging in efficient planning and decision-making. Thus, marine education must be updated and cover the latest technology trends, aiming to offer value to current and future industry needs.

Market opinions are claiming that advances in technology will have a massively negative impact on employment. However, the industry needs to look at the impact of technology from a transformational point of view. To embrace the

benefits of technology, companies need to support it with new professional profiles and skillsets to drive its manufacturing, operation and maintenance.

Digitalisation is an essential process for every company in the industry, and unavoidable for those who want to stay secure, deliver fast and be profitable. It will increase productivity, driven by the ease of sharing data, knowledge and more efficient trading processes. Digital shipping will not only maximise efficiency but also provide economies of scale.

Companies need to start by cleansing their existing raw data and visualising it. As a first step, it will be extremely helpful to understanding the actual performance of the vessel and its needs. Further, companies need to upgrade their databases and to mitigate in the cloud for easier access, maintenance and connectivity. It is important for all companies to understand and emphasise the importance of retraining and upskilling people. Thus, they will be able to invest and adopt more complex technologies.

Those who fall behind in technology, investment in digitalisation, as well as reconsidering their organisation's cultural transformation and management change, will lose competitiveness. Shipping companies will soon come up with new competitive advantages, which will increase their operational efficiency and productivity. New ventures will take place in new markets, as well as business segments. Digitalisation and digital transformation will boost the bottom line and create socio-economic prosperity in the maritime industry (Riviera, 2019).

References

Corporate Author i-scoop, 2020. *Industry 4.0: the fourth industrial revolution – guide to Industrie 4.0*. [Online] Available at: <https://www.i-scoop.eu/industry-4-0/> [Accessed 5 August 2020].

IMO, 2020. *IMO and the Sustainable Development Goals*. [Online] Available at: <http://www.imo.org/en/MediaCentre/HotTopics/Pages/SustainableDevelopmentGoals.aspx> [Accessed 20 September 2020].

KPMG, 2020. *Digital Transformation Mapping*, Switzerland: KPMG Global.

Macdonald, F., 2020. Digital Ship. *Digital Ship*, June, 20(6), pp. 12-16.

Riviera, 2019. *How maritime can make the most of Industry 4.0*. [Online] Available at: <https://www.rivieramm.com/news-content-hub/how-maritime-can-make-the-most-of-industry-40-54225> [Accessed 14 September 2020].

THE INTERNATIONALISATION OF AFRICAN EMERGING MARKET SMEs – A LITERATURE REVIEW AND PROPOSITIONS.

By

Dr Irene Kujala

Assistant Professor, School of Business and Economics, Åbo Akademi University

Dr Richard A Owusu

Associate Professor, School of Business and Economics, Linnaeus University

This paper concentrates on research into the internationalisation of emerging market SMEs (small and medium sized enterprises). We discuss various conceptual approaches to the internationalisation of SMEs, emerging markets, and the African context. Internationalisation theories, such as the stage models (e.g. Uppsala Model and innovation-related models), the business network theories and international new venture approaches, are most relevant for SMEs when discussing the role of risk aversion, collaboration, the business context and entrepreneurship for internationalising SMEs. As a specific example, we focus on the textile industry in sub-Saharan Africa. We conclude with proposals for future studies.

Keywords: Firm internationalisation, business network, institutional actors, emerging markets, SMEs.

1. Introduction and research problem

One feature of globalisation during the past decades has been the growth of emerging markets and their closer integration into the global economy. Emerging markets are defined as “countries which are in a transition phase from a developing to a developed market, due to rapid growth and industrialisation. Hence, markets which have a) started an economic reform process aimed at alleviating problems, for example of poverty, poor infrastructure and overpopulation, and b) achieved a steady growth in GNP per capita, and c) increased integration into the global economy, may truly be called EMs” (Casvugil, Ghauri, & Akcal, 2013, p. 5). This definition incorporates emerging economies from Africa, former communist markets, eastern European countries, Latin American markets, and Asian economies.

Overall, emerging sub-Saharan African economies are less developed than others, but a World Bank (2016) report confirmed and praised the improving business climate in emerging markets in Sub-Saharan Africa, while mentioning several sources of risks and challenges associated with the national business environments in this region. It is estimated that by 2020, the African continent’s GDP will have risen to nearly \$3 trillion (Chironga, Leke, Lund, & van Wamelen, 2011).

However, research on the internationalisation of firms has thus far primarily focused on firms from developed countries. Even with globalisation and the current interest in emerging market economies, significantly fewer studies have focused on internationalisation from emerging markets, and even less so on African economies (Owusu & Habiyakare, 2011).

Furthermore, existing theories are not necessarily applicable to emerging market contexts (Ibeh & Kasem, 2011; Burgess & Steenkamp, 2006). Due to the socio-economic differences between developed and developing nations, many presumptions made in prior theories, along with associated empirical results, cannot be directly generalised or used for firms from developing markets. Therefore, a need prevails for current theories to be developed and contextualised by conducting empirical studies in developing markets. Previous studies have emphasised the crucial role played by SMEs in stimulating socio-economic advancement and providing employment opportunities through internationalisation (Osei-Bonsu, 2014). Business relationships and networks are crucial in allowing such firms to overcome some of the associated challenges, such as resource constraints, during internationalisation (Agndal & Chetty, 2007a, 2007b; Coviello & Munro, 1997).

Upon reviewing the existing internationalisation research on emerging markets, the following contributions and research gaps were identified. First, the majority of previous studies have focused on the internationalisation strategies of multinational corporations (MNCs) in emerging economies (e.g. Klein, Wöcke, & Hughes, 2014; Owusu & Habiyakare, 2011; Bartels, Alladina & Lederer, 2009). A small but growing number of studies have been conducted on SME internationalisation in these markets. In most cases, the research tends to be on firms from developed markets entering emerging market economies, with particular focus on “bigger emerging markets”¹ (e.g. Sandberg, 2014, 2013). Very little research exists concerning SMEs from African economies and their internationalisation activities and entry into developed market economies. Secondly, previous research finds that institutional contexts could significantly impact the internationalisation of firms, by facilitating or restricting internationalisation processes (Korsakienė & Diskienė, 2015; Owusu & Habiyakare, 2011). Researchers have stressed that relationships with institutions and non-business or political actors, such as

¹ According to the Economist (<http://www.economist.com/topics/emerging-markets>), the biggest emerging markets (BEM) are countries such as BRIC (Brazil, Russia, India and China) along with Eastern Europe, Turkey, South Africa, Mexico, and Argentina.

