Intellectual Capital and Institutional Governance as Capital Structure Determinants in Tourism Sector

Purpose
This study investigates the capital structure determinants of the Middle East tourism sector by examining intellectual capital efficiency and institutional governance along with firm-specific and macroeconomic variables. This research also identifies the determinants of capital structure for tourism companies in the Gulf Cooperation Council (GCC) and non-GCC countries.

Design/methodology/approach
Data was collected from 45 listed tourism companies of nine Middle Eastern countries over five years from 2014 to 2018. The data was analysed using Ordinary Least Squares (OLS) regression and checked for robustness using the Generalised Methods of Moment (GMM) estimation.

Findings
Overall, the results indicate that tourism companies rely more on short-term debt than long-term debt, thus decreasing liquidity and increasing financial risk. Furthermore, tourism companies in non-GCC countries have higher intellectual capital efficiency compared to those in GCC countries. The aggregate institutional index is much higher for GCC countries compared to non-GCC countries. The OLS estimations suggest intellectual capital efficiency and institutional governance index provide inconclusive evidence as a determinant of capital structure proxy. A high capital employed efficiency is associated with more leverage for tourism firms. Theoretically, the results support pecking order and trade-off theories due to the relationships between firm-specific indicators and debt.

Originality
This study closes the gap in the capital structure debate by providing valuable insights on intellectual capital efficiency and institutional governance. These two factors serve as capital structure determinants in the Middle East and the GCC and non-GCC regions.

Keywords
Intellectual capital efficiency, institutional governance, capital structure, macro-economic indicators

1. INTRODUCTION

Presently, the COVID-19 pandemic has had a devastating effect on tourism globally due to government-imposed lockdowns, travel restrictions and wide-scale panic of tourists. During the pandemic, the tourism industry was one of the worst affected sectors and faced falling revenues and significant job losses (Uğur and Akbıyık, 2020). This is particularly devastating since tourism is the largest and fastest-growing sector globally (Gao and Su, 2020; Su, 2020), which stimulates investment and employment, revitalises the economy's structure, and positively contributes to long-run economic growth (Su, 2020). The services sector employs the poorest and most vulnerable in the travel, tourism, retail, accommodation, and food and beverage services (Arezki *et al.*, 2020). Though economic decline systematically affects all industries in different ways, the cyclical nature of tourism makes the impact of recession particularly significant. This is especially perilous for leveraged tourism companies burdened with the financial risk of mandatory interest and capital payments whilst facing reduced revenues due to the pandemic. Leverage is a necessary component of a capital structure and is one of the most important channels to attain cash flow to develop or acquire assets. With the rapid growth of knowledge-based economies, it is increasingly necessary for businesses to invest in intellectual capital (IC) assets which is a critical success factor in gaining a strategic market advantage and increase innovation. Companies with IC management are interested in value extraction (Edvinsson and Sullivan, 1996), and its potential for creating a wealth-generating advantage in the market has been evidenced in the extant literature (Firer and Williams, 2003; Kamukama, Ahiauzu and Ntayi, 2011; Ramadan *et al.*, 2017). However, considering the financial risk of debt and the volatile tourism market, companies must be still viable whilst investing in IC.

Capital structure decisions are not only based on the macroeconomic environment but also on firm characteristics and institutional governance (Taddese and Negash, 2013, p. 236; Matemilola *et al.*, 2019). A country's superior institutional governance leads to capital market development and economic growth through governance, the rule of law, and control for corruption. However, institutional differences between countries can potentially affect how companies within these countries are financed (Fan, Titman and Twite, 2012). As countries' institutional quality and legal enforcement improve, financiers are more inclined to grant credit to companies (Kaufmann et al., 2009). Furthermore, within a stakeholder perspective in resource-based theory, institutional governance becomes essential for attaining cheaper debt to fund IC assets. Therefore, institutional quality researchers have expressed the need to focus on institutional factors as determinants of firms' capital structure (Awartani *et al.*, 2016; Belkhir, Maghyereh and Awartani, 2016; Fan, Titman and Twite, 2012; Öztekin and Flannery, 2012; de Jong, Kabir and Nguyen, 2008).

Since the institutional environment varies across countries, this influences the financing choices of companies (Fan et al., 2012), as evidenced in Awartani et al. (2016), who found that better institutional quality led to more long-term debt by the Middle East and North Africa (MENA) countries. With the demise of the old social contract[1] in MENA countries, the highest priority is now placed *"on transparency, governance, and the rule of law as avenues to instil trust between the state and its citizens, attract private sector investment, grow the economy, and expand access to opportunities for all"* (The World Bank, 2020). The economic impact of the COVID-19 pandemic affected the MENA region most exposed to the global value chains and trade, which

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[1] Over the last three decades, MENA countries have experienced a departure from the old social contract of the dominant public sector protecting the privileged business class.

includes disruption of imports of crude oil and exports of chemicals in the Gulf Cooperation Council countries (GCC) as well exports for electrical machinery in non-GCC[2](Arezki *et al.*, 2020). Tourism is a vital source of income for many MENA countries, but these regions have been severely distressed by the pandemic (see Annexure 1) (Arezki *et al.*, 2020). Matemilola et al. (2019) stated that institutional quality affects firms' debt ratios when spread across different regions. Accordingly, this study examined the capital structure determinants on a regional basis, namely GCC and non-GCC. Comparing these countries adds to the robustness of this study and proves useful since tourism companies from these two regions may have differences in the value relevance of capital structure. Particularly since there was a sharper decline in foreign direct investment inflows for non-GCC (-74%) than GCC (-20%) during the pandemic era (annexure 1)(Arezki *et al.*, 2020).

The pandemic disruption to tourism and its concomitant effects on the economic environment stresses the need for the tourism sector to identify wider factors that lead to capital structure decisions. However, the extant literature has not sufficiently addressed this deficiency in identifying wider capital structure determinants. This research addressed the gap by tackling the fundamental question: Are IC efficient companies operating in countries with high institutional governance quality more indebted than those with lower levels? Using a conceptual model premised on relevant theories, this study wishes first to identify whether tourism companies rely on short-or long-term debt to understand the firm's indebtedness. Secondly, discover how the middle eastern regions are affected by the relationships between institutional governance, IC and capital structure. Thirdly, identify whether institutional governance and IC serve as capital structure determinants. The robustness of this study is supported using empirically tested and well-established models for IC and institutional governance, then applying econometrics to analyse the relationships between these frameworks.

