

# **TAXATION ON THE OPEN WATERS: ANALYZING TONNAGE TAX POLICIES THROUGH COMPARATIVE STUDY**

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## **Abstract:**

The global shipping industry has seen shifts in flag registrations as vessels move across different jurisdictions, prompting a need for innovative policies to prevent fleet decline. Tonnage tax has emerged as a significant approach in countries like Greece, Denmark, Norway, and the USA to address this challenge. Tonnage tax, in the context of this study, involves calculating taxes based on a ship's tonnage rather than traditional income-based assessments, as outlined in International Accounting Standard 12 (IAS 12). The study aims to explore the critical factors contributing to delays in implementing tonnage tax policies. While the focus is not on developing new accounting standards, the study investigates the factors behind the sluggish adoption of tonnage tax. The introduction of tonnage tax as a policy approach began in Greece in 1975, coinciding with the liberalization of shipping industries in non-traditional maritime nations. As ship owners sought registration in jurisdictions with lower taxes, the implementation of tonnage tax emerged as a solution to counteract fleet decline. This approach places importance on factors such as lock-in periods, qualifying assets, the location of management, and crew nationality management. Various authors have addressed tonnage tax from different angles, with some viewing it as an innovation to combat tax evasion, while others see it as an advantageous model for traditional maritime nations and disadvantaged countries to compete in the flag of convenience sector. This study delves into the dynamics and challenges of implementing tonnage tax in the global shipping industry.

**Keywords:** Tonnage tax, global shipping, flag registration, maritime industry, fleet decline, tax policy.

## **1. Introduction**

International shipping has taken several dimensions resulting to influx or exodus of flag registration from national government to other jurisdictions. The dynamism in shipping requires innovative-policy adaption from globalist, to avoid fleet decline. Experience of countries such as Greece, Denmark, Norway USA and several others, explains tonnage tax as “new-normal” for addressing fleet decline in international shipping. Tonnage tax as used in this study, refers to tax payment based on tonnage of a ship instead of assessable income as widely known in international accounting standard 12 (IAS12). This change seeks for development of accounting standard that will address tax-base on tonnage of a ship rather than income as widely held in accounting discipline, although this is not the tenacity of the present study. The study objective is to explore critical factors for laggardness in the implementation of tonnage tax.

The origin of tonnage tax implementation started from Greece in 1975, years after the non-traditional maritime nations liberalized their shipping industry, and ship owners begun moving to register in those

lesser tax jurisdictions (Leggate & McConville, 2005; Yin, 2020). To revert fleet decline caused by liberalization in other climes, tonnage tax was introduced as the least available tax regime using ship tonnage with emphasis on lock-in-period, qualifying assets, place of management and crew nationality management (Manolis & Bozzer, 2020).

Some other authors addressed tonnage tax as an innovation to address tax evasion (Chen et al., 2017; Panagiotou & Thanopoulou, 2019) while others debated it as best model for traditional maritime countries and disadvantaged shipping countries to compete in flag of convenience space (Gekara, 2010; Haider, 2013; Marlow & Mitroussi, 2011, 2012).

Consensus in literature point to facts that nations adapt tonnage tax to address number of issues such as employment (Gekara, 2010; Leggate & McConville, 2005) place of ship management (Elschner, 2013; Yin, 2020) and help to improve countries balance of trade and increase GDP (Manolis & Bozzer, 2020; Panagiotou & Thanopoulou, 2019). Recent publications of Yin, (2020) shows that tax incentives help reduce prices of imported goods owing to lesser cost from the reduced tax enjoyed in countries which tonnage tax regime. Despite the aforementioned advantages, Nigeria only made a public announcement to implement tonnage tax. The current tax system in the country is business unfriendly to the extent that indigenous shipping companies prefer to register off the shores of Nigeria (Ali et al., 2019; Kwanbo et al., 2019; Yahaya, 2018). Nigerian maritime was reported to be capable of generating seven trillion naira annually (About USD18.4 Billion) with about forty-million job opportunity from shipping and its allied activities (Jamoh, 2018).