government, are critical for conducting business (Hadjikani, Lee, & Ghauri, 2008; Hadjikani & Thilenius, 2005). Consequently, institutions or non-business or political actors can assist in the internationalisation of SMEs (Hadjikhani & Håkansson, 1996). However, previous research, particularly from an African SME perspective, has not sufficiently considered the significance of institutional actors as important elements in the processes related to SME internationalisation from an emerging market to a developed market economy, or the factors embedded in this development. Research has shown that in order to understand a firm's developmental process, it is important to incorporate these concepts (Halinen, Törnroos, & Elo, 2013). While institutional theory (e.g. Peng 2002) has discussed the roles of a wide variety of institutions, the crux of the existing research has been into how they affect the business of firms from developed markets entering emerging markets. Furthermore, other research into institutions and the business environment of emerging markets has been mainly focused on the big emerging markets (e.g. Meyer & Peng, 2005). Thus, the extant literature has studied the role of institutions from more prosperous or developed home markets. But a growing body of research has focused on the role of institutional actors when a firm internationalises from an emerging African market to a developed market economy. Due to the socio-economic differences between developed and developing nations, presumptions made in prior theories, along with associated empirical results, cannot be directly generalised to firms from less developed emerging markets. Based on these noted empirical and conceptual research gaps and perspectives, this paper aims to *discuss the literature on the internationalisation of SMEs in an emerging African market context, and provide propositions for future studies*. This paper uses the textile industry as an exemplification of the research, business environment, and entrepreneurial prospects and challenges of SMEs. The two research questions of this study are: (i) What are the factors impacting the internationalisation of African emerging market SMEs? (ii) What lessons do the studies of internationalising textile SMEs provide for research and management? The context here is significant, because, particularly in emerging markets, SMEs in the textile and clothing industry may offer platforms for learning and developing business network relationships (Guercini & Runfola, 2010). Such an industrial context has been recognized as the primary take-off industry for many emerging nations, primarily due to the labour intensity of the sector and its globally outsourced value chain (Gereffi, 1999). Bangladesh exemplifies the success of many Asian emerging markets, having built a large textile export sector that has provided jobs to over 4 million people and export earnings of over US\$10 billion for a country with meagre natural resources (Islam and Khan, 2013). In Ghana, the textile sector is a major priority for the government, due to its potential for accelerating growth in the industrial sector and the economy as a whole, including job generation and poverty reduction (Adjasi, 2006). Thus, textile SMEs in emerging African economies like Ghana have been supported through various policy initiatives, such as the President's Special Initiative Programme for the Textile Industry. The present study contributes to the literature on business networks, institutional theory, international entrepreneurship, and SME internationalisation in the context of an emerging African economy. Due to the rapid economic changes mentioned earlier, emerging economies themselves represent a fascinating context for researchers seeking to understand the relevance and applicability of existing theories constructed in developed economies. Our propositions should contribute to further research on SME internationalisation in emerging markets. In the following sections, we present a literature review of the internationalisation of SMEs, business network approaches, international entrepreneurship and research on emerging markets, after which we present proposals for future research.

2. Literature Review

2.1. The development of internationalisation research

In analysing the literature within SME internationalisation theory, the following three approaches are identified as dominant: (1) the incremental stages approach; (2) the business network approach; and (3) the international entrepreneurship approach. These three approaches are presented in the following sections.

The incremental stages approach

According to the stages approach, internationalisation constitutes a process that is both linear and sequential, taking place in distinct phases (Coviello & McAuley, 1999). There are two well-known schools of thought within this approach: the innovation-related internationalisation model (I-model) (e.g. Czinkota, 1982; Reid, 1981; Cavusgil, 1980; Bilkey & Tesar, 1977a) and the Uppsala internationalisation model (U-model) (Johanson & Vahlne, 1977).

The innovation-related perspective implies that the decision to internationalise is an innovative process for the firm (Bilkey & Tesar, 1977b). Also known as the I-Model, it aims to explain the mechanism of “push” and “pull” that affects the decision to invest abroad.

The Uppsala model has long been the dominant internationalisation model. Originally, it relied on empirical evidence relating to the internationalisation process of Swedish industrial firms in the 1970s, (Johanson & Vahlne, 1977; Johanson & Wiedersheim Paul 1975). Within this framework, the authors posited that during the internationalisation process, firms tend to enter foreign markets by being risk averse, and taking small incremental steps based on their market knowledge acquired through experiential learning. There was a psychic distance between markets, defined as the perception among companies of the differences between their home market and the foreign market, or a set of perceptions and facts that influence information flow and decision making in a firm’s internationalisation process. The model thus posited that firms 1) start internationalisation by entering markets that are close geographically and in terms of business culture and environment; 2) start with entry modes that require less investment and have lower risk. Thus, firms would start with exports or intermediate modes, before going for investment modes (Johanson & Vahlne, 1977; Johanson & Wiedersheim Paul 1975).

Four constructs were presented under two groups, state aspects and change aspects. State aspects consisted of market commitment and market knowledge, and change aspects consisted of commitment decisions and current activities. The two groups influence each other, as market knowledge directly impacted commitment decisions, and current activities impacted the current level of market commitment. In summary the model suggested a gradual process of internationalisation in which the firm is risk averse and acquires knowledge slowly. The firm first enters nearby markets and gradually moves to farther markets, and from less to more involved investment modes. Psychic distances separate different markets.

In reaction to criticisms of the model as being deterministic and not realistic in the current world, recent publications have proposed changes to the original propositions, reducing the strength of the idea of psychic distance, because of the higher level of knowledge many companies now have in the current global climate. They have also included the role of networks in internationalisation. The new model of state and change aspects de-emphasises the role of psychic distance and lack of knowledge. Companies can now internationalise in different ways using networks, which opens greater possibilities for SMEs (Johanson & Mattsson, 1988).

2.2. The business network approach

The Network Approach presents internationalisation as a process dependent on relationships and network connectedness between various actors in international business (Johanson & Vahlne, 2009; Johanson & Mattsson, 1988). A business network is defined as “a set of two or more connected business relationships in which each exchange relationship is between business firms that are conceptualised as collective actors” (Emerson, 1981). The Industrial Network Approach (INA) (Ford, 2002; Håkansson & Snehota, 1995; Johanson & Mattsson, 1992) suggests that all actors in the business market engage in business relationships that are mutually connected, to create networks. Relationships are defined as connections, interactions and links between firms and other identified actors in the business market (Håkansson & Snehota, 1995). With two or more connected relationships, firms are interlinked through direct and/or indirect relationships and different types and strengths of social bonds, activity links and resource ties. By interacting and cooperating, connected firms become mutually interdependent in various ways. These processes have an impact on the success or failure of each firm in its network. By an exchange of resources, firms receive resources that they need or lack from other firms, and provide their own resources in exchange (Håkansson & Snehota, 1995). Since its inception, this research viewpoint from the so-called IMP-Group has resulted in many studies and frameworks for analysing business network relationships. Among these is the basic structure of the Industrial Network approach, through the so-called ARA model (Håkansson & Johanson, 1992).

The ARA model consists of three closely intertwined elements: actors, resources and activities. Håkansson (1987) defines actors as “those who perform activities and/or control resources within a certain field” (p.14). These actors can be individuals, firms, departments, customers, distributors, competitors, government institutions or suppliers. Consequently, actors within a network work to direct and control available resources and activities. Through resource exchange processes, they develop relationships and gain access to resources of other network actors. Thus, through the ARA-process, network connections change and develop over time, and this includes those connections extending across international borders (Johanson & Vahlne, 2009; Johanson & Mattsson, 1988).

Business networks and SME internationalisation

Numerous studies have stressed the influence of networks on the internationalisation of SMEs (see e.g. McAuley, 2010; Fletcher, Huggins & Koh, 2008; Agndal & Chetty, 2007a, 2007b; Zain & Ng, 2006; Chetty & Wilson, 2003; Coviello & Munro, 1997). For SMEs, networks largely assist with the ease and speed of entering foreign markets. Hence, the SME develops the relationships needed to facilitate its internationalisation process. Relationships and networks have an impact on the level of risk incurred when entering an overseas market and, thus, assist in the firm's internationalisation (Kontinen & Ojala, 2011; Musteen, Francis, & Datta, 2010). Furthermore, network relationships can provide a diversity of knowledge, learning and experience that facilitates the exploitation of different markets, as well as providing an opportunity for recognition in international markets (Nummela, 2011; Johanson & Vahlne, 2009, 2011; Johanson & Mattsson, 1988). While many studies have focused on the positive effects, Tang (2009) discussed networks as a "double-edged sword", that can produce both favourable and unfavourable consequences for a small firm. Johanson & Vahlne (2009) state that being outside the network in a market creates a 'liability of outsidership' which can create challenges for firms regarding information constraints and uncertainties as a result of network developments and opportunities that emerge in the actual business network relationships in the target markets during the process of internationalisation. However, this liability of outsidership is not seen as a key hindrance in this process, as the firms' network position is the influencing factor that shapes the opportunities in the business environment. Consequently, the authors stress that insiderships in relevant networks are necessary for successful internationalisation. To gain insiderships, there is the need for internationalising firms to achieve trust, and develop and maintain relationships with other network actors (through business activities and by using mutual resources), otherwise the liabilities of outsidership will continue. Ojala (2009) contends that when an organisation passively follows its networks into new markets, there is the possibility of missing opportunities in some other markets. The firm can also be led into countries where its real market potential is very low. In line with this discussion, Vahlne, Schweizer, and Johanson (2010) state that engagement in global networks could result in difficulties related to adapting to cultural differences that can restrict the development of relationships. The managers of SMEs must consider the impact of networks and pay attention to building relationships and developing them in the right way for mutual benefit (Coviello & Munro, 1995).