This study makes three significant contributions. First, this study adds new evidence from a theoretical standpoint using the four debt components to evaluate the relationships with institutional governance and IC, whereas other studies have used one or two leverage variables. Second, the aggregated and disaggregated measures of IC was analysed on the four components of the debt structure in tourism companies. Based on the Ordinary Least Squares (OLS) regression estimation results of 225 firm-year observations from 2014-2018, the causal mechanism of how the aggregated and disaggregated IC measures are associated with different debt instruments were exposed. A key contribution was that greater capital employed efficiency for the Middle East and GCC tourism companies employed more long-term, short-term debt and total debt translating to increased financial risk. These findings offer insights into the alignment of strategic decision making related to capital structure policies when pursuing essential innovative resources related to IC investments. Third, this study examined the roles of the aggregated and disaggregated measures of institutional governance as capital structure determinants in tourism companies. The results showed that it does not constitute the capital structure determinants due to an insignificant institutional governance impact. A key finding was that high institutional ownership in Middle Eastern tourism companies negatively affected their long-term debt and total debt. These important constructs will inform regulatory processes as well as catalysing future research.

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[2] GCC countries=Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates.
  Non GCC countries=Algeria, Djibouti, Egypt, Iran, Iraq, Jordan, Lebanon, Libya, Morocco, Syria and Tunisia.

The rest of this paper is organised as follows: Section 2 presents the literature review that summarises capital structure theories, formulates the study hypotheses and describes the empirical model. Section 3 explains the data sample, the research model and variable measurement. Section 4 presents the study results, while Section 6 discusses the conclusions, recommendations and study limitations.

2. LITERATURE REVIEW

2.1 Intellectual capital (IC)

The resource-based theory describes the resources and capabilities of companies are sources of competitive advantage to achieve better financial performance (Barney, 1991; Grant, 1991). However, for a sustained competitive advantage[3], these resources need to be valuable and rare, which cannot be imitated or substituted (Barney, 1991). A resource-based approach to strategy is deploying existing resources for developing the firm's resource base further. These resources and capabilities consist of tangible and intangible assets, including capital equipment, employee skills, patents, brand names, financial resources and so forth (Grant, 1991). The resource-based theory describes the need for companies to invest in intangible assets since it is rare, valuable and difficult for competitors to imitate, leading to a sustained competitive advantage. Companies increasingly depend on knowledge, namely, patents, processes, management skills, technologies, customer and supplier information as well as experience (OECD, 2006). IC is defined as knowledge that can be converted into value (Edvinsson & Sullivan, 1996) which serves as an essential intangible asset (Firer & Mitchell, 2003). Sveiby (1997) initially categorised IC into three sub-categories. These were subsequently enhanced by Edvinsson and Malone (1997) and Ordóñez de Pablos (2003), as shown in Table 2.1.

<Insert Table 2.1: Theoretical evolution of IC >

Lev (2001) also proposes three key nodes of intangibles, adding human resources and organisational practices, although innovation (discovery or knowledge) is suggested instead of customer capital. Several studies have found that IC has a positive effect on firm performance (Chen, Cheng and Hwang, 2005; Riahi-Belkaoui, 2003; Ginesti *et al.*, 2018; Ozkan, Cakan and Kayacan, 2017; Pew Tan, Plowman and Hancock, 2008; Smriti and Das, 2018; Tran and Vo, 2018, Babajee et al., 2020). Additionally, Schiavone et al. (2014) argued that the firms' location in a science park significantly improved their intellectual capital performance. In contrast, another study found a negative effect of IC on financial performance (Firer & Mitchell, 2003). Sydler, Haefliger and Pruksa (2014) demonstrated that an increase in IC is associated with a higher return on assets over time. Therefore, the higher the investment is IC, the greater the sustainable competitive advantage. Although IC is vital for firms, few studies have shown its influence on capital structure decisions.

IC has been investigated for the Middle East countries by several prior studies. For example, in Egypt, IC demonstrated a negative influence on the probability of financial distress (Shahwan and Habib, 2020) and a partial mediation effect on the relationship between corporate governance and the firm's operational efficiency ratio (Shahwan and Fathalla, 2020) for listed firms. Studies in Oman suggested IC components such as structural capital, relational capital and spiritual capital

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[3] Sustainable competitive advantage is defined a competitive advantage dependent on the possibility of competitive duplication, rather than the length of period the firm had a competitive advantage.

were significantly related to entrepreneurial opportunity (Rahman et al., 2021), structural capital was positively associated with ROA and Altman Z score of non-financial sector firms (Dalwai and Salehi, 2021) and IC contributed to better readability of financial sector firms (Dalwai et al., 2021). Human capital, social capital and knowledge transfer were positively related to the organisation capital in Jordan (Dahiyat et al., 2021). Few studies in Iran reported IC to have an indirect relationship to firm performance through the mediating role of intrapreneurship (Asiaei et al., 2020) and higher levels of IC showed a greater diversity of performance measures (Asiaei and Jusoh, 2017). A negative relationship was reported for corporate governance and IC of GCC countries (Al-Sartawi, 2018). These studies demonstrate a visible gap in studies on IC for the Middle East tourism firms.

2.2 Capital structure theory
IC cannot be created or leveraged without capital employed, consisting of physical capital and financial capital (Pulic, 2000). Therefore, increasing the IC level increases the need for internal and external sources of corporate funding. Internal funding sources come from retained earnings, while external funding sources come from equity, long-term debt (LTD) and short-term debt (STD). Based on the firm's financing policy and internal and external factors, these components vary in terms of the composition of the capital structure. Therefore, the selection of the capital structure can maximise the shareholder value. Theoretically, the capital structure framework is predominantly informed by three theories: trade-off theory, pecking order theory, and free cash flow theory, which must be considered when devising an optimal capital structure for a company (Sewpersadh, 2019). These theories can be summarised as follows:

- Trade-off theory proposes an optimal capital structure, entailing a balancing act between tax benefits from debt and financial distress costs due to unavoidable debt repayments (Myers, 1984). Therefore, profitable firms are in a favourable position to repay the principal plus interest (Rajan and Zingales, 1995) and should be highly levered to offset corporate taxes (Frank and Goyal, 2003).

- Pecking order theory does not advocate for an optimal capital structure due to the costs of information asymmetry. It prescribes a hierarchal order for sourcing finance, namely, internally generated funds, followed by debt and lastly, equity (Myers and Majluf, 1984). Profitable firms have sufficient cash flow for internal financing and consequently rely less on debt (Titman and Wessels, 1988). However, internal financing is not often adequate to cover investment spending on average, necessitating the use of external financing (Frank and Goyal, 2003).

- Agency theory argues for an optimal capital structure that minimises total agency costs[4]. Based on this, the free cash flow theory prefers debt as a source of finance under conditions of asymmetric information. This is because the repayment obligations reduce the flow of cash, which prevents managers from making risky decisions to the detriment of shareholders' interests (Jensen, 1986).