This study is apt, especially at this current time-during and after the lingering global pandemic of covid19, as ship owners will be more interested in jurisdictions with lesser cost of operation which tonnage tax has been specially developed to offer. This study uses grounded theory data analysis technique to explore Nigerian shipping sector anticipated policy reform. The unique contribution of the study is its pragmatic discussion on critical factors on implementing tonnage tax in Nigeria. The remainder of this paper is structured as follows: introduction of the study, related studies, research method, results, and discussion of the main findings, implication of findings, study's limitation and suggestion for future research.

## **2. Related Studies**

Taxation plays an important role in international trade, it influences choice of business head office location decisions (Annuar et al., 2018; Mohdali et al., 2017). Studies on fundamental issue surrounding taxation are enormous and tax evasion become a common denominator that government and researchers pay so much attention on compliance behaviours (Borrego et al., 2017; NIMASA, 2008) as found in several studies (Alabede, 2014; Fagbemi et al., 2010; Jalan & Vaidyanathan, 2017; Ritsatos, 2014).

Tax evasion being the denominator of most tax studies, become so prevalence that some countries legalise it with a window for tax havens (Dowd et al., 2017; Jaafar & Thornton, 2015; Manolis & Bozzer, 2020). The most arguable has been happening in the shipping industry due to its pervasiveness (Yin, 2020). As discussed in Canadian tax law, tax has been watered-down from revenue source with emphasis on tonnage tax rule in the shipping sector. This rule allow for predictability of tax value, easy to calculate and give rise to low tax payment by shipping companies (Elschner, 2013; Manolis & Bozzer, 2020). These numerous advantages make tonnage tax an international competition for ship-owners to decide which countries flag to fly and has also reduced numbers of tax evasion (Chen et al., 2017; Gravelle, 2015; Marlow & Mitroussi, 2011).

Few years after its implementation in some countries, tonnage tax post-implementation studies begins to emerge, especially in the context of United Kingdom (UK). Among the earlier studies was a review of Lord

Alexandra commission recommendation on full support for tonnage tax implementation in the UK. The study found that tonnage tax implementation actually help to revert fleet decline and further recommends that enhance writing down of allowances and rollover relief are necessary to improve UK number of fleets(Brownrigg et al., 2001).

Four years after, another study investigate if tonnage tax was working in UK using a study period data from 1999 to 2003, the study found that introduction of tonnage tax help improve UK number of registered ship and employment level in the shipping sector. Although facts and figures were shown in tables according to number of registered ships in the respective years after the introduction of tonnage tax, but no comparison was made between pre and post. This comparison would have helped to arrive at much more statistically robust findings and inference that the introduction of tonnage tax leads to improvement in the shipping industry of the UK(Leggate & McConville, 2005).

In the same veinGekara, (2010) extends Leggate & McConville, (2005)study, using 2004 to 2008 data, to understand perception of stakeholders on the newly introduced form of tax assessment using primary instrument for elucidating information. The study found a contradictory perception from respondents. While shipping companies embrace tonnage tax because of its less operating cost, Unionist on the contrary, complaint of foreigners' domination with cheap labour in the UK.

This finding is significant for countries plagued with unemployment crisis to see how best they can take advantage of the tonnage tax system since it showcase globalization, where countries can utilize their comparative advantage on employment lop-sidedness across jurisdictions(Gekara, 2010).

Recent study in Canada looked at Canadian government reviewed shipping system, as a mechanism that can accommodate number of issues among which tonnage tax was considered, as best option to address fleet decline in the country. In the review, "the mind and management" test shows that introduction of tonnage tax lured international shipping into Canada, specifically more in Vancouver, making the city a shipping hub(Yin, 2020). The preponderance in literature about tonnage tax shows that it is a fiscal policy mostly adapted by countries to compete with others in the area of encouraging ships to fly their national flag using the cheapest tax rate, which is predictable with clauses that lock-in shipping companies- mostly between a ten years period(Elschner, 2013; Steven, 2017).

Adapting tonnage tax in a country like Nigeria, that already have income tax rules requires both national policy-change and amendment/new provision of accounting standards before full implementation could be effective. Policy change implementation research first started as pessimistic-undertone studies from United State around 1970s by way of evaluating the effectiveness of number of growing reform programs that were characterized with implementation failures(Pülzl & Treib, 2017). Critics of pioneering research work on implementation premise, faulted the paucity of theory building by the earlier studies to substantiate findings(Pülzl & Treib, 2017; Rusly et al., 2012).