Thus, a network approach to SME internationalisation needs a careful and balanced consideration of why, how and when a firm can actively enhance its international entry and development by connecting with other actors in order to gain mutual value. In SMEs, in particular, connection to institutional actors to gain access to international markets plays an important role.

2.3. International entrepreneurship and related theories of SME internationalisation

Some previous studies (e.g. Casson, 1985) suggested that the role of entrepreneurship in internationalisation had not been adequately studied. Oviatt and McDougal (1994: 49) integrated entrepreneurship into international business when they defined the international new venture (INV) as 'a business organisation that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries.' They were mainly considered as businesses that had an international outlook from their formation. They could be start-ups, or companies with innovative products or services. Their internationalisation strategy would be proactive. Being relatively new, they were likely not to own assets abroad, and to have relatively few fixed resources. The main resource of such companies would be knowledge, even though they agreed that their knowledge of specific international markets might be limited. It follows that most of these companies would be SMEs in their initial phases (see also Oviatt & McDougal, 2004).

Similar research on 'born globals' (Gabrielsson, Kirpalani, Dimitratos, Solberg, & Zucchella, 2008; Knight, Madsen & Servais, 2004; Madsen & Servais, 1997) focused on similarly knowledge-endowed companies that internationalised early. Later research on the subject emphasised the technologically and digitally savvy, and service firms (Moen, 2002).

Some of the reasons adduced for the development of these new types of firms, and the emerging theory which brought new implications to the existing theories, were: increasing globalisation, the development of global segments and international niche markets; technological developments that allow small companies to compete with bigger companies and to globalise their business; small companies following their customers (firms) abroad; and advances in information technology that allow easy information flow within international divisions of a company and with its partners. However, the overwhelming reasons were entrepreneurial and managerial. These companies are mostly SMEs, and their founders, owners, and managers were strong entrepreneurs, knowledgeable and savvy internationally. Apart from their own entrepreneurial and knowledge resources, they use relationships and networks to overcome their limitations (Gabrielsson et al., 2008: p. 387; Knight, Madsen & Servais, 2004; Madsen & Servais, 1997).

Further research has shown that INVs, or born globals develop through phases like any other company, and their initial characteristics might change into more traditional approaches, or they may even be acquired and integrated into bigger firms (Gabrielsson, Gabrielsson & Dimitratos, 2014).

International entrepreneurship research has a strong relationship to the stages and network theory presented earlier as it emphasises the behavioural aspects of entrepreneurs and managers, rather than purely economic calculations.

However, there has been very little research into SME internationalisation and entrepreneurial roles within internationalisation in an African context. A criticism of the theory is that the emphasis on the entrepreneurial characteristics and speed of internationalisation, while valid for the developed markets that have been studied, may not be the same for poorer emerging markets, for example in sub-Saharan Africa, where resource limitations are profound.

2.4. Studies of internationalisation in an African and emerging market context

Several studies have focused on exporting from developing countries. The study by Akomea, Sørensen, & Amponsah-Efah (2014) of firms in the Ghanaian pharmaceutical industry revealed that only a very small percentage of the firms are involved in exporting. The key factors explaining initial export activity among firms in Nigeria were explored by Ibeh, Ibrahim, & Ezepue (2007). Their study revealed that the major triggers for export activity were proactive reasons and were not due to unsolicited orders, in contrast to SMEs from developed economies. The impact of barriers with respect to the export behaviour of Tanzanian firms is identified in a study by Milanzi (2012). The results reveal that a lack of export information and knowledge, financial constraints, as well as export capacity and supply are significant factors that impact export behavior. Matthee & Krugell (2012) found that resource barriers negatively impact the productivity of South African organisations, and that size, finance and productivity are the most important factors in their export success. In an investigation of reasons for poor exporting performance in five African nations (Kenya, Ghana, Nigeria, Tanzania, and South Africa), Rankin, Söderbom, & Teal (2006) showed that a firm's size is a major determining factor in the decision to export goods. The study also revealed that the proportion of manufacturing exports of Sub-Saharan African (SSA) economies was rather low. Kuada (2007) conducted a survey among exporters in the manufacturing sector and processed food industry and indicated that current internationalisation theories are inadequate in guiding or explaining the internationalisation of firms in Ghana and other African nations. According to the author, the decisions of Kenyan and Ghanaian firms in Africa to sell fresh pineapples or similar products to consumers in Europe have been mainly determined by the fact that the European countries are the leading import markets in the world for fresh produce. Thus, these firms started exporting directly to European markets that were further away than other African markets due to the size and attractiveness of the European markets. The research challenges traditional claims that firms from developing countries start their internationalisation process by exporting their products to culturally similar markets or nearby markets. Matenge (2011) found, in the case of small firm internationalisation in Botswana, that factors such as commitment, innovative products, networking with government, and market knowledge were major factors in determining their international market involvement.

Further, it is revealed that firms that take advantage of and use network relationships are faced with fewer export challenges. In particular, institutional ties and business networks were found to influence exports and improve a firm's capabilities. Other researchers have revealed the role of networks in studies of the internationalisation of firms from emerging markets. Senik et al. (2011) determined that three forms of networks assisted Asian SMEs to enter international markets, namely social networks (friends, colleagues, etc.), business networks (SME owners, managers and Asian multinational enterprises), and intermediaries (government agencies). For their part, Zain and Ng (2006) found that network relations increasingly motivated firms in Malaysia, influencing their choice of market or decision for mode of entry. Additionally, this would assist firms in gaining preliminary credibility and permitting accessibility to more networks. Ghauri, Lutz, and Tesfom (2003) confirmed the use of networks in overcoming the challenges of marketing for export with regard to manufacturing companies in developing countries.

Through their study of Tanzanian SMEs, Rutashobya and Jaensson (2004) found that the owners and entrepreneurs established several business relationships and networks. Apart from linkages with export houses and producers, many of the networks were of an informal character. Based on his research on the internationalisation of entrepreneurial firms in South Africa, Mtigwe (2006) proposed a new internationalisation model in which personal networks and entrepreneurial capabilities are the main motivational factors for entering foreign markets and for obtaining information on international opportunities. Kuada (2007), for his part, suggests that in order to strengthen the position of African firms in the global economy, the process of the internationalisation of African firms should incorporate both "upstream and downstream" value creation activities (Kuada, 2007, p. 107). According to the author, this can be achieved through connections between firms in Africa, as well as relationship development with firms from both developing and developed market economies.