Trade-off theory recommends that higher debt use is associated with positive tax shields and fewer bankruptcy costs whilst remaining cognizant of the trade-off of increasing systematic risk. Similarly, the pecking order predicts the maturity and priority of debt structure where preference is for debt when internal financing is inaccessible. Thus, funding with the least information costs

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[4] Agency costs are defined as the sum of "the monitoring expenditures by the principal, the bonding expenditures by the agent, and the residual loss". Residual loss is the dollar equivalent of the "divergence between the agent's decisions and those decisions which would maximise the welfare of the principal". (Jensen and Meckling, 1976, p. 308).

should be sourced first before the firm issues securities with greater information costs. In comparison, the free cash flow theory uses debt to curb managerial opportunism due to information asymmetry where agency conflicts are reduced because creditors are involved in monitoring management. Within certain precautionary restrictions, these three theories recommend leverage as a source of finance. Higher debt intensity is likely to be associated with a higher interest burden which impacts liquidity and increases the financial risk (Sewpersadh, 2019). The financial risk of mandatory interest and capital repayments is at the mercy of inflation, currency risk and interest rate fluctuations, which increases these distress costs. Sufficient liquidity is beneficial because it lowers bankruptcy risk and assures credit providers whilst bolstering the firm in dealing with fluctuating market conditions. This is particularly relevant to highly cyclical businesses that rely on free cash flow rather than long-term debt. Having liquid assets lowers profitability since investing in these funds will render higher returns, albeit at greater risk. The goal of an optimal capital structure decision is to determine the financial leverage that can maximise a company's value, reduce free cash flow (alleviate managerial opportunism) and minimise the weighted average cost of capital (Sewpersadh, 2019). Since the external market—and not management—dictates the weighted average cost of capital, this highlights the importance of institutional governance. Strong institutional governance provides an environment conducive to businesses using debt to fund assets whilst minimising the risks associated with debt.

2.3 Institutional governance

According to North and Etzioni (1993), essential components of well-functioning economic systems that drive economic growth are institutional stability, consistency and predictability. North (1986) explains that institutions can be viewed as a set of customs and rules that provide incentives and disincentives, shaping individuals' behaviour. These customs and rules are enforced either through self-regulation, codes of behaviour or third-party policing and monitoring. Institutional quality is represented by countries that have property rights protection, "*a well-specified legal system, a well-specified and impartial third party of government to enforce them, and a set of attitudes toward contracting and trading that encourages people to engage in them at low cost*" (North, 1986, p. 236). Institutions shape economic performance by determining transaction and transformation costs. Furthermore, the "*cost of transacting arises because information is costly and asymmetrically held by the parties to exchange*" (North, 1993, p.43). Therefore, institutional quality is a vital component in the risk assessment of a country since it creates reasons for or against economic transactions and business decisions. Firms that operate in countries with strong institutions can obtain external capital and grow faster (Demirgüç-Kunt and Maksimovic, 1998; Awartani *et al.*, 2016). For instance, countries with inadequate legal protection over assets and a high political instability commonly exhibit high rates of expropriation that may deter potential investors (Azzimonti and Sarte, 2007). This makes it difficult for firms to obtain debt capital, especially in developing countries, since low institutional quality offers inadequate protection for lenders, thereby reducing loan availability (Qian and Strahan, 2007; Ağca, De Nicolò and Detragiache, 2013). Moreover, Matemilola et al. (2019) found a positive relationship between institutional quality and debt, concluding that as developing countries' institutional governance improves, lenders are more willing to grant credit to firms due to the reduced bankruptcy risk.

Recognising the need for a suitable gauge for institutional governance, Kaufmann et al. (1999) developed the World Governance Indicators (WGI). The authors define governance as "the traditions and institutions by which authority in a country is exercised" (Kaufmann et al., 2009, p. 4). Table 2.2 shows the three categories that define the six measures of WGI:

3. Hypothesis Development

3.1 IC and capital structure

Value creation efficiency through IC investments is a critical component of sustainability that affects a firm's financing decision due to its intangibility. Extant literature has a dichotomous view on the importance of intangible assets on capital structure. One strand of literature argues that intangibles do not constitute suitable collateral for financiers since it is riskier and more difficult to value than tangible assets. Therefore, a firm's investment in tangible assets can support more debt than investments in IC since it inherently has a lower liquidation value translating to higher bankruptcy costs, limiting its debt capacity. Consequently, it encourages firms to use other debt instruments such as short-term debt. When a firm has a high proportion of intangible investments, the amount of debt needs to be limited to manage its risks (Harris and Raviv, 1991; de Jong, Kabir and Nguyen, 2008; Frank and Goyal, 2009; Fan, Titman and Twite, 2012). The alternative view of prior studies suggests that intangible assets offer substantial backing for leverage as it comprises of an increasing proportion of the firm's value (Lim, Macias and Moeller, 2020). Some of the intangible assets that are liquid and redeployable are accepted as collateral by lenders as they are associated with innovating ways of leveraging and financing these assets (Loumioti, 2012). Furthermore, the positive consumer attitude or experience towards an intangible asset such as a brand helps reduce the overall firm's riskiness and thus, intangible assets can support leverage (Larkin, 2013).

Despite the importance of funding sources, there is limited literature examining the direct relationship between IC and capital structure. Lim, Macias and Moeller (2020) reported a positive association between intangible assets and leverage for US public firms. Another recent study found IC negatively influences financial leverage, where financial leverage is significantly lower in firms with high VAIC in 21,335 Italian companies (D'Amato, 2021). However, this study only used one leverage variable and did not separate capital structure into short- and long-term debt components nor provide for the impact on liquidity. As the empirical evidence on capital structure determinants has suggested, the high proportion of intangibility is associated with lower levels of financial leverage (Al-Fayoumi and Abuzayed, 2009; Khémiri and Noubbigh, 2018; Sun *et al.*, 2016; Pacheco and Tavares, 2015), the following hypotheses are therefore proposed:

H1: The aggregated and disaggregated measures VAIC^{TM} model have a negative influence on long term debt

H2: The aggregated and disaggregated measures VAIC^{TM} model have a negative influence on short term debt

H3: The aggregated and disaggregated measures VAIC^{TM} model have a negative influence on total debt

H4: The aggregated and disaggregated measures VAIC^{TM} model have a negative influence on liquidity

3.2 Institutional governance and capital structure

Premised on the institutional theory, institutional quality is essential to gain access to external funding sources (Selznick, 1957). Several studies have found that institutional factors influence the capital structure (Fan, Titman and Twite, 2012; Öztekin and Flannery, 2012; Awartani *et al.*,

2016; Belkhir, Maghyereh and Awartani, 2016; Matemilola *et al.*, 2019). For instance, Fan et al. (2012) found that firms in 39 developed and developing countries with weaker laws or higher corruption tend to use more short-term debt. Also, in countries where there is a higher tax gain from leverage, more debt is utilised. Whereas, Öztekin and Flannery (2012) found that institutional differences explained the variance in the estimated speeds of adjustment to target leverage ratios of firms in 37 developed and developing countries. Oztekin and Flannery (2012) conclude that their results support the theory that better institutional quality reduces transaction costs linked to firms' adjustment of their debt. Awartani et al. (2016) examined 444 firms in MENA countries and found that more short-term debt was used in the MENA region.

