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Good Governance: The Impact on the performance of Tunisian listed companies

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Abstract

The purpose of our research is to study the impact of governance tools on Tunisian company performance. Empirical verification conducted by an expert panel composed of 100 Tunisian companies listed on the Tunis Stock Exchange. The observation period is 10 years, from 2008 to 2018. It shows that the composition of the board of directors, the remuneration system, shareholders and information disclosure on the performance of these banks which have a positive impact. On the other hand, for the two performance indicators (ROE and ROA), the age of the company is not important.

Keywords: governance; performance; director board

1. Introduction

Governance is a concept that has evolved a lot since the emergency of 1980s, and on the other hand the debates around this issue of the interests involved. Even in political science the first classical essays on the subject says about the concept centered on two main components: law then order, governance today addresses issues related to the mechanisms necessary to negotiate the various interests of society

By the way the broad notion covers the different ways in which individuals and groups organize themselves to achieve common goals.

The literature is full of works attempted to test the effect of governance on performance and most of these works show that governance has a significant effect on the performance of the company and on its

value in the market, and this for different contexts and performance indicators. Among these studies we can cite that of Widodo, DS, Silitonga, P., & Ali, H. (2020)), Coffey, B., Bush, J., Mumaw, L., de Kleyn, L., Furlong, C., & Cretney, R. (2020) and Beshi, T. D., & Kaur, R. (2020). Most governance studies ignored governance issues at the level of listed companies mainly in emerging countries (Sajko, M., Boone, C., & Wernicke, G. 2017).

However, this theme is important for several reasons.

Listed companies occupy a preponderant role in the economies of countries. They are a major component of any national economy. The change of the international context following globalization, liberalization, deregulation of financial systems, the adoption of new technologies affects the functioning of these type of business. The business sector has a big role in the economic and social development of our country. Its direct involvement in the implementation of public sector strategies justifies the strengthening of corporate governance practices with a view to greater efficiency and performance. Despite structural changes in the financial system in Tunisia which have strengthened the role of the financial market from 1990s, listed companies still remain also the main focus of economic development.

In view of all these considerations, it is interesting to conduct a study developed within the framework of listed companies. Our work is inspired by research related to corporate governance and proposing several control mechanisms to improve performance (Widodo, D. S., Silitonga, P., & Ali, H. (2020) and Hutahayan, B. (2020)). Our ambition in this research to determine the effect of governance on the performance of listed companies. From this perspective, as part of the research, we will try to provide answers to the following question « will the governance improve the performance of Tunisian listed companies? ».

2. Review of Literature and formulation of research hypotheses

A large amount of literature attempts to examine the impact of governance on performance, and most of the work in society shows that governance has a significant impact on company performance and its value in the market, as well as different environments and performance Indicators.

E. Schiehl (2004) established the relationship between company performance and the four attributes of corporate governance structure: Board composition, management participation, incentive compensation and major shareholder participation.

The work carried out by Horstmeyer and Wells (2017) suggests that the effects of good governance also depend on the economic conditions characterizing a sector. Shareholder rights are maximized when the sector is booming, and appear significantly less important when economic conditions are bad. Bauer et al. (2008) used data provided by the International Governance Indicators (GMI). The Japanese companies in the sample are classified according to six governance dimensions.

The author analyzes the impact of governance quality on its performance. Using the total index shows that companies with higher governance levels outperform other companies at rate of 15% each year. Evenly, recent work by Horstmeyer and Wells (2017) suggests that the effects of good governance also depend on the economic conditions characterizing a sector. Shareholder rights are maximized when the sector is booming, and appear much less important when economic conditions are bad. We must also take into account the stage reached by the company in its life cycle. Thus, a mature listed company needs more supervision and control: in this case, it could be shown that a reduced board of directors is better suited. Otherwise, a younger company will be able to benefit more from the advice of its board, which will therefore be all the more effective as its members will be more numerous. Black, Jang, and Kim (2003) showed in their sample of 526 South Korean companies that they developed an index based on the governance review of the Korea Stock Exchange. An increase of 10 points in the governance index resulted in a 65% increase in the Tobin index « Q » and a market booking rate of 13%. They also found that any improvement in governance practices would result in a 47% increase in Tobin's « Q-value » and a 96% increase in market/book value. From the other side, Chong and Lopez-de-Silanes (2007) believe that governance will definitely affect the operating performance of the companies studied, but this impact is far less than the impact on the market value of these companies.