Another stream of research focuses on the influences of the business context and the role of other actors (including institutional and political) in an emerging market, in facilitating business activities there (see e.g. Elg, Schaumann, & Ghauri, 2012; Meyer, Estrin, Bhaumik, & Peng, 2009). For instance, based on in-depth case studies of two Swedish firms and their activities in India, Elg et al. (2012) demonstrated how firms collaborate with partners in emerging markets in order to influence political actors proactively, as well as to actively reduce the harmful effects of political decisions. Along the same lines, Owusu (2002) revealed that political and institutional actors from both Finland and Ghana were effectively involved as purchasers of infrastructural projects, and supported the energy project marketer IVO of Finland to supply the purchased facilities in Ghana. Furthermore, Owusu and Habiyakare (2011) showed how the evolution of the political, economic, and social environment and policies of the South African government, as well as policies of foreign governments towards South Africa, impacted the entry decisions of foreign companies in the country before and after 1984. Thus, the political environment in emerging markets influences both indigenous and foreign firms both positively and negatively (Auwah, 1997). Nevertheless, firms can create a strategic advantage through their interactions with these institutional actors from emerging markets (see also, Hadjikhani, Lee & Ghauri, 2008; Elg, Ghauri & Tarnovskaya, 2008).

2.5. Studies of textile and garment exporters

Many attempts have been made to research the drivers and barriers that are associated with the textile industry in developing markets (Tatoglu, Demirbag, & Kaplan, 2003). Visser (1996) researched Peruvian exports of textiles and found that the existence of cooperative links among the producers was critical to their success. Visser (1996) observed that in the Peruvian textile industry, family ties and personal relationships were the key factors for network development and international success. Ibeh (2003) classified Nigerian firms based on their export entrepreneurial orientation level. He determined that fashion companies that belonged to the high export entrepreneurial cluster developed their market in the U.S.A. by relationship building with merchandisers and agents, and through attending fashion exhibitions and shows. Grosse, Shannon, and Cecilio (2013) found that the Uruguayan textile and garment industry was extensively engaged in exporting once they had accumulated experience and knowledge. They tailored their products to international markets and when their export development to a foreign country reached a certain level, the focus shifted to customer service. Eren-Erdogms, Cobanoglu, Yalcin, and Ghauri (2010) studied the internationalisation of Turkish textile retailers using a multiple case study approach. The study revealed the significance of domestic and host market factors in influencing the internationalisation of textile retailers from emerging market economies. Based on empirical evidence, Ciravegna, Lopez, and Kundu (2014) studied the inception of the internationalisation of textile industry SMEs in China. It presented a view of internationalisation as an entrepreneurial process, and the influence that relational networks have on this process.

Integrating the strength of effectuation theory (see e.g. Sarasvathy, 2001; Sarasvathy & Dew, 2008) and business network frameworks (e.g. McAuley, 2010; Agndal & Chetty, 2007a, 2007b; Chetty & Wilson, 2003), Kujala and Törnroos (2018) studied internationalising through networks from emerging to developed markets using a case study from Ghana. Their study used a single embedded case approach and longitudinal research (Pettigrew, 1997; Van de Ven, 1992) to understand the internationalisation development of a Ghanaian SME in the clothing and textile industry, and its entry into the affluent US market.

Kujala and Törnroos (2018) study revealed the challenges that entrepreneurs from African economies, such as Ghana, battle with when operating in an unpredictable business context. Such challenges include unpredictable institutions, instability, and weak infrastructure. Further findings revealed that the entrepreneurial manager of the studied firm was competent and experienced, based on many years of locally running the parent company in the same business. The entrepreneur succeeded in working successfully in an unstable business environment within a chaotic state infrastructure.

This implies that successful internationalisation was achieved as a result of a joint effectuation and networking process. Thus, considering the challenges of Ghana's economy, it seems that the effectuation processes and the entrepreneurs' capabilities were the only way for an SME to prosper. Effectuation processes and capabilities are strongly embedded in the local African business culture.

According to Kujala and Törnroos (2018), entrepreneurs in such circumstances, in addition to expertise and experience, must have vision in the midst of adversity during internationalisation. They must be able to seize opportunities when they arise. It is crucial to their success that the SMEs/entrepreneurs possess the capabilities and knowledge of the processes involved in building network relationships. It was also noted in the study that the success of this internationalisation process should not be claimed as solely due to the entrepreneur, but also the result of the capabilities and processes of other actors in the formed relationships and network. In summary, the internationalisation process was the result of an exchange of joint resources and activities between network actors over time, coupled with an effectuation based managerial enactment process.

The preceding review shows the limited research on the internationalisation of emerging African market SMEs. At the same time, frameworks and concepts exist in received theories for conducting further empirical research on the subject. However, several researchers have stated that, as they have been developed in the context of developed markets, research on emerging markets is necessary to improve them. The lack of research is particularly evident in the case of SMEs from emerging African countries. The small number of studies do provide some implications that we summarise for further research. While we reviewed most available studies, we focused on the textile industry, as it is a manufacturing industry that has proved an arena for successful internationalisation for many emerging markets, due to its labour intensity and the fact that it has been largely outsourced from developed markets.

Based on the above research we suggest the propositions below as a basis for further research.

Proposition 1: The entrepreneurs/managers of internationalising African SMEs should build strong skills and knowledge of specific international markets. Knowledge can be built gradually through staged internationalisation or by finding appropriate international opportunities.

Proposition 2: To overcome the liabilities of outsidership, internationalising African SMEs should build relationships and networks in foreign markets with outsourcers, suppliers, agents, etc.

Proposition 3: Relationships with foreign and local institutional actors support the successful internationalising of emerging African market SMEs. Local and foreign institutions contribute valuable resources to their business networks.

Proposition 4: Active network mobilisation by institutional actors supports the internationalisation of African SMEs.

Proposition 5: An improvement in local institutions and the business environment is necessary to support internationalising African SMEs. Stability and the strength of their local business environment and market is positively related to their ability to internationalise.

- Adjasi, C. K. (2006). Are exporting firms really productive? Evidence from Ghana. *African Journal of Business and Economic Research*, 1(2/3), 78-97.
- Agndal, H., & Chetty, S. (2007). The impact of relationships on changes in internationalization strategies of SMEs. *European Journal of Marketing*, 41(11/12), 1449-1474.
- Akomea, S. Y., Sørensen, O. J., & Amponsah-Efah, K. (2014). Export drivers and barriers: Evidence from Ghanaian pharmaceutical manufacturing firms. *Global Journal of Business Research*, 8(2), 81-96.
- Bartels, F. L., Alladina, S. N., & Lederer, S. (2009). Foreign direct investment in Sub-Saharan Africa: Motivating factors and policy issues. *Journal of African Business*, 10(2), 141-162.
- Bilkey, W. J., & Tesar, G. (1977). The export behavior of smaller-sized Wisconsin manufacturing firms. *Journal of International Business Studies*, 8(1), 93-98.
- Burgess, S. M., & Steenkamp, J. B. E. (2006). Marketing renaissance: How research in emerging markets advances marketing science and practice. *International Journal of Research in Marketing*, 23(4), 337- 356.
- Casson, M. (1985). Entrepreneurship and the dynamics of foreign direct investment. In Peter J Cavusgil, S. (1980). On the internationalization process of firms. *European Research*. 8. 273-281. Cavusgil, S. T., Ghauri, P. N., & Akcal, A. A. (2013). *Doing business in emerging markets*. London, Sage.
- Chetty, S. K., & Wilson, H. I. (2003). Collaborating with competitors to acquire resources. *International Business Review*, 12(1), 61-81.
- Chetty, S., & Agndal, H. (2007). Social capital and its influence on changes in internationalization mode among small and medium-sized enterprises. *Journal of International Marketing*, 15(1), 1-29.
- Chironga, M., Leke, A., Lund, S., & van Wamelen, A. (2011). Cracking the next growth market: Africa. *Harvard Business Review*, 89(5), 117-122.
- Ciravegna, L., Lopez, L., & Kundu, S. (2014). Country of origin and network effects on internationalization: A comparative study of SMEs from an emerging and developed economy. *Journal of Business Research*, 67(5), 916-923.
- Coviello, N. E., & McAuley, A. (1999). Internationalisation and the smaller firm: a review of contemporary empirical research. *MIR: Management International Review*, 223-256.
- Coviello, N. E., & Munro, H. J. (1995). Growing the entrepreneurial firm: Networking for international market development. *European Journal of Marketing*, 29(7), 49-61.
- Coviello, N., & Munro, H. (1997). Network relationships and the internationalization process of small software firms. *International Business Review*, 6(4), 361-386.
- Czinkota, M. R., (1982). *Export development strategies: US promotion policy*. New York: Praeger.
- Elg, U., Ghauri, P. N., & Tarnovskaya, V. (2008). The role of networks and matching in market entry to emerging retail markets. *International Marketing Review*, 25(6), 674-699.
- Elg, U., Schaumann, J., & Ghauri, P. (2012). Managing political actors through network partners: market-driving multinationals in emerging markets. In *Business, Society and Politics* (133-153). Emerald.
- Emerson, R. M. (1981). Social exchange theory. In M. Rosenberg, & R. Turner (Eds.), *Social psychology: Sociological perspectives* (30 – 65). New York: Basic Books.
- Fletcher, D., Huggins, R., & Koh, L. (2008). Institutional entrepreneurship in the emerging regional economies of the western Balkans. *Entrepreneurship in emerging regions around the world: Theory, evidence and implications*, 125-152.
- Ford, D. (1982). The development of buyer – seller relationships in industrial markets. In: H. Hakansson (Ed.), *International marketing and purchasing of industrial goods: An interaction approach* (288 – 303). Chichester, UK: Wiley.
- Gabrielsson M., Gabrielsson, P., & Dimitratos, P. (2014). International entrepreneurial culture and growth of international new ventures. *Management International Review*, 54, 445-471.