Furthermore, better quality institutions are associated with the use of more long-term debt in the area. Belkhir et al. (2016) examined the indirect effects of institutional quality from 444 listed firms in MENA countries and found it negatively influenced debt. Recently, Matemilola et al. (2019) found that institutional quality from 23 developing countries significantly affects firms' capital structure. Among the six disaggregated measures of institutional quality, the study finds only political stability and voice and accountability to be negatively and positively related to capital structure, respectively. Using the supply-side theory, this study argues that strong creditor protection offered under better institutional quality settings induce lenders to grant credit on favourable terms (La Porta *et al.*, 1997), and thus corporations would take on more debt. The following hypotheses are therefore proposed:

H5: The aggregated and disaggregated measures of the institutional governance index have a positive influence on long term debt

H6: The aggregated and disaggregated measures of the institutional governance index have a positive influence on short term debt

H7: The aggregated and disaggregated measures of the institutional governance index have a positive influence on total debt

H8: The aggregated and disaggregated measures of the institutional governance index have a positive influence on liquidity

The empirical model for this study is depicted in Figure 1. First, it is theorised that the value-added benefits of IC have a positive influence on leverage. Second, it is hypothesised that better institutional governance lowers bankruptcy costs, leading to firms leveraging upwards to take advantage of the tax shield benefits.

< Insert Figure 1: Empirical model of capital structure determinants here>

4. METHODOLOGY
4.1 Data, sample selection and research method
The study sample was extracted from the Middle East region, which comprises 14 countries (Turkey, Bahrain, Iraq, Israel, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen, Jordan and the Palestinian Authority) and 51 public listed tourism sector companies. The accounting variables identified in section 3.2 were collected from 2014 to 2018 from the S&P Capital IQ database. Companies with missing information in the study period were excluded from the sample, culminating in a final sample of 45 listed tourism sector companies

from nine countries. The study had 95 firm-year observations for the GCC and 130 firm-year observations for the non-GCC tourism sector companies.

The study of capital structure determinants has potential endogeneity problems of explanatory variables leading to the extant literature using the two-step system Generalised Method of Moment (GMM) estimator for capital structure studies (Khémiri and Noubbigh, 2018; Zhang and Liu, 2017; Vo, 2017; de Miguel and Pindado, 2001). As part of the robustness check, this study uses a GMM system estimator because debt is reported to have persistent behaviour (Lemmon, Roberts and Zender, 2008). This suggests current year debt affects prior year debt. The two-step system GMM also supports in addressing the possible reverse causality between debt and the explanatory variables (Matemilola *et al.*, 2019) and omitted variables problem (Vo, 2017). Flannery and Hankins (2013) argued traditional OLS produces biased estimates for models that include firm-specific effects and lagged debt. Thus, the two-step system GMM estimator of Arellano and Bover (1995) and Blundell and Bond (1998) control unobserved individual heterogeneity and potential endogeneity issues. Accordingly, this study addresses the potential bi-directional causality between the response variable (leverage) and the explanatory variables (Sewpersadh, 2019). It is, therefore, an asymptotically efficient and consistent estimator.

4.2 Variables measurement
This study investigated the determinants of capital structure for Middle East tourism sector companies. The dependent, independent and control variables used to support the study are explained in the following sections. Table 3.1 summarises the measurement of the variables of this research.

<Insert Table 4.1 Variables measurement here>

4.2.1 Dependent variables
The most common measure of capital structure is the ratio of the total debt-to-total asset (total debt) (Matemilola *et al.*, 2019; Bany-Ariffin, 2010; Frank and Goyal, 2009). However, studies have also shown that the ratio of short-term debt (STD) and long-term debt (LTD) has a positive effect or negative effect on firm performance (Kyereboah-Coleman, 2007; Yazdanfar and Öhman, 2015; Lee and Dalbor, 2013; Salim and Yadav, 2012). This study contends that leverage should also be analysed in its different components, including liquidity as a response variable. This study contributes to the literature by examining the capital structure determinants using four measures of debt. This study adopted the components of capital structure derived from Sikveland and Zhang (2020) and Chittenden et al. (1996). A separate econometric model was estimated for the four constituents of capital structure, calculated as follows:

1. Long-term debt (LTD) = [Long-term loans (LTL) + other long-term liabilities (OLTL) / Total Assets (TA)] *100

2. Short-term debt (STD) = [Current liabilities (CL) / TA]*100

3. Total Debt (TD) = [(CL + LTL + OLTL) / TA] *100

4. Liquidity (LIQ) = [(CA-CL)/TA] *100

4.2.2 Independent variables

a.   IC efficiency

The monitoring and measuring of IC, as well as firm potential can be facilitated by the Value Added Intellectual Capital Coefficient (VAIC^{TM}) model as developed by (Pulic, 1998; Pulic, 2000). VAIC^{TM} is objective and verifiable since it uses a company's audited and published financial data that was prepared based on accepted accounting standards. This enables management, shareholders and other stakeholders to monitor and evaluate value creation. The model is an analytical procedure that relies on the concept of added value as a measure of performance (output) relative to IC (input) as managed by a company, showing how much new value is created by each monetary unit invested in resources. The higher the coefficient of VAIC^{TM} of a firm, the greater the company's IC in using resources for value creation (Pulic, 1998). In line with prior research, VAIC^{TM} was adopted as a proxy for IC efficiency since it is a widely accepted quantitative measure for IC efficiency (Dalwai and Mohammadi, 2020; Kasoga, 2020; Isola, Adeleye and Olohunlana, 2020; Buallay and Hamdan, 2019; Dalwai, Mohammadi and Al Siyabi, 2018; Hamdan, 2018; Soewarno and Tjahjadi, 2020). The VAIC^{TM} calculation was based on the following steps:

Step 1: The value-added (VA) computation is the beginning point of VAIC calculation:

VA = Operating Profit (OP) + Employee cost (EC) + Depreciation (D)+ Amortisation Expenses (A)

Step 2: Calculate human capital efficiency (HCE), structural capital efficiency (SCE) and capital employed efficiency (CEE):

HCE[5] = VA / HC, where HC refers to employees' wages and salaries. HCE is considered as the firm's value addition attributable to investment in human capital.

SCE[6] = SC / VA, where SC refers to structural capital derived by subtracting HC from VA. SCE is considered as the variation between value-added and human capital investment.

CEE[7] = VA/CE, where CE refers to capital employed that is, the sum of equity and long-term liabilities. CEE is the efficiency of the physical and financial capital used in the firm.

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[5] Human capital efficiency (HCE) represents the value-added efficiency per invested monetary unit by a company. Employees are not treated as a cost but as an investment since they invest their knowledge and capabilities, as reflected in the value added to the company's activities in the market (Pulic, 2008).