Finally, Bauer et al. (2003) confirmed that governance is positively correlated with the profitability and market value of European companies in the research. But it is negatively correlated with operational performance. In addition to that, Gruszczynski (2005) tested the existence of this link in a Polish language environment.

His research shows that there is a significant correlation between the calculated governance scores and the financial performance of the Polish companies studied. Otherwise, Bauer et al. (2008) studied the relationship between governance quality and Japanese company performance. They set out to develop a total index covering six aspects of governance.

So, the results of this study show that companies with the best governance perform 15% better than other companies each year. Furthermore, Mohamed, Basuony, and Badawi (2013) studied the impact of corporate governance on the financial and stock market performance of 88 non-financial companies listed on the Egyptian Stock Exchange EGX100 index. The study proves that there are about three governance mechanisms studied: Ownership structure, board composition and audit quality. We incorporate control variables into the analysis and we enumerate: the company size, age, department and financial structure. The Financial performance is evaluated through ROE and ROA and also through Q's stock market performance.

According to Al-ahdal, WM, Alsamhi, MH, Tabash, MI, & Farhan, NH (2020), corporate governance plays a critical role in creating a corporate culture of awareness and transparency. In this context, the study by these authors provides a brief overview of the history of corporate governance mechanisms in India and in the Gulf Corporation Council (GCC) countries, the corporate legal system and established supervisory policies by the Indian governments and the GCC. In addition, this study analyzes the impact of corporate governance mechanisms on the financial performance of Indian and GCC listed companies. The study uses a sample of 53 listed non-financial companies from India and 53 listed non-financial companies from GCC countries for the period 2009-2016. The results revealed that the responsibility of the board of directors (BA) and the audit committee (AC) have an insignificant impact on the performance of companies as measured by ROE and Tobin's Q. Furthermore, fictitious country results show that Indian companies outperform those in the Gulf countries in terms of corporate governance practices and financial performance. According to these authors this research is seen as a battery of further research and studies, particularly in listed companies in India and in the GCC in the context of corporate governance and financial performance.

At the national level, Madhar, S. (2016) studied the relationship between governance and performance by studying 46 Moroccan issuers between the end of 2012 and the end of 2014. The author developed a grid of 31 governance guidelines that mainly cover board practices and shareholder rights. In order to

measure the performance of the companies in the sample, it prefers financial and stock market indicators, especially turnover, EBITDA and net profit margin. Based on the results of these studies, our research will first try to study the correlation between the governance index published on the Canadian Globe and Mail website and performance indicators. Therefore, we will test the hypothesis to study this correlation as follows:

The General Hypothesis: companies with higher governance scores will have better performance.

Since the governance indicator we use is composed of 4 sub-indexes, we will test the impact of each sub-index on performance.

The composition and performance of the Director Board: The board of directors is considered to be one of the main means to correct the defects of managers (Widodo, D. S., Silitonga, P., & Ali, H. (2020), Garcia, A. S., & Orsato, R. J. (2020) and F. Adjaoud et al. (2007)).

This is how Hermalin and Weisbach (2000) describe it as the "heart of governance".

The size of the board of directors is also seen as a variable that may have a significant impact on its effectiveness (P. André and E. Schiehl 2004). According to the results of Yermack (1996) and S. Bahagat and Black (2002), this effect is negative because the board loses its effectiveness as the size of the board increases. In contrast to these results, the results of Godard (2001) show that the size of the board has no effect on the performance of French companies and it has nothing to do with the performance indicators used. Yermack (1996) also showed a negative correlation between the size of the board of directors and the value of the company, because of communication difficulties and the high cost of joint decision-making. Through these studies, we can draw the following first hypothesis:

Hypothesis 1: The higher the governance's score related to board composition, the higher the company's financial and stock market performance increase

Salary system and performance: Widodo, D. S., Silitonga, P., & Ali, H. (2020), Srivastava, A., & Bhatia, S. (2020) and P. André and E. Schiehl (2004) believe that company performance will be related to the relative importance of long-term incentive compensation, such as cash dividends and the grant of stock options.

Therefore, our second assumption is:

Hypothesis 2: The higher the governance's score related to the compensation policy, the higher the company's financial grow and the stock market performance increase.

Shareholder rights and company performance: Gompers, Ishii, and Metrick (2003), Esposito, P., & Dicorato, S. L. (2020) and Horstmeyer, D., & Wells, K. (2017) show that the company with the strongest shareholder rights has higher value, higher profits, higher sales growth, and more and lower capital expenditures.