- Gabrielsson, M., Kirpalani, V. H. M., Dimitratos, P., Solberg, C. A., and Zucchella, A. (2008). Born globals: Propositions to help advance the theory. *International Business Review*, 17(4), 385–401.
- Gereffi, G. (1999). A commodity chains framework for analysing global industries. *Institute of Development Studies*, 8(12), 1-9.
- Ghauri, P., Lutz, C., & Tesfom, G. (2003). Using networks to solve export-marketing problems of small-and medium-sized firms from developing countries. *European Journal of Marketing*, 37(5/6), 728-752.
- Grosse, R., Mudd, S., & Cerchiari, C. G. (2013). Exporting to the far and near abroad. *Journal of Business Research*, 66(3), 409-416.
- Guercini, S., & Runfola, A. (2010). Business networks and retail internationalization: A case analysis in the fashion industry. *Industrial Marketing Management*, 39(6), 908-916.
- Hadjikhani, A., & Håkansson, H. (1996). Political actions in business networks a Swedish case. *International Journal of Research in Marketing*, 13(5), 431-447.
- Hadjikhani, A., & Thilenius, P. (2005). *Non-business actors in a business network: A comparative case on firms actions in developing and developed countries*. Elsevier, Amsterdam.
- Hadjikhani, A., Lee, J. W., & Ghauri, P. N. (2008). Network view of MNCs' socio-political behavior. *Journal of Business Research*, 61(9), 912-924.
- Håkansson H and Johanson J, 1992, A Model of industrial networks, in B. Axelsson and G. Easton, (eds), *Industrial networks: A new view of reality*, London, Routledge, 28-34.
- Håkansson, H., & Snehota I, (1995). *Developing relationships in business networks*, London, International Thomson.
- Håkansson, H., (1987). *Industrial technological development: A network approach*. London, Croom Helm.
- Halinen, A., Törnroos, J. Å., & Elo, M. (2013). Network process analysis: An event-based approach to study business network dynamics. *Industrial Marketing Management*, 42(8), 1213-1222.
- Ibeh, K. I. (2003). On the internal drivers of export performance among Nigerian firms: empirical findings and implications. *Management decision*, 41(3), 217-225.
- Ibeh, K. I., Ibrahim, E., & Ezepue, P. O. (2007). Factors stimulating initial export activity: Any difference for Nigerian firms? *Journal of African Business*, 8(2), 7-26.
- Ibeh, K., & Kasem, L. (2011). The network perspective and the internationalization of small and medium sized software firms from Syria. *Industrial Marketing Management*, 40(3), 358–367.
- Islam, M. M., & Khan, A. M., (2013). Textile industries in Bangladesh and challenges of growth. *Research Journal of Engineering Sciences*. 2(2), 31-37.
- Johanson, J. and Mattsson, L. (1992). Network positions and strategic actions—An analytical framework. In: Axelsson, B. and Easton, G., *Industrial Networks: A New View of Reality*, 205-217, Routledge, London.
- Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1), 23-32.
- Johanson, J., & Vahlne, J. E. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies*, 40(9), 1411-1431.
- Johanson, J., & Vahlne, J. E. (2011). Markets as networks: implications for strategy-making. *Journal of the Academy of Marketing Science*, 39(4), 484-491.
- Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm—four Swedish cases. *Journal of Management Studies*, 12(3), 305-323.
- Johansson, J., & Mattsson, L. G. (1988). Internationalization in industrial systems—a network approach. *Strategies in global competition*, 287-314.
- Klein, S., Wöcke, A., & Hughes, J.M. (2014). Leaving home: Relocation choices of South African multinational enterprise (MNEs). *African Journal of Business Management*, 8(8), 253-269.

- Knight, G., Madsen T. K.; Servais P. (2004). An inquiry into born-global firms in Europe and the USA, *International Marketing Review*, 21(6), 645-665.
- Kontinen, T., & Ojala, A. (2011). Network ties in the international opportunity recognition of family SMEs. *International Business Review*, 20(4), 440-453.
- KorsakienÄ, R., & DiskienÄ, D. (2015). Institutional theory perspective and internationalization of firms. How institutional context influences internationalization of SMEs. *Entrepreneurship and sustainability issues*, 2(3), 142–153.
- Kuada, J. (2007). Internationalization, regionalization and Africa's economic growth strategies. *Journal of Business and Economic Research*, 2(1), 92-114.
- Kujala, I., & Törnroos, J. Å. (2018). Internationalizing through networks from emerging to developed markets, with a case study from Ghana to the USA. *Industrial Marketing Management*, 69, 98-109.
- Leonidou, L.C. (2004). An analysis of the barriers hindering small business export development. *Journal of Small Business Management*, 42(3), 279-302.
- Madsen, T. K., & Servais, P. (1997). The internationalization of born globals: an evolutionary process? *International Business Review*, 6(6), 561-583.
- Matenge, T. (2011). Small firm internationalization – A developing country perspective. *International Journal of Business Administration*, 2(4), 103.
- Matthee, M, & Krugell, O. (2012). Barriers to internationalization: firm-level evidence from South Africa. *Studia universitatis babes-bolyai, oeconomica*, 57(1).
- McAuley, A. (2010). Looking back, going forward: reflecting on research into the SME internationalization process. *Journal of Research in Marketing and Entrepreneurship*, 12(1), 21-41.
- Meyer, K. E., & Peng, M. W. (2005). Probing theoretically into Central and Eastern Europe: Transactions, resources, and institutions. *Journal of International Business Studies*, 36(6), 600-621.
- Meyer, K. E., Estrin, S., Bhaumik, S. K., & Peng, M. W. (2009). Institutions, resources, and entry strategies in emerging economies. *Strategic Management Journal*, 30(1), 61-80.
- Milanzi, M. (2012). The impact of barriers on export behavior of a developing country firms: evidence from Tanzania.
- Moen, Ø. (2002). The born globals: a new generation of small European exporters. *International Marketing Review*, 19(2), 156-175.
- Mtigwe, B. (2006). Theoretical milestones in international business: The journey to international entrepreneurship theory. *Journal of International Entrepreneurship*, 4(1), 5-25.
- Musteen, M., Francis, J., & Datta, D. K. (2010). The influence of international networks on internationalization speed and performance: A study of Czech SMEs. *Journal of World Business*, 45(3), 197-205.
- Nummela, N. (2011). Change in SME internationalization: A network perspective. *International Growth of Small and Medium Enterprises* (248-263) New York: Routledge.
- Ojala, A. (2009). Internationalisation of knowledge-intensive SMEs: The role of network relationships in the entry to a psychologically distant market. *International Business Review*, 18, 50-59.
- Okpara, J. O., & Kabongo, J. D. (2010). Export barriers and internationalization: evidence from SMEs in an emergent African economy. *International Journal of Business and Globalisation*, 5(2), 169-187.
- Osei-Bonsu, N. (2014). Understanding the internationalization process of small-to medium-sized manufacturing enterprises (SMEs): Evidence from developing countries. *European Journal of Business and Management*, 6(2), 167–186.
- Oviatt, B. M. & McDougall, P.P. (1994). Toward a theory of international new ventures. *Journal of International Business Studies* 25(1), 45-64.
- Oviatt, B. M., & McDougall, P. P. (2005a). Defining international entrepreneurship and modelling the speed of internationalization. *Entrepreneurship Theory and Practice*, 29(5), 537-553.
- Oviatt, B. M., & McDougall, P. P. (2005b). The internationalization of entrepreneurship. *Journal of International Business Studies*, 36(1), 2-8.