Further modifications came up to address those paucities with the introduction of theoretical framework using hypothesis. This improvement, metamorphosed to different school of thoughts. Top-down, bottom-up and hybrid theory of implementation became the three pronounced school of thoughts in policy change implementation (Pülzl & Treib, 2017; Rusly et al., 2012).

This study followed the bottom-top approach to policy implementation by exploring the proposed implementation of tonnage tax from the context of government agencies directly saddled with maritime administration in Nigeria using grounded theory data collection techniques. Grounded theory seek to understand what is going on, what is the main problem of the participants and how are they trying to solve it? These fundamental questions will enable the study to establish tonnage implementation success factors

for further accounting researchers to begin research-conversations around tonnage taxation (Modell et al., 2008).

### 3. Research Method

To better understand Nigeria laggardness in adopting tonnage tax, interviews were conducted with nine participants drawn from Nigerian Maritime Administration and Safety Agency, Nigerian Shippers Council and Maritime Workers Union of Nigeria. Both to be addressed herein as NIMASA, NSC and MWUN respectively. Due to paucity of knowledge on tonnage tax, a purposive sampling technique was used by snowballing to arrive at the final sample used for this study. The primary criteria for sample selection, was recommendation of interested participant with perceived understanding of international taxation and local knowledge of the Nigerian shipping industry see summary of participants bio data in table 1

This study was built on grounded theory data analysis technique, with no hypothesis in mind to test, nor did the study attempt to confirm any existing theory. A grounded theory has been defined as “discovery of theory from data”(Glaser & Strauss, 1967 pg1). Justification for using grounded theory techniques was on a two premise: first little is known about tonnage tax even among professional tax accountants at international financial reporting implementation council (IFRIC) level, see the link for details in footnote 2. Second, the paucity of knowledge on the problem area likely explains the scarce accounting publication on this important area of taxation that has gained wider diffusion across jurisdictions. Furthermore, the study selected few participants who were considered knowledgeable in international taxation and shipping. On the premise of these, grounded theory data analysis technique become necessary to explore a detail understanding from the appropriate context for this study (Ghiringhelli & Virili, 2020; Modell et al., 2008).

Nigeria shipping sector was chosen to explore laggard’s view on implementation challenges because the country still suffers a lot from fleet decline (Lazarus & Ukpere, 2011), most of her citizens with maritime related certificates are unemployed (Anele et al., 2016; Maku & Alimi, 2018).An exploratory study therefore become appropriate research design for getting first-hand information amongst experts in Nigeria shipping industry through interview (Ghiringhelli & Virili, 2020; Scales, 2013).

The study uses inductive type of coding as data became determining factor of all generated codes in the study, there was no preconceived codes in mind before the interview was conducted(Preez & Stiglingh, 2018).Data were openly coded immediately after the interview and axially coded afterwards. Codes were grouped into three themes using ATLAS.ti8.

Top management role in tonnage tax implementation was considered as a theme with the following mentioned by participants during the interview: level of commitment shown by top management on tonnage tax implementation in the interview was coded as **commitment**, the presence of tonnage tax in management strategic plan was coded as **strategic plan**, communication of top management resolutions on tonnage tax implementation was coded as **communication**, and motivational skills of top management on issues involving change **motivation**.

The second generated theme was role of government employees on tonnage tax implementation in Nigerian shipping industry. Employees roles were generated under the following codes: extent to which they are empowered (empowerment), ability of government employees to be multi-tasked (Multi-tasking), knowledge of tonnage tax (Knowledge), team spirit (Teamwork), willingness and attitude to change (Attitude to Change), employees unionism (Union Support).

Last identified theme was organizational role, generated through the following codes: conversation surrounding the involvement of consultant in tonnage tax implementation (consultant), alignment of



tonnage tax with the mission and vision of the organisation (mission and vision) the organisation culture (culture), availability of resource to implement tonnage tax (resources) and collective lack of interest to implement tonnage tax (inertia). These key points were initially open-coded and axial coding was finally done to conceptualize what has been taking place in the experience of participants who are stakeholders in tonnage tax implementation (Glaser & Strauss, 1967).