Therefore, the third research hypothesis can be as follows:

Hypothesis 3: The higher the governance's score related to respect for shareholder rights, the higher the company's financial and stock market performance increase.

Disclosure and performance: The increase in information disclosure has led to lower agency costs and therefore increased company value (F. Adjaoud, D. Zeghal and S. Andaleeb (2007), Beshi, T. D., & Kaur, R. (2020) and Çelik, Ş., & Güleç, T. C. (2020))

Therefore, we can state the last hypothesis of the study as follows:

Hypothesis 4: The higher the governance's score related to disclosure, the higher the company's financial and stock market performance increase

3. Research methodology

In this case, we propose a choice of methods that can verify the research hypothesis. Firstly, we expose our research samples. Secondly, we developed the variables held within the framework of this research.

3.1. Framework of Research

The purpose of this study is to evaluate the impact of good governance on the performance of listed companies. Therefore, we take 130 listed companies in Tunisia as a sample. The sample covers companies belonging to three different sectors: the industrial, commercial and service sector. These samples held can better consider the impact of governance on performance.

Therefore, the research interval is 30 years, from 1990 to 2019 according to financial information collected from the bank's annual activity report, APTBEF's annual report, BVMT's guidelines, and documents from the Financial Market Committee (CMF).

3.2. The variable Research

In the following, we introduce the variable used to evaluate the structure of the board of directors and measure bank performance.

a) Variables that depend on company performance

Our goal is to study the effect of explanatory (exogenous) variables on performance. Performance is an endogenous or explanatory variable.

Performance can be measured by using market indicators of stock market prices (price-to-book ratio, price-earnings ratio, total shareholder return, etc.) or ROE or ROA type accounting indicators.

In our research, we use the ratio of return on assets (ROA) to return on equity (ROE)

ROA (Return on Assets) Economic Performance: This ratio is also called the earning rate of permanent capital because it represents the ability of the capital to create a certain level of operating profit to compare the result with the method to achieve the goal.

$$\text{ROA} = \frac{\text{net income}}{\text{capital used} = \text{equity} + \text{LMT debts}}$$

The financial performance of the return on equity (ROE): this ratio is also called the return on equity, which represents the ability of shareholders to invest in equity to generate profit

$$\text{ROE} = \frac{\text{net income}}{\text{equity}}$$

b) Independent variables

We try to identify the most important variables that describe corporate governance. Regarding to the characteristics of the board, we selected 4 variables

- The composition of the board of directors;
- Equity and compensation;
- Shareholder rights;
- Information disclosure.

Four characteristics constitute the four sub-indices of our Global Governance Index

c) Control variables

If we want to verify the impact of governance mechanisms on bank performance, we must consider other variables to draw conclusions, especially:

Company size: Introduce variables of scale to achieve economies of scale or diseconomies of scale. Smirlok (1985), Akhavein, et al (1997), Guan (2003) and Çelik, Ş., & Güleç, T. C. (2020) found a positive and significant relationship between bank scale and performance.

Company age (AGE): Company age is usually regarded as a variable that has a very important impact on performance.

Generally speaking, the company age variable is represented by the logarithm of the number of years of operation (Brown and Caylor (2006), Ben Cheikh and Zarai(2008) and Al-Gamrh, B., Ismail, K. N. I. K., Ahsan, T., & Alquhaif, A. (2020)).

Therefore, we have one independent variable, two dependent variables and one control variable. Therefore, we have two models:

Model 1 : $ROA_{i,t} = \beta_0 + \beta_1 GOV_{i,t} + \beta_2 AGE_{i,t} + \beta_3 T_{i,t} + \epsilon_{i,t}$ Model 2 : $ROE_{i,t} = \beta_0 + \beta_1 GOV_{i,t} + \beta_2 AGE_{i,t} + \beta_3 T_{i,t} + \epsilon_{i,t}$ With GOV: The governance index,

T: The size of the company, AGE: The age of the company DT: The company's debt,

β_0 : The constant and ϵ The error term

Table 1: variable choice's

Variable	Signification	Measure
ROA	Return on Assets	Net income / total assets
ROE	Return on Equity	Net income / equity
GOV	Corporate governance	This index looks at four important characteristics of the board of directors, namely: - The composition of the board of directors; - Shareholding and compensation; - The rights of shareholders; - Disclosure of information.
AGE	Company age	Log (number of years)
T	size of the company	Log (book value of total assets)

Source: Personal design

Next, we continue to conduct econometric research, through which we try to test whether there is a connection between performance indicators (ROE and ROA) and the governance of Tunisian listed companies.