- Owusu, R. A. (2002). Project marketing to Africa: Lessons from the case of IVO transmission engineering and Ghana's national electrification scheme. *Journal of Business and Industrial Marketing*, 17(6), 523-537.
- Owusu, R. A., & Habiyakare, E. (2011). Managing risk and turbulence in internationalization of foreign companies to South Africa: Lessons from seven Finnish business-to-business firms. *Journal of African Business*, 12(2), 218-237.
- Peng, M. (2002). Towards an institution-based view of business strategy. *Asia Pacific Journal of Management*, 19(2/3), 251-266.
- Pettigrew, A. M. (1997). What is a processual analysis? *Scandinavian Journal of Management*, 13(4), 337-348.
- Rankin, N., Söderbom, M., & Teal, F. (2006). Exporting from manufacturing firms in sub-Saharan Africa. *Journal of African Economies*, 15(4), 671-687.
- Reid, S. D. (1981). The decision-maker and export entry and expansion. *Journal of International business Studies*, 12(2), 101-112.
- Rutashobya, L., & Jaensson, J. E. (2004). Small firms' internationalization for development in Tanzania: Exploring the network phenomenon. *International Journal of Social Economics*, 31(1/2), 159-172.
- Sandberg, S. (2013). Emerging market entry node pattern and experiential knowledge of small and medium-sized enterprises. *International Marketing Review*, 30 (2), 106-129.
- Sandberg, S. (2014). Experiential knowledge antecedents of the SME network node configuration in emerging market business networks. *International Business Review*, 23(1), 20-29.
- Sarasvathy, S. D. (2001). Effectual reasoning in entrepreneurial decision-making existence and bounds. In *Academy of Management Proceedings*, 2001(1), 1-6.
- Sarasvathy, S., & Dew, N. (2008). Effectuation and over-trust: Debating Goel and Karri. *Entrepreneurship Theory and Practice*, 32(4), 727-737.
- Senik, Z. C., Scott-Ladd, B., Entekin, L., & Adham, K. A. (2011). Networking and internationalization of SMEs in emerging economies. *Journal of International Entrepreneurship*, 9(4), 259-281.
- Tang, Y. K. (2009). 'Networks and the internationalization of firms: what we believe and what we might have missed', in Jones et al., (eds), *Internationalization, Entrepreneurship and the Smaller Firm*, UK: Edgar Elgar Publishing LTD.
- Tatoglu, E., Demirbag, M., & Kaplan, G. (2003). Motives for retailer internationalization to Central and Eastern Europe. *Emerging Markets Finance and Trade*, 39(4), 40-57.
- United Nations Conference on Trade and Development (UNCTAD) Publications. Retrieved from <http://unctad.org>.
- Vahlne, J. - E., Schweizer, R. & Johanson, J. (2010). Internationalization as an entrepreneurial process. *Journal of International Entrepreneurship*, 8(4), 1-28.
- Vahlne, J. E., & Johanson, J. (2013). The Uppsala model on evolution of the multinational business enterprise—from internalization to coordination of networks. *International Marketing Review*, 30(3), 189-210.
- Van de Ven, A. H. (1992). Suggestions for studying strategy process: A research note. *Strategic Management Journal*, 13(5), 169-188.
- Visser, E. J. (1996). Local sources of competitiveness spatial clustering and organisational dynamics in small scale clothing in Lima, Peru, University of Amsterdam, Amsterdam.
- Zain, M., & Ng, S. I. (2006). The impacts of network relationships on SMEs' internationalization process. *Thunderbird International Business Review*, 48(2), 183-205.

AUTHORS

Alena Terekhova

Cathy Doyle

Constantinos Constantinou

Daniil Sourianos

Denis Murphy

Derek Watson

Georgia Yiangou

Ioanna Gleni

Irene Kujala

Iris Mohr

Katerina Pavlou

Nataliya Shiraz

Nicos Antoniadis

Richard Afriyie Owusu

Roman Puchkov

Yiota Nicolaidou

Yuan Zhai

Alena Terekhova

Alena Terekhova is Senior Business Development Manager and former Global Product Marketing Director of Wargaming (World of Warships: Legends and Brand Communication Lead of World of Warships), based in Nicosia, Cyprus. Ms. Terekhova has developed and executed global brand communication and marketing campaigns for such brands as World of Warships, World of Tanks, KIA, Mazda and Land Rover. At Wargaming, she has directed media campaigns to attract over two million new players to the recently released game – World of Warships: Legends, available on PS4 and Xbox One. She has also introduced Wargaming to celebrity marketing by running their first collaboration with an Action Hero Actor, Steven Seagal, later signing on the Hockey player and Stanley Cup winner, Alexander Ovechkin. Before this, she conducted global creative production to support marketing activities and lead brand communication for World of Warships. In the automotive industry, she developed and performed a Regional GoToMarket brand strategy for a new KIA AutoCentre in Belarus. Earlier, she led brand communication for Mazda and Land Rover, where she organised an initial showcase for a Mazda concept car in Belarus during the MotorShow 2011, bringing forward MAZDA as the outstanding auto brand in the region. Alena also launched a client relationship event program to increase the sales of Mazda and Land Rover cars and raise the quality of customer service at the AutoCenter. She is an expert in PR, media buying, influencer marketing, business development and budget planning.

Contact info: a_terekhova@wargaming.net / terekhova1310@gmail.com.

Cathy Doyle

Cathy Doyle is Director of Year 2 Masters Programmes at the Institute of Leadership, Royal College of Surgeons in Ireland. She is a lecturer/module lead in clinical governance, quality and safety and operations management and has MSc students in Ireland, the United Arab Emirates and Bahrain. She holds an MBA and MA in Education (Leadership and Management). Cathy is a Professional Doctorate candidate with the University of Sunderland, United Kingdom. Her research is based on governance and its application at board level in a healthcare setting. For 15 years Cathy was secretary to a statutory hospital board. She served at a non-executive board member, for four years, on a not-for-profit board funded by Dept. of Education and Arts Council in Ireland. Currently she is a member of the Board Clinical Governance Committee of an Irish healthcare organisation.

Contact info: cdoyle@rcsi.ie.