[6] Structural capital efficiency (SCE) means that the greater the labour expenses, the smaller the proportion of structural capital in a company (Pulic, 2000).

[7] Capital employed efficiency (CEE) shows the efficient use of corporate capital, namely, financial capital and physical capital since intellectual capital cannot work alone in creating value-added efficiency for the company (Pulic, 2008).

Step 3: Calculate VAIC^TM:

$$VAIC^{TM} = HCE + SCE + CEE$$

b. Measure of institutional quality

As governance or institutional quality is an unobservable variable, it has been problematic to obtain a suitable proxy (Magnusson and Tarverdi, 2020). For this reason, Kaufmann et al.'s (1999; 2009) WGI was used as a proxy for institutional governance, where each country was ranked based on the six governance elements. The countries were assigned a value between 0 to 100, using the percentile ranking method. In addition to the WGI, the institutional quality index (InstIndex) was used. This is an arithmetic mean of the WGI (Matemilola *et al.*, 2018; Aluko and Ajayi, 2018; Le, Kim and Lee, 2016). The institutional quality data was reliably obtained from the World Bank's WGI database.

4.2.3 Control variables

The association of capital structure with institutional quality and IC was controlled for other variables. This study includes institutional ownership (InstOwn), measured as the ratio of the number of institutional or corporate shareholders to the total number of shares and is a critical internal corporate governance mechanism (Li *et al.*, 2020; Gurusamy, 2021). Jensen and Meckling (1976) suggest that ownership structure reduces agency costs and enhances the firms' management control. Institutional ownership is found to have a negative relationship with leverage (Gurusamy, 2021). Tangibility (FATA) was expressed as the ratio of property, plant and equipment to total assets. Firm size (FirmSize) was measured as the natural logarithm of total assets. Profitability (ROA) was a measure of earnings before interest, tax and depreciation divided by total assets. The growth of a firm was found to have a conflicting relationship with debt under theoretical predictions.

Prior studies have found macroeconomic factors affect the firm's borrowing decision and therefore associated with capital structure (Li and Islam, 2019; Matemilola *et al.*, 2018; Khémiri and Noubbigh, 2018; Memon, Md Rus and Ghazali, 2015; Chang, Chen and Liao, 2014; Booth *et al.*, 2001). An increase in the inflation rate leads to an increase in the risk of lending to the firms, resulting in lower debt usage (Matemilola *et al.*, 2018). The gross domestic product (GDP) growth rate reflects a country's economic conditions that determine the lending capacity and overall debt usage in the capital structure (Khémiri and Noubbigh, 2018; Memon, Md Rus and Ghazali, 2015).

4.3 Research model

This study investigated the determinants of capital structure for the Middle East tourism sector. A panel data model was estimated to incorporate IC efficiency, institutional and firm-specific factors using the following equations:

$$DepV_{i,t} = \beta_0 + \beta_1 VAIC_{i,t} + \beta_2 InstIndex_{i,t} + \beta_3 Controls_{i,t} + \sum Country + \varepsilon_{i,t} \text{ (Equation 1)}$$

$$DepV_{i,t} = \beta_0 + \beta_1 VAIC_{i,t} + \beta_2 ContCorrupt_{i,t} + \beta_3 GovEff_{i,t} + \beta_4 PolStability_{i,t} + \beta_5 RegQuality_{i,t} + \beta_6 RuleLaw_{i,t} + \beta_7 VoiceAccount_{i,t} + \beta_8 Controls_{i,t} + \sum Country + \varepsilon_{i,t} \text{ (Equation 2)}$$

$$\text{DepV}_{i,t} = \beta_0 + \beta_1\text{HCE}_{i,t} + \beta_2\text{SCE}_{i,t} + \beta_3\text{CEE}_{i,t} + \beta_4\text{InstIndex}_{i,t} + \beta_5\text{Controls}_{i,t} + \sum\text{Country} + \varepsilon_{i,t} \text{ (Equation 3)}$$

$$\text{DepV}_{i,t} = \beta_0 + \beta_1\text{HCE}_{i,t} + \beta_2\text{SCE}_{i,t} + \beta_3\text{CEE}_{i,t} + \beta_4\text{ContCorrupt}_{i,t} + \beta_5\text{GovEff}_{i,t} + \beta_6\text{PolStability}_{i,t} + \beta_7\text{RegQuality}_{i,t} + \beta_8\text{RuleLaw}_{i,t} + \beta_9\text{VoiceAccount}_{i,t} + \beta_{10}\text{Controls}_{i,t} + \sum\text{Country} + \varepsilon_{i,t} \text{ (Equation 4)}$$

The variables in these four equations are defined in Table 3.1 above. The subscript 'i' refers to the observations of ith firm while subscript 't' refers to the time period. In equations 1, 2, 3 and 4, the dependent variables (DepV) are proxied by long-term debt (LTD), short-term debt (STD), total debt (TD) and liquidity (LIQ). The independent variables are represented by IC efficiency (VAIC^{TM}, HCE, SCE and CEE) and measures of institutional quality (InstIndex, ContCorrupt, GovEff, PolStability, RegQuality, RuleLaw and VoiceAccount). The control variables comprise country-specific macroeconomic variables (Inflation and GDP), firm-specific corporate governance (InstOwn), firm-specific indicators (FATA, FirmSize, ROA and SalesG) and country effect.

The extant literature has used a two-step system Generalised Method of Moment (GMM) estimator for capital structure studies (Khémiri and Noubbigh, 2018; Zhang and Liu, 2017; Vo, 2017; de Miguel and Pindado, 2001). As part of the robustness check, this study uses GMM system estimation because debt is reported to have persistent behaviour (Lemmon, Roberts and Zender, 2008). This suggests current year debt affects prior year debt. The two-step system GMM also supports in addressing the possible reverse causality between debt and the explanatory variables (Matemilola *et al.*, 2019) and omitted variables problem (Vo, 2017). Flannery and Hankins (2013) argued traditional OLS produces biased estimates for models that include firm-specific effects and lagged debt. Thus, the two-step system GMM corrects endogenous and reverse causality between variables using valid instruments (Blundell and Bond, 1998).

5. RESULTS AND DISCUSSION
5.1 Descriptive statistics and correlation
Table 5.1 presents the descriptive statistics for the dependent, independent and control variables of this study.

<Insert Table 5.1 Descriptive statistics here>

As shown in Table 5.1, the Middle East tourism companies' capital structure had an average of 16% of LTD. The mean was 14% for GCC countries, while the non-GCC countries were higher, at 17.7% for the LTD composition in the capital structure. Similarly, the non-GCC countries relied more on STD compared to their GCC counterparts. While the TD composition was 30% of total assets for the GCC countries, the non-GCC countries were at 41%. Prior studies on the capital structure of the GCC non-financial sector reported TD at an average of 23% (Zeitun, Temimi and Mimouni, 2017). This finding provides evidence that sub-sectors have their own specific characteristics and have different institutional features that emphasise the need for further investigation.