We try to test the hypothesis that corporate governance has a positive impact on financial and market performance, and observe under what conditions this impact will occur.

4. Interpretation of the results and discussion

4.1 Descriptive statistics

Table (2) illustrates the mean, standard deviation and mean of the variables considered in our study. The table also confirms the average age of 10 years. In 100 companies, the average age of shareholders' equity is 1.35. For DIV, the average value of this variable is 8.4.

Therefore, the average values of ROA and ROE are 0.90 and 10.6, respectively.

Table 2: Descriptive Statistics.

	Medium	Median	Minimum	Maximum	Standard deviation
ROA	0,90	0,82	0,20	1,55	0,35
ROE	10,62	10,88	1,95	17,50	3,84
CA	11,57	11,25	8,10	15,30	1,70
SR	4,50	2,14	1,49	5,61	1,12
DIV	8,48	8,10	3,35	12,22	1,08
SC	2,85	2,90	0,7	5,42	1,66
T	8,40	8,05	5,51	12,60	1,85
AGE	10,40	10,13	3,50	20,5	3,15

Source: Eviews 9

4.2. Study of the effect of performance on governance using the global governance index

The low R2 in Table 3 indicates that the explanatory power of our model is moderate so, the results that come from our estimates can be interpreted as follows:

> The effect of the total assets variable (T) is positive and is statistically significant given that the probability associated with this variable is 0.050, or equal to 0.05. The sign associated with its parameter indicates that an increase in total assets has a positive impact on the ROA and the ROE.

> The impact of the Governance Index (GOV) variable is positive and statistically significant given that the t-stat is lower than that of the table of at the 5% threshold. The sign associated with its parameter indicates that the increase in the governance index influences the ROE and ROA.

> The impact of the variable AGE is positive given its coefficient of 0.008 for ROA and 0.007 for ROE. It is statically insignificant in view of the student statistic calculated lower than that of the table.

Table 3: Study of the effect of performance on governance (global index)

Variables	ROE	ROA
Constant	8.356*** (4.452)	7.569*** (2.851)
AGE	0.008 (0.036)	0.007 (0.019)
T	6.054*** (1.548)	3.128** (1.323)
GOV	0.325 (0.245)	0.435 (0.685)
R²	0.502	0.523
Number of observation	100	100

Source: Eviews 9

The values in brackets represent the standard errors * significant at the 10% level, ** significant at the 5% level, *** significant at the 1% level.

4.3. Study of the effect of performance on governance using the sub-indices making up the global governance index.

The decomposition of the governance index consists of replacing this index with its four sub-indices (BC, SC, SR, and DIV) in the three performance equations. The estimated models, in this step, are as follows:

Model 3 : $ROE = cte + \alpha_1 BC + \alpha_2 SC + \alpha_3 SR + \alpha_4 DIV + \beta_1 T + \beta_2 AGE + \epsilon_i$

Model 4 : $ROA = cte + \alpha_1 BC + \alpha_2 SC + \alpha_3 SR + \alpha_4 DIV + \beta_1 T + \beta_2 AGE + \epsilon_i$ Where $i=1 \dots 100$ designates companies ;

BC: The composition of the board of directors; SC: Shareholding and compensation;

SR: Shareholder rights;

DIV: Information disclosure. T: Size ;

AGE: Age of Company ; C : Constant ;

And ϵ : Standard error

The various estimates indicate that the sub-indices have a significant impact on financial performance.

Therefore, our hypothesis has been verified for Model 3 and Model 4.

Table 4: Expressive study of Expression Form

variable	ROE	ROA
Constant	6.324** (3.511)	7.133** (3.220)
BC	0.125* (0.052)	0.425 (0.085)
SC	0.241* (0.068)	0.324* (0.088)
SR	0.189* (0.034)	0.225* (0.043)
DIV	0.518 (1.021)	0.125* (0.214)
AGE	0.005 (0.0326)	0.0065 (0.0121)
T	5.522*** (1.254)	4.225** (1.113)
R²	0.48	0.502
Number of observation	100	100

Source: Eviews 9

*The value in parentheses indicates the standard error *significant at the 10% level*significant at the 5% level*significant at the 1% level****

It is important to note that the low value of R^2 in Table 4 indicates that the explanatory power of our model is moderate.