Member check was used to establish the study credibility by sending copies of the audio transcribed script to interviewee to confirm whether the transcription covered the message they want to pass across, this was confirmed using two questions: do you agree with the facts as they are reported? And do you agree with the researcher's interpretation of the facts? Member check responses to the aforementioned questions established credibility of the study(Christensen et al., 2015).

Advocates of grounded theory suggest that accounting study that uses grounded theory technique should appreciate the underpinning commonalities of the founding fathers of grounded theory when interpreting result of the study. Despite the founders later divergent views, researcher should state crux of their result as not to over concentrate on the participants as findings but to reiterate varying degree of incidents that participants shared with the researcher as a basis of grounding the data or theoretical development from the data(Modell et al., 2008; Parker & Roffey, 1997).

This study concentrate more on the "groundedness" of the data by noting the code-code relationship otherwise known as the coefficient of the codes (C-coefficient). The C-coefficient describe strength of relationship between two codes, somehow like in a quantitative study (Frieze, 2019 pg 175). However, a caution was given to avoid interpretation of the C-coefficient because it has no **p value** and the degree of relationship should equally be avoided unlike quantitative study (Frieze, 2019 pg 178). The present study take into consideration these caveats in result interpretation and as a rule of thumb, consider C-coefficient  $\geq 0.1$  as Ccoefficient with relationship as also established in quantitative approach (Christensen et al., 2015; Creswell, 2009).

#### **4. Results**

The descriptive result only concentrates on the participants' profile as shown in table 1 whom were 67% males and 33% females. About 56% of them were from Nigerian Maritime Administration and Safety Agency (NIMASA); participants from Nigerian Shippers Council (NSC) were about 33%; whilst only about 11% were from Maritime Workers Union of Nigeria (MWUN). Members generally had not less than a graduate degree certificate from either or both of Accounting, Maritime studies, Shipping & Logistics, Finance management and Maritime policy study. About 33% of the participants were qualified PhD holders, the highest number of participants of about 56% had master's degrees and 11% of the participants were BSc holders. Participants had varied number of years in service, those with 1-10 years in service were about 12.5% that participated in the interview; the same 12.5% had about 11-20 years in service. About half of the participants had 21-30 years in service which represents 50%; those with more than 31 years in services were about 25% in the sample. Based on the background information, participants hold the right qualifications and experience in the shipping industry to give reliable responses that should be deemed appropriate for the current study. Participants were given pseudonyms in compliance with the caveat on consent form that reaffirm non-disclosure of participant's name. The Pseudo-code C2P4 for instance, refers to fourth participant in case number two.

#### **Table 1: Demographic Profile of Participants**

S/N	Pseudo Code	Organization	Designation	Years in Service	Highest Education Qualification	Sex
1	NM1	NIMASA	Chief Shipping Officer	35	PhD Shipping & Logistic	M
2	MU2	MWUN	President	30	MSc Computer Science	M
3	NM3	NIMASA	Senior Ship Officer	10	MSc Shipping & Logistics	M
4	NS4	NSC	Assistant Director Audit	27	MSc Maritime Transport & Logistics	F
5	NM5	NIMASA	Deputy Director, Budget	18	PhD Accounting and Finance	M
6	NM6	NIMASA	Assistant Director Final Account	29	PhD Maritime Finance	M
7	NS7	NSC	Chief Accountant	25	BSc Accounting, ACCA	M
8	NM8	NIMASA	Assistant Director Wet Cargo	31	MBA & BA (English)	F
9	NS9	NSC	Assistant Director Shipping Promotion	28	MSc Maritime Policy	F

The qualitative result as shown in table 2, present the likely three themes as critical factors for tonnage tax implementation in Nigeria shipping sector which are: top management, organization and employees as the emerging themes from the data.