The VAIC^{TM} for the Middle East region had an average of 6.7, compared to the non-GCC region that reflected a higher IC efficiency of 7.75. The GCC countries reported a higher composition of SCE while non-GCC countries were better at HCE. This suggests that tourism companies in the GCC have a more efficient structural capital due to higher investment in organisational processes, procedures, technologies and information resources. The quality of institutional factors for all variables except voice accountability (VoiceAccount) was higher for GCC countries compared to the non-GCC and Middle East region as a whole. The political stability index for the GCC had a mean of 49. The non-GCC fared worse, at only 15.4. However, voice accountability was much stronger for non-GCC countries compared to the GCC region. The institutional ownership is about 5% for the Middle East region, however it is important to note that not all companies have institutional ownership. GCC region companies have a higher presence of institutional ownership in comparison to non-GCC companies. The non-GCC region had a higher GDP than the GCC region, however, it also suffered from higher inflation. The tourism companies' firm size (FirmSize) was much better in the GCC region compared to the non-GCC region.

Table 5.2 presents the correlation results of the full sample.

<Insert Table 5.2 Pairwise correlations here>

As can be seen in Table 5.2, LTD was significantly and positively correlated with all institutional quality indicators except for PolStability. LTD was negatively correlated with PolStability, which suggests that if the country's political stability is weak, there is a higher reliance on long-term debt. STD was significantly and positively correlated with HCE and CEE, suggesting that human capital efficiency and capital employed efficiency promote greater reliance on short-term debt. However, STD was negatively correlated with all institutional quality indicators except for VoiceAccount. TD was also positively correlated with CEE. In line with the findings of Matemilola et al. (2019) for listed firms in 23 developing countries, this study also reported a significant negative correlation between TD and two institutional quality indicators (ContCorrupt, PolStability) but a positive correlation with VoiceAccount. The institutional ownership is significantly and negatively correlated with the LTD and total debt, suggesting that corporates do not invest in shares of firms having high LTD and TD. There was a high correlation between the institutional quality indicators, suggesting a multi-collinearity issue. An aggregate institutional quality index was used to counter this effect, in line with prior studies (Matemilola *et al.*, 2018; Langbein and Knack, 2010). The correlation between the other independent variables was less than 0.80, thus there was little risk of multi-collinearity among them.

5.2 Regression analysis
Table 5.3 presents the ordinary least squares (OLS) regression estimation results for equation 1 that was run for the Middle East region, GCC and non-GCC region countries.

<Insert Table 5.3 OLS Regression results (Capital Structure proxies, VAIC, Aggregate Institutional Index – equation 1) here>

As shown in Table 5.3, R-Squared strongly explained the capital structure proxies for the Middle East, GCC and non-GCC region tourism countries. VAIC^{TM} had no significant association with the capital structure proxies for all the regions. This suggests that intellectual capital efficiency

does not impact the different debt maturity ratios for the tourism firms of any of the regions. Thus, there is no support for H1, H2, H3 and H4. The aggregate institutional index has no significant relationship with any capital structure proxies for the Middle East, GCC and non-GCC countries. This finding is inconsistent with H5, H6, H7 and H8.

Institutional ownership (InstOwn) has a significant and negative impact on LTD and TD. On the other hand, InstOwn has a significant and positive relationship with STD. ROA exhibited a negative relationship with LTD and TD for the Middle East region and non-GCC countries. This result is consistent with the pecking order theory, which suggests that profitable firms prefer to use internal financing before resorting to external financing.

The findings also demonstrate that FATA was positively related to LTD of the Middle East and GCC countries. Similarly, FATA is positively related to TD of the GCC region. FirmSize is negatively associated with STD and LIQ but positively associated with LTD. Large-sized firms can provide more reliable information and thus instil confidence in creditors for extending long-term debt. On the other hand, ROA was positively associated with LIQ, but negatively associated with LTD and TD. This supports the pecking order theory, suggesting that firms with higher profitability require less debt or external financing.

Table 5.4 presents the results of individual governance indicators, VAIC^{TM} and control variables regressed on the capital structure proxies.

<Insert Table 5.4 OLS Regression results (Capital Structure proxies, VAIC, Governance Indicators – equation 2) here>

As shown in Table 5.4, the explanatory power (R-sq) of the regression models is around 40% for LTD and TD. The R-sq for STD and LIQ is higher at approximately 50% for the Middle East, GCC and Non-GCC regions. VAIC^{TM} has no significant association with any capital structure proxies, as noted in the previous table results. The governance indicator results are similar to that of InstInd. None of the individual country governance indicators are significant to explain the variation in the debt maturity ratios. Institutional ownership was negatively associated with LTD and TD, indicating that institutional ownership is lower in firms with longer debt maturity ratios in the GCC region. Higher tangibility (FATA) is associated with more LTD and lower liquidity. Firms with higher sales growth were associated with higher LTD, STD and TD. Firms larger in size can attract more LTD, whereas smaller firms resort to STD and LIQ.

Table 5.5 presents the results of the institutional quality index, VAIC^{TM} components and control variables regressed on capital structure proxies.

<Insert Table 5.5 OLS Regression results (Capital Structure proxies, HCE, SCE, CEE, Aggregate Institutional Index – equation 3) here>

As shown in Table 5.5, the explanatory power is the highest and above 60% for STD, TD and LIQ models of the GCC region. The HCE is statistically and negatively significant at 5% for STD (Column 5) and TD (Column 8) models of the GCC region. This indicates that tourism firms with low human capital efficiency have a high short-term and total debt composition. This result is

consistent with the hypothesised relationship in H2 and H3. The CEE was positively associated with LTD (Columns 1, 2, 3), STD (Columns 4, 5, 6) and TD (Columns 7, 8, 9). The finding lends no support to hypotheses H1, H2 and H3. InstIndex demonstrated an insignificant relationship with the capital structure proxies of the Middle East, GCC and non-GCC countries tourism firms. The corporate governance mechanism of institutional ownership continued to have a significant negative impact on LTD and TD of the Middle East and GCC regions companies. Tangible assets (FATA) were associated positively with LTD and TD but negatively with LIQ. This supports the view that a higher proportion of tangible assets acts as collateral and can attract more long-term debt, negating the need for short-term debt. The profitability findings provide further support for the pecking order theory that advocates a negative relationship with leverage.

Table 5.6 reports the results of governance indicators, VAIC^{TM} components and control variables regressed on capital structure proxies.

<Insert Table 5.6 OLS Regression results (Capital Structure proxies, HCE, SCE, CEE, Governance Indicators – equation 4) here>

As shown in Table 5.6, the R-sq of all the models significantly improves when the aggregate measures of institutional quality were included. The HCE and SCE are insignificant for all the capital structure proxies, thus lending no support to H1, H2, H3 and H4. Consistent with the results in table 5.5, CEE positively impacts LTD, STD and TD and negatively impacts LIQ. The relationship between CEE and LIQ is consistent with hypothesis H4. The aggregate measure of country institutional quality has no significance in explaining the variations in the debt maturity ratios. Firms with higher tangibility, firm size and lower profitability attract more long-term debt for the Middle East region.