The results that come from our estimates can be interpreted as follows:

> The effect of the total assets variable (T) is positive and is statistically significant given that the probability associated with this variable is 0.050, or equal to 0.05. The sign associated with its parameter indicates that an increase in total assets has a positive impact on the ROA and the ROE.

> The impact of the variable on the composition of the board of directors is positive and statistically significant given that the t-stat is lower than that of the table of at the 5% threshold. The sign associated with its parameter indicates that the composition of the board of directors influences the ROE and ROA.

> The impact of the Shareholding and compensation variable is positive and statistically significant given that the t-stat is lower than that of the table of at the 5% threshold. The sign associated with its parameter indicates that the composition of the board of directors influences the ROE and ROA.

> The impact of the shareholder rights variable is positive and statistically significant given that the t-stat is lower than that of the table of at the 5% threshold. The sign associated with its parameter indicates that the composition of the board of directors influences the ROE and ROA.

> The impact of the variable Information disclosure is positive and statistically significant given that the t-stat is lower than that of the table of at the 5% level. The sign associated with its parameter indicates that the composition of the board of directors influences the ROE and ROA.

> The impact of the variable AGE is positive given its coefficient of 0.008 for ROA and 0.007 for ROE. It is statically insignificant in view of the student statistic calculated lower than that of the table.

5. Discussion

The relationship between governance and economic performance has long remained the subject of much controversy between different schools of economic thought.

Indeed, according to our estimates, governance has a positively significant effect on the performance of listed companies for the 4 models.

For model 1 and 2

Then, we noticed that according to various estimates, governance has an impact on financial and economic performance.

In fact, the GOV variable is very important in the first of two models.

Therefore, our general hypothesis has been verified. This result is the same as the research direction of Gruszczynski (2005), which reveals the positive relationship between governance index and performance in the Polish language environment.

The total assets variable (T) is positive and significant in the two equations using ROE (6.054 ***) and ROA (3.128 **).

This is consistent with our assumption that size has a positive effect on financial performance. Several authors have found similar results such as Beshi, T. D., & Kaur, R. (2020), Durnev and Kim (2003), Bohren, Odegaard (2001), F. Adjaoud, D. Zeghal and S. Andaleeb (2007) who find in different contexts of positive association between size and performance.

The table below shows that any financial performance indicator proves the variable AGE is not important where (ROE is 0.004, ROA is 0.008).

This result doesn't match our expectations and results in other circumstances and other authors. For example, Ben Cheikh and Zarai (2008) found that in the Tunisian context, the Age Variable has a significant impact on a company's stock market performance (MTB) and accounting performance (ROA) (with a 1% threshold).

Their results are also consistent with those of Cameron and Whitten (1981).

Shortly, using the total sample and the overall governance index can confirm our general assumptions about the impact of governance on performance.

Therefore, the breakdown of governance indicators will allow us to test the effectiveness of each governance sub-index that is evaluated against these two performance indicators.

For model 3 and 4

In both models, the estimated coefficients of variables related to board composition are positive and significant. Our research results are consistent with the literature review we have developed. The size of the board is also seen as a variable that may have a significant impact on its effectiveness (Widodo, D. S., Silitonga, P., & Ali, H. (2020), P. André and E. Schiehl (2004) and Al-Gamrh, B., Ismail, K. N. I. K., Ahsan, T., & Alquhaif, A. (2020)).

As for the variable "shareholding and compensation", the results showed a positive and significant impact on the economic performance of Tunisian companies. This result is consistent with the results observed by Widodo, D. S., Silitonga, P., & Ali, H. (2020), Hergli et al. (2007) and P. Biancone, S. Secinaro, V. Brescia (2018), who argued that moderate executive compensation related to company performance (accounting or market value related) is a factor that has a positive impact on company value.

Regarding to the variable "shareholder rights", the results show that it has a positive and significant impact on the economic performance of Tunisian companies.

This result is consistent with the results found by Coffey, B., Bush, J., Mumaw, L., de Kleyn, L., Furlong, C., & Cretney, R. (2020) and Gompers, Ischii, and Metrick (2003), which indicate that the company with the strongest shareholder rights has greater value, higher profits, and stronger sales growth.