**Table 2 Themes on Critical Factors for Implementing Tonnage Tax**

	<b>A. EMPLOYEES FACTORS</b> Gr=48; GS=7		<b>B. TOP MANAGEMENT FACTORS</b> Gr=44; GS=7		<b>C. ORGANIZATIONAL FACTORS</b> Gr=46; GS=6		<b>Totals</b>	
	<b>Absolute</b>	<b>Row-relative</b>	<b>Absolute</b>	<b>Row-relative</b>	<b>Absolute</b>	<b>Row-relative</b>	<b>Absolute</b>	<b>Row-relative</b>
<b>MWUN</b> <b>Gr=17;</b> <b>GS=1</b>	31	40.91%	24	31.82%	20	27.27%	75	100.00%

<b>NIMASA</b> <b>Gr=113;</b> <b>GS=5</b>	25	33.33%	22	29.33%	28	37.33%	75	100.00%
<b>NSC</b> <b>Gr=45;</b> <b>GS=3</b>	20	26.47%	31	41.18%	24	32.35%	75	100.00%
<b>Totals</b>	76	33.57%	77	34.11%	73	32.32%	225	100.00%

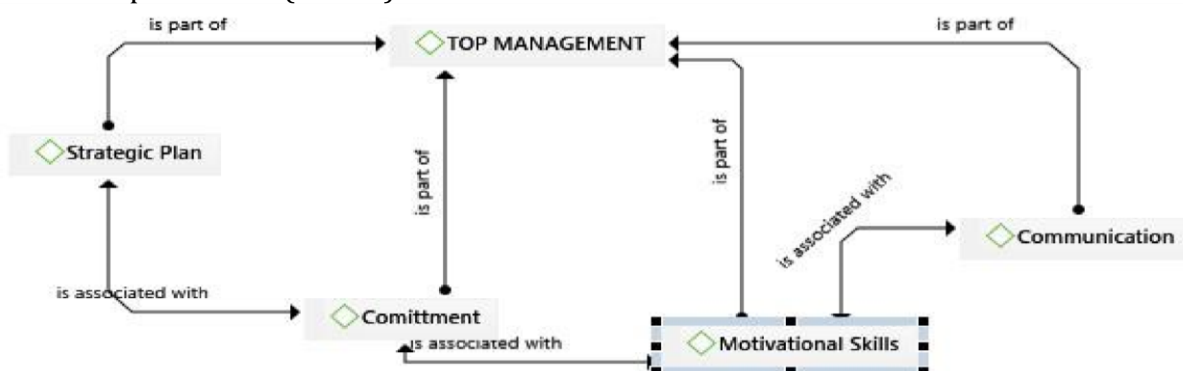
The three themes have codes relationship amongst them at inter and intra theme level from shared incidents of participants. Result interpretation was guided by Modell et al., (2008) endorsement when grounded theory data analysis technique become necessary to explore Accounting issues. Incidents were established from participants in the code-code relationship result generated using ATLAS.ti8 statistical tool as shown in table as **Appendix A** and diagrammatically presented as **Appendix B**.

#### 4.1 Results of Top Management Factor on Tonnage Tax Implementation

The outcome in figure 1 represent interview conversation on the role of top-management with regards to tonnage tax implementation. Four combined codes show relationship both at inter and intra code level. The most interesting outcome of this theme is association amongst the generated codes that seem linearly linked. It appeared more like having tonnage tax in the strategic plan of shipping industry is the most important factor for implementing tonnage tax as commonly shared by participants:

Another factor is that initiative that are not top ranked strategic-plan of management hardly get the light of the day. Tonnage tax in my opinion was not in management strategic plan. I read the five strategic pillars of management, there is no place that tonnage tax was mentioned. So, if tonnage tax is not in top management strategic plan, how will it be implemented? (C8P10). Participant also acknowledged the role of management in tonnage tax implementation, which must include a seamless flow of communication, with all the necessary stakeholders using motivational skills to engage other team players in tonnage tax implementation agenda.