Constantinos Constantinou

Constantinos Constantinou is Director of Research and Head of Undergraduate Studies, Nicosia in addition to being a Lecturer in Marketing at the Cyprus Institute of Marketing. He is also the Editor-in-Chief of *The Market: International Journal of Business* and has previously served as a post-doctoral Research Fellow, as well as Associate Director of the Cyprus Centre for Business Research – CIM. Moreover, he has worked as a Research Fellow at the Centre for European and International Affairs, at the University of Nicosia (UNIC) and as a Media and Communication Trainee at the European Defence Agency, in Brussels. He holds a PhD in Business Administration from the European University Cyprus (EUC), MA in International Relations and European Studies from UNIC and MBA/BA in European Studies from EUC. Further, his research focuses on political marketing and communication, specifically, on the marketing of war.

Contact info: constantinos@cima.ac.cy.

Daniil Sourianos

Daniil Sourianos is a Shipping Scholar. His academic qualifications include an MBA in Shipping from the Cyprus Institute of Marketing, awarded with a full scholarship from KPMG Cyprus, and an MSc, BSc in Electrical Engineering from the University of Cyprus, with additional studies at Imperial College London.

He has been the Entrepreneurship Ambassador of the University of Cyprus and has participated as a Young Scholar of the Centre for Entrepreneurship of the UCY in the European Innovation Academy 2016. He is a winner of several start-up competitions and has been leading as Founder of the TraCar start-up. During his studies, Daniil gained professional experience from Cyprus, The Czech Republic, The United Kingdom and Iceland as a researcher, software developer, and IT and laboratory assistant.

His experience and passion in technology, innovation and entrepreneurship led him to be an advisor in several early-stage start-ups, as well as to work for the Cyprus Seeds initiative as program administrator. In January 2020 Daniil joined KPMG Cyprus Management Consulting, as Digital Transformation Advisor.

He has been distinguished with a scholarship from Google and the Founder Institute. Additionally, Daniil was invited by the King Abdullah University of Science and Technology in Saudi Arabia to present his BSc thesis, as one of the 50 best worldwide projects for the Winter Enrichment Program. Also, he was awarded as one of the 'Most Active Students 2016' in Cyprus, 'Global Winner of NASA Space Apps Hackathon 2017' and 'Young Scientist 2018', an award given by the President of the Republic of Cyprus.

Daniil, as one of the leaders of NestFold's Global Winning Team, was invited by NASA for a space rocket launch viewing in Cape Canaveral Air Force Station (Florida, USA), meeting scientists and astronauts in person.

Contact info: sournil@gmail.com.

Derek Watson

Derek Watson is an Associate Professor and Senior Fellow of the Higher Education Academy, founder of the Faculty 'Business Clinic' and the Doctoral lead for the University's 'Research Fridays' programme and has rich experience of mapping skills requirements in emerging sectors. Dr Watson has extensive links and networks as a result of sourcing and embedding external engagement opportunities across the curriculum, with an international portfolio of clients and contacts, such as the British Cabinet Office, Indian Government Council of Scientific and Industrial Research, Dubai Police and Canon International. His research focuses on academic-industry collaboration and food safety cultural compliance.

Contact info: derek.watson@sunderland.ac.uk.

Denis Murphy

Denis Murphy is Chief Administrative Officer with the Association for Dental Education in Europe and adjunct faculty with the Institute of Leadership with the RCSI, where he lectures on healthcare quality improvement theories and practice. With over 25 years of work in both the public and private sector, his professional career currently blends professional and academic practice. He is a board member of the Nursing and Midwifery Board of Ireland, Council member with the CHKS Accreditation and Chairperson of Dublin's South Inner City Community Development Association. Denis holds an MBA, MSc in Management and Business Research Methodologies and a Post Graduate Certificate in Professional Studies in Education. He is currently a Professional Doctorate candidate with the University of Sunderland, UK.

Contact info: denis.murphy@adee.org.

Georgia Yiangou

Georgia Yiangou is a graduate in digital marketing from the UWL/CIM Masters Degree and is currently working as a digital marketer at a private company in Nicosia. She holds a bachelor's degree in political science from the University of Cyprus. As a result of her passion for political marketing and communication, her first master's degree was in political communication from the University of Leeds (UK). Georgia's first master's dissertation focused on "Educating primary-aged children in becoming future citizens: A comparison study between parents and teachers in Cyprus"; a research that aimed at enhancing active participation and political education in Cyprus. The specific research was also awarded with a distinction. With regards to the UWL/CIM master's dissertation, she opted to further her research in political communication coupled with the effect of digital marketing/social media on the government of the Republic of Cyprus.

Contact info: georgia-yiangou@hotmail.com.

Ioanna Gleni

Ioanna Gleni is the Data Protection Officer and End User Support Coordinator of SCF Management Services (Cyprus) Ltd. She holds a Bachelor of Laws LLB (Hons) from the University of Salford, Manchester (UK), a Master of Laws (LLM) in Commercial and Corporate Law from the University of London (UK) and a Master of Science (MSc) in Human Resource Management and Corporate Strategy from the Cyprus Institute of Marketing, Limassol (Cyprus). Her research interests focus on human capital management strategies. Previous fields of research include medical law and ethics, and criminal law.

Contact info: igleni07@gmail.com.

Irene Kujala

Irene Kujala is Assistant Professor of International Marketing at Åbo Akademi School of Business, Turku, Finland. She teaches business-to-business and international marketing, and perspectives of global business environment courses at a masters level. Additionally, she advises and supervises master thesis students. Her research on small firm internationalisation and business networks in an emerging African market context has been published in 'Industrial Marketing Management'. Areas of expertise include business-to-business marketing, business relationships, networks, small and medium-sized enterprises internationalisation, emerging African economies, and qualitative research methods.

Contact info: ikujala@abo.fi.

Iris Mohr

Iris Mohr is Chair of the Department of Marketing, The Peter J. Tonin College of Business, St John's University, Jamaica, New York. Dr. Mohr, earned a Ph.D. in business administration in marketing/strategy from City University of New York. She also holds an MBA from City University of New York, a Master's in communications from the Hebrew University in Israel, a professional degree in screenwriting from the University of California in Los Angeles, and most recently a New York Film Academy certificate in documentary filmmaking. Her articles have appeared in publications such as the Journal of Internet Commerce, Harvard

Press, Interfaces, Human Resource Management, Quality Management Journal, Industrial Marketing Management, Journal of Marketing Theory and Practice, European Journal of Marketing, Business Horizon, Journal of Product Innovation Management, and Marketing Management as well as in other professional publications. Most recently, she has been pursuing research and writing articles that relate to fashion, food, and sustainability. Formerly, she was a contributing editor of The Conference Board's Quality Briefing and Membership Update, bimonthly professional newsletters. Additionally, Dr. Mohr was an Examiner of the New York State Governor's Excelsior Award Program, modeled after the prestigious Malcolm Baldrige National Quality Award for Excellence. Dr. Mohr is a member of the American Marketing Association.

Contact info: mohri@stjohns.edu.

Katerina Pavlou

Katerina Pavlou is the Academic Director of the Cyprus Institute of Marketing (Limassol Campus) and graduated from the National and Kapodistrian University of Athens, with a BSc in early childhood education, and continued with her postgraduate studies in educational psychology at the University of Bristol, UK. She is a holder of a PhD in cognitive psychology from the University of Southampton, UK. Her research interests lie in the area of attention biases to threat in anxious youths and adults. Since completion of her PhD, she has worked as a lecturer in business and organisational psychology. During her academic tenure she delivered various business-related modules including Organisational Behaviour, Workplace Psychology, Effective communication in Organisations and Business Statistics. Dr Pavlou has been holding the position of Academic Director at The Cyprus Institute of Marketing (Limassol) since September 2019.

Contact info: katerina@cima.ac.cy.