As for the effect of the variable "Information disclosure" on the performance of companies, the results reveal a positive and significant impact on the economic performance of Tunisian companies.

This result is consistent with the results observed by R. Bauer and al (2008), in the Japanese context, who found that information disclosure is one of the most determining factors of performance.

The total assets variable (T) is positive and significant in the two equations that using ROE (5.522 ***) and ROA (4.225 **).

This is consistent with our assumption that size has a positive effect on financial performance.

The AGE variable is not important for financial performance indicators (ROE is 0.005, ROA is 0.0065).

6. Conclusion

To conclude this research aims to study the relationship between corporate governance and performance in Tunisia. It aimed also to determine corporate governance practices in the Algerian context based on the criterion of performance. We tried to take a critical look at the quality of corporate governance while analyzing the impact of the governance index on performance to verify whether governance really has an effect on performance. Indeed, the analysis of this relationship is based on the implementation and study of several statistical tests as well as the use of multiple linear regressions

The first contribution of this study to the scientific literature is a complete and well-argued econometric analysis of the existing relationship between governance and performance. The analysis of this relationship relies on the implementation and study of several statistical tests as well as the multiple linear regressions. The results of econometric tests confirm the theories. Moreover, this study finds a significant relationship between the governance index, total assets and economic and financial performance.

This study has some gaps that need to be addressed. The first limitation relates to the relatively small size of our sample. The second limitation concerns the small number of factors likely to explain the level of performance of companies. Nevertheless, it can be considered as a starting point for further research. Finally, there are two main research perspectives that can be outlined. The first is to add other governance variables. The second would be to carry out a comparison with what is practiced in other countries and in particular emerging countries.

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Social indicators for businesses' circular economy: multi-faceted analysis of employment as an indicator for sustainability reporting

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Abstract

In recent years, the introduction of the circular economy's principles at the micro level is receiving attention in different areas of the business literature. Although several studies have focused on the environmental or economic impacts of the adoption of the circular economy at a micro level, a detailed

analysis of the social aspects of the circular economy in businesses is still necessary. From a triple bottom line perspective, social dimensions of the circular economy are one of the three pillars for sustainability accounting and reporting and must be considered in the relationship between firms and their stakeholders. Thus, the main objective of this study is to reflect on the social impact of the business circular economy at the micro level by analysing job generation. To this end, this study' approaches the definition of specific indicators to measure different dimensions of the employment in a circular economy framework through the qualitative analysis of semi-structured interviews collected in a regional case study in Spain. This article summarises different metrics to be applied to the measurement of the multi-faceted employment generated by companies in a circular model. Furthermore, a contribution derived from the synopsis of this study is the definition of the linkage of circular businesses' and the sustainability accounting and reporting.

Keywords: Social corporate responsibility; Circular economy; Social indicators; Social accounting; Social impacts

1. Introduction

In recent years, attention to the circular economy (CE) has been increasing in different domains, including business (Centobelli et al., 2020; Urbinati et al., 2017). Notably, the CE model has gained ground among academics, policymakers, and practitioners as an effective way to manage the urgent issues related to climate change and sustainability (Marco-Fondevila et al., 2020). The concept of CE arises with the objectives of keeping products, components, and materials useable and useful to return to the cycles (Rossi et al., 2020). In summary, the aim of a CE is to create circular (closed) loops in which raw materials and other resources are used repeatedly in different phases (Yuan et al., 2006) while contributing to waste reduction (Aranda-Usón et al., 2018).

At present, the CE is being implemented worldwide at the micro (company or consumer level), meso (eco-industrial parks), and macro (nations, regions, provinces, and cities) levels (Ghisellini et al., 2016). In the European Union (EU), a series of communications reports and plans have been implemented to expand the CE principles throughout Europe (European Commission, 2014, 2015, 2020).

To date, the CE-related research has been mainly developed at the macro level (Korhonen, Honkasalo, et al., 2018; Merli et al., 2018; Pomponi & Moncaster, 2017). At the micro level, the knowledge on the introduction of the CE model is still in an early stage of development (Aranda-Usón et al., 2020). Studies have focused mainly on the competitiveness of firms, the implementation of circular business models (Bocken et al., 2016; Witjes & Lozano, 2016), or the analysis of the CE in the general principles of sustainability (Geissdoerfer et al., 2017; Kravchenko et al., 2019). Thus, the adoption of the CE by businesses requires the definition and measurement of the impacts generated by adopting circular business models in terms of social, economic, and environmental as pillars of the sustainability paradigm. Moreover, the CE systems are considered beneficial for different sustainability dimensions such as resource productivity, job creation, and gross domestic product (European Commission, 2020). However, little detailed analysis has been conducted on the impact of the CE on different business sectors, in particular, on the resultant social consequence of the introduction of the CE-related activities in firms.