Innovative ideas like tonnage tax are not always in public domain but when its diffusion got to top management that have strong commitment with skills to motivate their subordinates then such innovation can be implemented (C1P12)



*Figure 1* Top Management Factor on Tonnage Tax Implementation

#### 4.2 Results of Employees as a Factor on Tonnage Tax Implementation

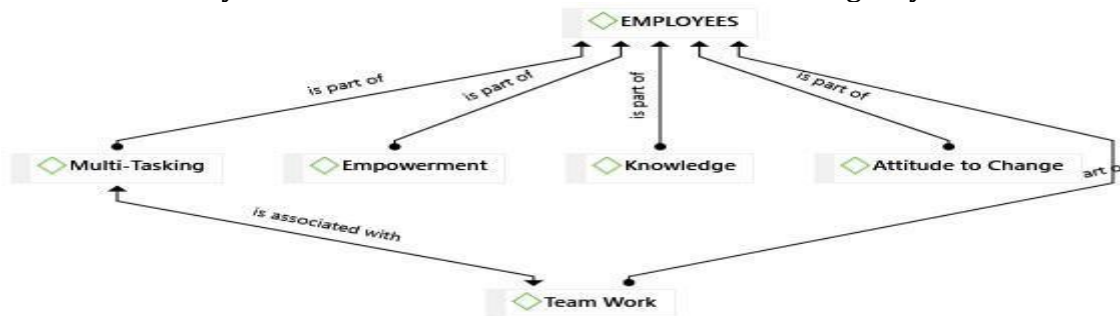
The role of employees on tonnage tax implementation generated six codes during the interview. However, unionism was dropped amongst the codes because there was no found relationship on the code “unionism”

both at inter and intra code level amongst the themes. The result on critical role of employees in figure 2, also demonstrates that teamwork and multitasking skills of the employees, produce an intra-relationship discussion on employees' role in tonnage tax implementation. A successful implementation could be inferred as a function of employees that can be multitasked and can equally work as a team the committee members to be selected from the organization should consist of staff with multi-tasking skills.

.....Members should not see it as an absolute task that will stop their usual office routine, rather they should have a broader skill that will combine both their role as committee members and their usual office routine. If committee members lack the multitasking skills, is either the committee fails, or the agency suffer from its daily office affairs. (C1P13)

In another stride, a collaborative backing was given to teamwork as employees' essential trait in successful implementation of new policy.

.....lack of teamwork also frustrate implementation and it surface because of staff resilience to change, We have lots of conservative staff who enjoins the old ways of doing things and never wants to embrace new ideas even if they know that the idea will be beneficial to the agency



*Figure 2 Employees Factor on Tonnage Tax Implementation*

#### **4.3 Results of Organization as a Factor on Tonnage Tax Implementation**

Organization as a critical success factor on tonnage tax implementation had a five code construct. These codes show some common pattern of relationship among which are: culture of an organization has relationship with its mission and vision also with the organization's inertia as depicted in figure 3 below. The context where about 56% of the study participants come from (NIMASA) inherited public announcement of Nigeria government intention to implement tonnage tax a year after her merger formalities was concluded. Majority of the participants perceive the timing as one of the constraints thus: I think the merger between NMA and JOMALK in 2006 was part of the reasons. The coming together of two different agencies under an umbrella lead to cultural shuck. This cultural difference was part of the reasons that deterred tonnage tax change implementation (C4P11)

Top management of the implementation committee witnessed a merger after announcing her intention to adopt, this past experience is a strong factor for not having tonnage tax yet implemented to present time. After the merger, the country was left with a combination of different agencies with different orientation which made communication of tonnage tax ideas difficult for further conversation (C5P9)

Participants also shared the complexity of effective change implementation in public services by describing change in the aforementioned as frustrating and not opened to trending innovation thus:

Tonnage tax introduction is an effort towards promoting ship registration in the country. Looking at it from this angle, I think the committee members are the right people to handle the task. My only reservation is



about the culture of government employees with regards to change. Change in government settings come with all kinds of frustrations. A culture that is opened to change will have a speedy adoption of trending innovation; I do not think Nigeria public service-culture is opened for innovation as at that time (C7P14)