5.3 Robustness check
The study of determinants of the capital structure had potential endogeneity problems of explanatory variables (Zhang and Liu, 2017). Similar studies on determinants of capital structure have used the GMM system estimator. This is because traditional OLS estimates can produce biased coefficients (Matemilola *et al.*, 2019; Matemilola *et al.*, 2018; Zeitun, Temimi and Mimouni, 2017; Belkhir, Maghyereh and Awartani, 2016; Temimi, Zeitun and Mimouni, 2016; Vo, 2017). The two-step system GMM estimator of Arellano and Bover (1995) and Blundell and Bond (1998) control unobserved individual heterogeneity and potential endogeneity issues. Accordingly, this study addresses the potential bi-directional causality between the response variable (leverage) and the explanatory variables (Sewpersadh, 2019). It is, therefore, an asymptotically efficient and consistent estimator. The GMM analysis approach was deemed well-suited to this study's unique dataset, with characteristics of a large number of observed individuals over a short time series. One-year lagged values of the dependent and explanatory variables were used as instruments. The use of internal instrumental variables instead of external instruments to analyse panel data is considered efficient and consistent (Arellano and Bond, 1991). The specification tests were endorsed by checking the first order (AR1) and second-order autocorrelation (AR2) tests. The over-identification of instruments was checked using the Hansen J. test.

Table 5.7 shows the GMM system estimations for equations 1 and 2, substituted with lagged dependent variables and VAIC^{TM}.

<Insert Table 5.7 GMM system estimation results for the Middle East here>

As shown in Table 5.7, the p-values of AR2 do not lead to the rejection of the null hypothesis, suggesting no second-order autocorrelation. The lagged values were thus suitable instruments for the equations. The p-values of the Hansen J test were above the significance level, thus confirming the instruments as correctly identified and exogenous. IC was negatively associated with LTD (Column 1), suggesting that weaker IC encourages firms to resort to long-term debt. This is consistent with the findings hypothesised in H1. The aggregate institutional index was negatively associated with LIQ for Middle East tourism companies. This suggests that a lower institutional quality index leads to firms relying more on liquidity. The InstIndex was negatively associated with LIQ (Column 4), demonstrating that tourism companies have more liquidity when institutional quality is low in the Middle East countries. Similarly, LIQ was positively influenced when the ContCorrupt index was high for countries, but GovEff and RegQuality were weak. None of the other capital structure proxies had a significant VAIC^{TM} or institutional index, confirming the robustness of the OLS results. Supporting the trade-off theory, the control variables tangibility and profitability had a significant positive and negative relationship with LTD (Column 1), respectively. Institutional ownership has a significant negative and positive impact on LTD (Column 1) and LIQ (Column 4), respectively.

Table 5.8 presented the GMM system estimations for lagged capital structure proxies and lagged IC components.

<Insert Table 5.8 GMM system estimation results for the Middle East here>

As shown in Table 5.8, the specification tests of AR2 confirmed no second-order correlation for all models. Similarly, the Hansen J test confirms that the instruments used for the models were valid and exogenous. Inconsistent with the OLS results in Table 5.5 and 5.6, the GMM system estimation demonstrated that human capital efficiency was positively associated with LTD (Columns 1 & 5), STD (Columns 2 & 6) and TD (Column 3 & 7) of the Middle East tourism companies. Consistent with Table 5.5 and 5.6, when firms' capital employed efficiency (Column 3) was strong, they tended to attract more TD in their capital structure. InstIndex has a positive impact on LTD, STD and TD that is different from the estimations obtained in OLS. The aggregate governance indicators continued to show mixed associations with LIQ, confirming the robustness of OLS results in Table 5.6. A high GDP was associated with more debt (Columns 3 & &) in their capital structure, whereas high inflation also demonstrates high LTD, STD and TD.

6. DISCUSSION AND CONCLUSIONS

There is limited research contributing to identifying the wider determinants of capital structure. This paper adds to the growing literature by analysing the four debt components on the aggregated and disaggregated measures of institutional quality and IC. Furthermore, this paper accounts for the differences in these constructs by dividing samples into GCC and non-GCC countries. The study findings indicate that tourism companies rely more on short-term debt in comparison to long-

term debt. Although intangible assets generally have greater risk and deter debt (Lev, 2001; Frank and Goyal, 2003), they also enjoy higher expected returns. Tourism companies in non-GCC countries have a much higher IC efficiency compared to those in GCC countries. In contrast, the aggregate institutional index is much higher for GCC countries compared to non-GCC countries.

The OLS estimations demonstrate an inconclusive relationship for $VAIC^{TM}$ and Institutional Index with the capital structure proxies suggesting that Middle East region tourism firms have not developed their IC and do not have the proper institutional country environment to influence debt maturity ratio decisions. The result contradicts D'Amato's (2021) findings that showed a negative relationship between $VAIC^{TM}$ and financial leverage. The Institutional Index result is consistent with the prior study's findings on 43 countries by Alves and Francisco (2015), which found no conclusive impact with capital structure decisions. However, some other studies have reported contradictory results of having a positive relationship between institutional variables and long-term debt (Awartani *et al.*, 2016; Matemilola *et al.*, 2018; Shahzad *et al.*, 2020). None of the individual governance mechanism was significant to explain the variation in capital structure proxies of the aggregate $VAIC^{TM}$ model. These results are not consistent with the prior studies of developing countries that reported a positive association of total debt with all the governance indicators (Matemilola *et al.*, 2019). Alternatively, Belkhir et al. (2016) findings also reported a negative relationship between corruption and the total debt of the Middle East and North Africa (MENA) region.

The corporate governance variable of institutional ownership has a negative impact on long-term debt and total debt of the Middle East and GCC region tourism companies. This supports the substitute model view offered by La Porta *et al.* (2000), whereby institutional holdings are an alternative bonding mechanism for debt thus, higher institutional holdings result in lower debt. These findings are inconsistent with prior studies that show a positive relationship (Sun *et al.*, 2016) or no conclusive relationship with leverage (Huang and Song, 2006; Pirzada, Mustapha and Wickramasinghe, 2015; Al-Fayoumi and Abuzayed, 2009).