In particular, from the triple bottom line (Elkington, 2001), companies must implement indicators that also capture the relationship between circular activities and their repercussions on the corporate sustainability report, which is the leading vehicle for communication through which companies transmit to stakeholders their core ideas and progress on the CE (Marco-Fondevila et al., 2020). Additionally, the improvement of environmental impacts has been related to the closing of material loops espoused by the EC, and the economic aspects are considered intrinsic to the circular business model; however, social implications of the EC remain little explored in business literature.

Reports and studies have focused on the social aspects of the CE, and they reference mostly job creation as a positive externality of a transition to the CE, which is focused primarily on resource efficiency and recycling and on waste reduction (Llorente-González & Vence, 2020). Notably, the CE model can include generating new jobs, improving employees' quality of life, and linking a system's functioning with the social dimension of management in organisations (Mathews & Tan, 2011).

CE implementation is a complex process, and the role of employees is crucial (Khan et al., 2020). In particular, new employment opportunities are largely related to recycling and the reuse of waste, sectors that generate direct employment (European Commission, 2015). Studies that have analysed the impact of the CE on the labour market predict that the waste sector (classification and management of waste for

reuse and recycling) will generate a large number of jobs and that most CE-related employment opportunities will demand medium- or high-skilled workers (Morgan & Mitchell, 2015).

In summary, a sustainable future can be a reality only if the economies are rearranged on circular principles characterised by a balanced assessment of the economic, social, and environmental needs (Momete, 2020) and employment is a relevant pillar for a CE for market and stakeholder's aspects (Rossi et al., 2020). However, some questions emerge regarding the selection of social indicators to monitor progress towards a CE at the micro level.

An analysis of the literature reveals two gaps. First, there is a general need for detailed knowledge of the implications of the CE on society because the majority of studies have not specifically analysed employment generation as a social impact derived from the business CE. In addition, the fragmented approach to this topic by scholars has made an enhanced analysis of the CE-related employment necessary. Thus, this paper fills these two gaps by providing a joint approach to the definition and measurement of the social impact of CE, by analysing job generation at the micro level. As one of the contributions to the literature, this study reflects on the indicators inherent to employment and its different facets as the social impacts of firms in their relationship with stakeholders for sustainability accounting and reporting.

To achieve these objectives, the remainder of this paper is structured as follows: the next section investigates the general background, the third section describes the methodological considerations, and the fourth section summarises the findings to state conclusions and reflects on future perspectives of and challenges for the measurement of social impacts of the CE at micro level.

2. Background

The adoption of the CE by firms contributes to more efficient use of raw materials and resources, to cleaner production, and greater efficiency by increasing the circularity of materials (Aranda-Usón et al., 2020; Jun & Xiang, 2011; Li et al., 2010; Liu et al., 2009; Van Berkel, 2010). Currently, private sector initiatives include technologies and processes for closing the material loops and for circular business models, the introduction of related environmental standards, or specific actions in the framework of