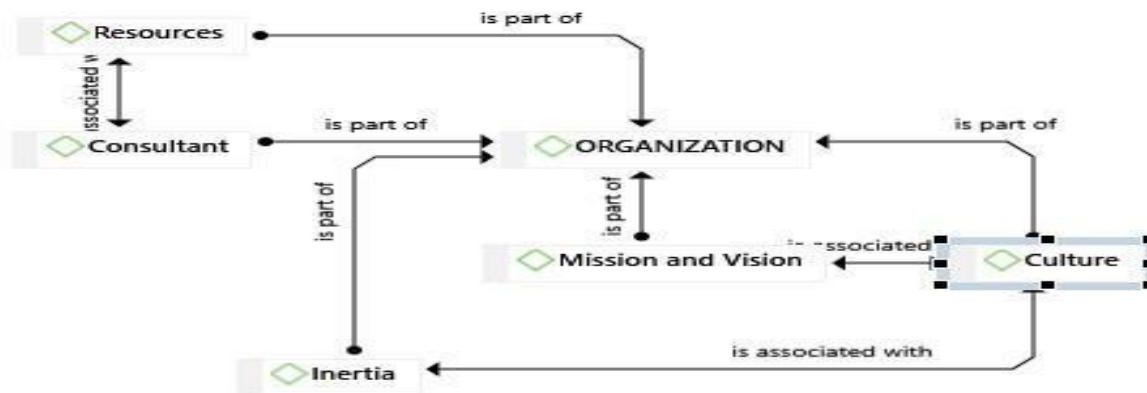


Figure 3: Employee Factor on Tonnage Tax Implementation

## 5.0 Findings and Discussion

A major finding of this exploratory study is that change implementation in social setting is a complex process that requires management, employees and the organization to achieve a goal congruence. This study discover similar findings with prior studies on organisation readiness to implement change (Aslam et al., 2018; Gurumurthy et al., 2013; Ismail et al., 2018; Puchalski Ritchie & Straus, 2018; Sony & Naik, 2019; Vaishnavi et al., 2019).

The study establish that motivational skill of top management has relationship with staff attitude on change implementation similar to rational choice model (Signé, 2017). The meaning of this is that organization with motivational-skill-driven top management has a higher probability of implementing innovative ideas quicker than those with lesser motivational skills.

Similar to many prior studies (e.g Ghiringhelli & Virili, 2020; Santos et al., 2017; Schumacher et al., 2016; Wolf et al., 2018), this study also found that the human resource element play pivotal role on change implementation processes, especially on tonnage tax implementation in Nigeria. To enable effective and efficient implementation, employees should be empowered to work as a team, necessary training should be provided for them so that the required knowledge on policy change or innovative idea can be easily embraced (Wolf et al., 2018).

The force of inertia as derived in the data, depict a function of commitment, culture of the organization, level of empowerment, motivational skills and teamwork see the code-code coefficient matrix in the appendix as table2. Negative forces from each of these forces contribute to inertia whilst the positive shall accelerate tonnage tax implementation. The data also shows that the mission and vision has more to do with the organization culture, to achieve full implementation of tonnage tax in Nigeria, professional consultant who will be knowledgeable in both tax and international shipping should be engaged.

## 5.0 Implication of study, limitations and Areas for Further research

The present study unearth discus about Nigeria fleet decline in international shipping space and explored professional input on tonnage tax as panacea to fleet decline. The study thematically brought the key success factor for efficient implementation of tonnage tax regime in Nigeria. This exploratory study will be useful for countries plagued with fleet decline to appreciate how others countries were able to compete

favourably using tonnage tax as policy instrument and understand factors to consider for successful implementation. It further contribute to grounded theory studies for further quantitative verification. Just like every other qualitative studies, this study cannot be generalized deductive. However, it establish premise for academic writing in accounting discipline. Therefore, accountants can start asking question on what are the consequence of having a tax that is in conflict with IAS12? How do accountant recognise ship disposal under tonnage tax and how do international standards cover this important area in order to achieve harmonization of business reporting, globally?

## **6.0 Conclusion**

The summary of the present study recognises top management as the most significant actor on new policy implementation. Top management in the context of this study, refers to CEO and other Executive Directors who need to have the following attribute for effective and efficient implementation of innovative ideas: consideration of innovative ideas on strategic plan, ability to motivate by frequent communication of desirable information to deserving stakeholders and be committed by “walking the talks”. Employees on the other hand need requisite knowledge on the new idea and be empowered to appreciate team work by exhibiting attitudinal change. Organization also has an inbuilt role on policy alignment to its mission and vision, resources at her disposal can be efficiently utilized when consultants with expertise are allowed to contribute in new policy implementation. These are the concluding factors that will enable implantation of tonnage tax in Nigeria.

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