Nataliya Shiraz

Nataliya is an experienced lecturer, researcher and academic manager. Throughout her 20-year career, she has played an important role in the development of research initiatives at leading public and private UK Higher Education institutions, including Imperial College London, UCL, Birkbeck University of London, King's College London, Queen Mary University of London, Ulster University, QAHE and GBS. She has consistently contributed to the enhancement of institutional learning and teaching strategy on a number of strategic partnerships in private higher education. Nataliya holds a PhD in Linguistics from the University of Cambridge, a PG Degree from University College London, Membership with Chartered Institute of Linguistics specialising in education, as well as a Senior Fellowship with Advance HE.

Nataliya's background in business research as well as applied linguistics provides her with a unique perspective on teaching business management subjects. She has been operating in multicultural educational contexts for over two decades, appreciating inclusive learning and international collaborations – an approach that is important when considering the diverse staff and student communities that exist in 2021. Her academic interest areas include discourse analysis, blended learning models, content analysis for qualitative research and academic integrity.

Contact info: nshiraz@globalbanking.ac.uk.

Nicos Antoniadis

Nicos Antoniadis is Adjunct Assistant Professor – The Peter J. Tobin College of Business, St. John's University, Jamaica, New York, USA. Dr. Antoniadis is a Greek-Cypriot refugee (Famagusta-Cyprus). He is a political marketing specialist and holds a BA degree in business administration (Cyprus), an MA degree in international marketing (UK), and a Ph.D. degree in business administration (France) with his main field of study being public administration and a specialisation in political marketing strategy in the USA. Dr. Antoniadis has acted as adviser to several politicians and organisations in Cyprus and abroad. He has worked as a lecturer and student adviser in UK universities (Cyprus Campuses) and US universities (CUNY, DeVry, and St. John's University). He is also the author of the book "There is Hope: Building Cyprus' Paideia" and the author of two eBooks on political marketing. He has to his credit a considerable number of surveys, newspaper articles, seminars, academic conferences, lectures, and academic articles relating to the political marketing strategy of U.S. elected politicians, Nordic countries' politicians, and Cypriot politicians. In 2015, he developed the AMPCOPE Political Test (Antoniadis Measuring Political Competitiveness and Performance), the first global online tool that measures the competitiveness and performance of politicians and political candidates in relation to their major political rival(s). The AMPCOPE Political Test is registered with the U.S. Copyright Office. Dr. Nicos Antoniadis is a member of the Marketing Academy of Science. He is a Trinity College of Music graduate and an award-winning Guitar Soloist. He is also an award-winning scholar: (a) The CIS Model: Packaging Government Ideas, 7th International Conference on Management and Education Innovation, University of Greenwich, London 2019; and (b) "Recognized for Outstanding Research and Contributions" among the few influential studies featured in Heliyon's edition, Elsevier (February 2019). In 2016, he was nominated for the American Marketing Awards and in 2018, he was rated by CUNY/CSI as a "Superior Professor". He has acted as a reviewer for the Academy of Marketing Science (AMS), the American Marketing Association (AMA), the Journal of Political Marketing, Economics Bulletin, Palgrave Communications, and Common Ground. Additionally, he is an editor at Ikypros Portal and L.A. Voice newspaper, and is an accredited reporter in the United Nations. As of 1 September 2020, he was the first person to teach Political Marketing at St. John's University, New York.

Contact info: n_antoniades2004@yahoo.gr / antonian@stjohns.edu.

Richard Afriyie Owusu

Richard Afriyie Owusu is Associate Professor at the Linnaeus University, School of Business and Economics Pedalstråket 11, 392 31, Kalmar, Sweden. He has wide international academic experience, having taught and researched in universities in Finland, USA, Australia and Ghana. Moreover, he also teaches business-to-business and international marketing courses at bachelors and masters levels. He advises PhD students and has also taught in executive MBA programmes. Dr. Owusu's research interests are within business-to-business marketing and international marketing strategy, particularly in emerging markets. He has published research articles on, among other subjects, entry modes and market development strategies in Africa, international project business, and corporate social responsibility in international supply chains, in well-ranked international research journals. Further, he is a member of the Editorial Review Boards of two international research journals and regularly reviews papers for several other international journals. In addition, he has worked on corporate consulting projects, including a business network strategy analysis for KONE Corporation and, in 2010-2011, as a Consultant for Omega Strategic Resources Ltd, which contributed to Ghana's National Export Strategy for 2011-2015.

Contact info: richard.owusu@lnu.se.

Roman Puchkov

Roman Puchkov is Director of Learning and Senior Lecturer at The Cyprus Institute of Marketing. Roman has more than 20 years of work experience including teaching and academic leadership roles with British universities, including Birkbeck, University of London, the University of Sunderland, the University of Suffolk and Wrexham Glyndwr University, as well as in private alternative education providers in the UK and Cyprus.

Prior to joining academia, in 2003-2008 Roman worked for the UK Government Department for International Development (UKAid) where he managed multi-million pound technical assistance projects focusing on public administration and economic reform in transition economies. Roman started his career in 1998 in a management consultancy in UK, White Young Green International, working closely with the World Bank, IMF and private clients in restructuring mining enterprises. His long-term international project assignments overseas included China, Mongolia, Russia and Ukraine. Roman's specialisation is in energy markets, business strategy development and international HRM. Roman graduated from the University of Nottingham with his first degree in economics with EU studies and obtained his postgraduate qualifications from London South Bank University. He completed his PhD in industrial economics and areas of his quantitative research remain in global energy consumption. Further, Roman is a Fellow of the UK Higher Education Academy.

Contact info: roman@cima.ac.cy.

Yiota Nicolaidou

Yiota Nicolaidou is a security mechanics strategist and the founder, and CEO of Y. Secure World Vision. She is a self-made businesswoman, tech entrepreneur, a philanthropist, and an admitted fighter against terrorism. Yiota has been trained in the design of safety critical systems and the protection of highly classified information from even invisible attacks and in fault tolerance, she brings a realistic and actionable angle to the protection of organisations and businesses.

Yiota's expertise has been sought out by top semiconductor companies, governmental agencies fighting cyber-terrorism, and other government-based safety critical infrastructure re-design projects related to public protection, valuable assets and classified information protection.

She focuses on holistic security (covering hybrid attacks) and strategy and her training models take advantage of mental and behavioural models and brain capabilities in order to offer her clients effortless, easy and, at the same time, long-term protection. Yiota is the producer and presenter of a blog and podcast called "Your Security Boost". She also makes appearances as a national speaker, guest writer for security related magazines and local radio and TV shows.

Contact info: yiota@secureworldvision.com.

Yuan Zhai

Yuan Zhai is a PhD research student at the University of Sunderland, UK. He started studying in the UK when he was 14 years old and won silver and gold medals in the UK Mathematics Challenge in 2009 and 2010, respectively. In 2014, Mr Zhai received a bachelor's degree in engineering from Imperial College London. Following that, he received a master's degree in science from the University of Warwick in 2016. From 2016 to 2017, he served as the business manager of the China Energy Construction Group International Co., Ltd., responsible for reviewing all the commercial contract terms signed by the enterprise with foreign governments or other enterprises. Yuan Zhai entered the University of Sunderland in February 2018 to pursue a doctorate under Dr. Derek Watson.

Since his master's degree, he has focused on exploring business management, quality and safety control, international strategy and return on investment. He has delivered speeches in universities and academic conferences, participated in and organised the China-British Enterprise Association and educational exchange activities, and maintained good communications and research links with experts and professors from different British universities.

Contact info: zhaiyuan666@126.com.

The Market

International Journal of Business



CYPRUS INSTITUTE
of MARKETING
**THE CYPRUS
BUSINESS SCHOOL**

research

CYPRUS CENTRE
FOR BUSINESS
RESEARCH

www.cima.ac.cy/market

market@cima.ac.cy