The results also suggest fixed asset to total asset is positively related to long term debt and term debt. This finding is consistent with extant literature (Sikveland and Zhang, 2020; Moradi and Paulet, 2019; Matemilola *et al.*, 2018; Frank and Goyal, 2009; Rajan and Zingales, 1995). Higher levels of asset tangibility act as an assurance for creditors and the safety of their investments. According to the trade-off theory of capital structure, tangibility is positively related to debt because of the collateral offered to obtain debt capital (Frank and Goyal, 2009). The negative association with liquidity is also a signal that current assets fulfil short-term needs as collateral instead of tangible assets due to easy convertibility (Proença, Laureano and Laureano, 2014; Hall, Hutchinson and Michaelas, 2000). In line with trade-off theory, large firms with high tangibility have less asymmetric information and thus attract more debt (Touil and Mamoghli, 2020; Vo, 2017; Chang, Chen and Liao, 2014; Moradi and Paulet, 2019). Large firms have less bankruptcy risk, and thus there is greater demand for leverage as their size increases. They also have better access to capital markets.

The pecking order theory supported the findings on the profitability and growth of the tourism companies. There was a negative relationship between profitability and debt since profitable companies have sufficient cash flow to use internal financing and thus have less demand for leverage. Prior studies have also reported a negative relationship between ROA and leverage

(Cappa, Cetrini and Oriani, 2020; Matemilola *et al.*, 2018; Moradi and Paulet, 2019; Li and Islam, 2019; Zeitun and Goaied, 2021).

Sales growth is positively associated with higher capital structure ratios. This is consistent with the pecking order theory and suggests that firms with growth opportunities resort to debt before equity (Güner, 2016; Proença, Laureano and Laureano, 2014). The present study's findings also support the pecking order theory, as growth opportunities were positively correlated with leverage (Vo, 2017; Touil and Mamoghli, 2020).

6.1 Theoretical implications
The study findings have important implications for researchers, practitioners and policymakers. Researchers should adopt a multi-theoretical model in the study of capital structure determinants corresponding to the results of this study that support both trade-off theory (tangibility) and pecking order theory (profitability, growth opportunities). The study findings suggest that determinants work differently for various types of companies and regions. The results also provide more clarity on the interaction of the various IC components with capital structure decisions in the context of the Middle East region tourism companies. The study sheds light on the monitoring mechanism offered by effective corporate governance. High institutional ownership discourages long term debt due to the associated bankruptcy risk thus being able to mitigate the principal agent conflict.

6.2 Practical implications
Corporate managers of tourism companies could make optimal capital structure decisions by considering the detailed value of the IC components. For example, IC is majorly comprised of SCE and HCE for GCC and non-GCC regions, respectively. This research implies that managers can focus on improving the capital employed efficiency to attract leverage as an additional source of financing for tourism firms. Managers should encourage investment in human resources to enhance knowledge and information to make optimal capital structure decisions. IC efficiency increases firm profitability enabling them to generate more cash flows reducing the bankruptcy risks associated with higher debt. Similarly, owners and managers can explore the firm characteristics such as large size, high tangibility and low profitability for providing better access to more long-term debt. The GMM system estimations for macroeconomic determinants of inflation and GDP were associated with the capital structure proxies of tourism companies, which holds useful implications for policymakers. Policymakers can discourage lending during high inflation periods or relax credit policies in periods of increased GDP. Institutional monitoring is pronounced for the tourism sector firms as they substitute for external debt monitoring thus, leverage decreases when institutional shareholding increases. Companies can use this as a valuable tool for investor protection and investors can choose to invest in firms that have a high proportion of institutional investors. Policymakers are recommended to consider the ownership threshold for supporting the firms in making capital structure decisions.

6.3 Limitations and future research
This study is not exempt from limitations and lays a foundation for future research. Capital structure is measured using four different measures of debt maturity ratios. However, future studies can include market leverage, defined as the ratio of total debt to total common equity plus total debt (Singh and Kannadhasan, 2020) or the partial adjustment model for leverage (Nguyen *et al.*,

2021; Liao, Mukherjee and Wang, 2015; Chang, Chou and Huang, 2014). The study focused on Pulic's (1998) IC efficiency coefficient, which has, in recent years, been subject to certain criticisms. This measure could be substituted with alternative measures such as Nadeem et al.'s (2019) modified model of VAIC or IC disclosures. The study used aggregate institutional quality measures, firm-specific and macroeconomic indicators. However, this research did not consider numerous other capital structure determinants, including corporate strategy (Cappa, Cetrini and Oriani, 2020) and other firm-level corporate governance indicators and managerial experience. Only listed tourism companies were taken into consideration in this study. Such firms would have access to different resources than private firms (Acharya and Xu, 2017). Future studies could be extended to private tourism companies to increase the generalizability of the findings on the determinants of capital structure.

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Annexure 1

The pandemic disruption of imports of crude oil include the GCC countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates) and interruption of exports of intermediate inputs such as chemicals (Saudi Arabia) and metal and metal products (United Arab Emirates). Whereas non-GCC countries had an interruption of exports of intermediate inputs for electrical machinery (Morocco and Tunisia)(Arezki *et al.*, 2020).

Figure x Sharp decline of foreign direct investment for GCC and Non GCC
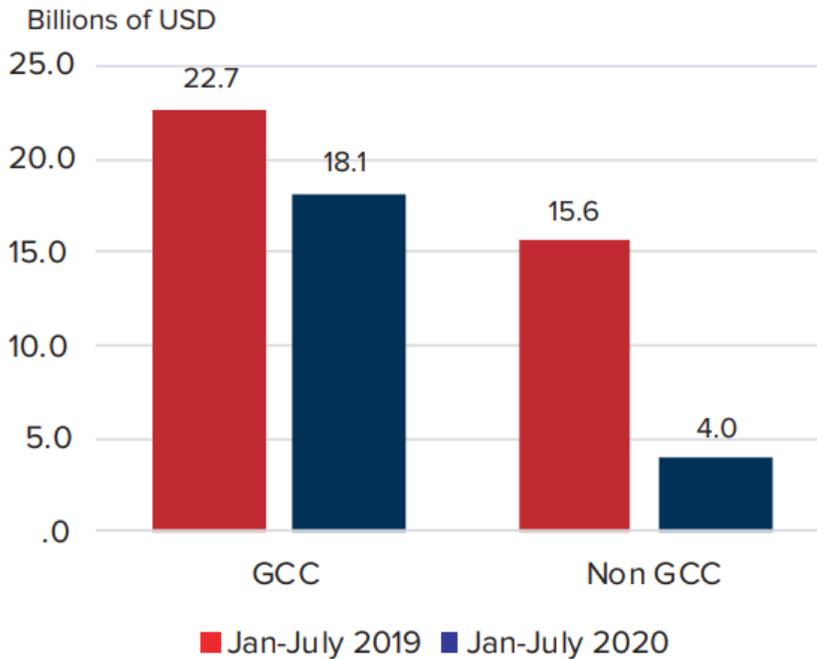
Source: Arezki, et al. (2020)

Note: GCC countries=Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. Non GCC countries=Algeria, Djibouti, Egypt, Iran, Iraq, Jordan, Lebanon, Libya, Morocco, Syria, Tunisia.

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Source: Arezki, et al. (2020)