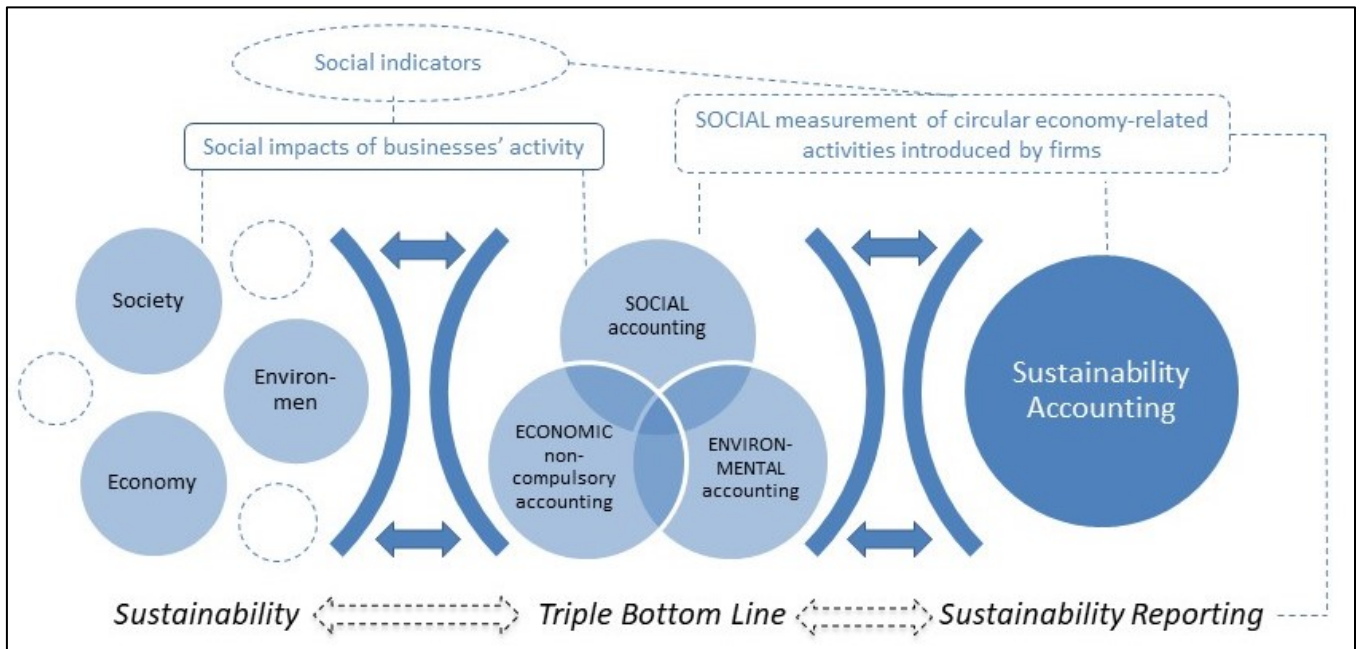
Corporate Social Responsibility (CSR). These initiatives are considered important drivers of the CE transformation in many European countries (European Commission, 2020).

Different authors have pointed out that the concept of CE plays a role in sustainable development (Ghisellini et al., 2016; Korhonen, Honkasalo, et al., 2018; Marco-Fondevila et al., 2020). Some definitions of CE are evolving towards enhanced concepts based on the pillars of sustainability (environment, economy, society), and the measurement of these three dimensions in a CE model is a topic in business literature (Kristensen & Mosgaard, 2020; Rossi et al., 2020),: (Korhonen, Honkasalo, et al., 2018; Korhonen, Nuur, et al., 2018). Nevertheless, it has been argued that the CE literature has prioritised the economic system with primary benefits for the environment and only implicit gains for social aspects (Padilla-Rivera et al., 2020). Besides, the analysis of the diversity and scope of existing CE indicators on all levels points out the prevalence of macro level indicators, while indicators on the meso and micro level are less prevailing.

Based on these premises, the introduction of the CE in businesses raises the integration of the sustainability paradigm into management practices claimed by the environmental and social-accounting scholars (Adams & Frost, 2008; Adams & Larrinaga-González, 2007; Adams & McNicholas, 2006). Notably, because conventional accounting seems most suited to the linear cause-effect relationships (Bebbington et al., 2017), the introduction of the CE model in firms requires a radical transformative programme based on sustainability that responds to the of inter-locking of the social, environmental, and economic systems that have been pointed out for accounting practices (Bebbington & Larrinaga, 2014). Moreover, despite the difficulties connected to sustainability and social accounting, their potentially significant benefits continue to attract the attention of scholars and practitioners (Mauro et al., 2020) for reporting to the internal and external stakeholders through sustainability indicators to accomplish sustainability performance management (Warhurst Alyson, 2002).

The relationship between sustainability accounting and the measurement of the social dimension of the CE is summarised in the synopsis of this study (Figure 1).

Figure 1. Synopsis of the study



Source: Author's elaboration

In a CE context, accounting indicators for internal or external reporting are being used in the framework of environmental management accounting to measure flows of materials and waste, for liability management, or the definition of accounting capabilities of firms for the introduction of circular business models (Scarpellini et al., 2020). However, companies sparsely use micro level indicators for the social dimension of the CE and further research is necessary (Elia et al., 2017; Rossi et al., 2020; Saidani et al., 2019). In particular, companies need to indicate to stakeholders the social impacts of circular investments and activities.

The approach used in this study is not specifically theory-driven, and the research objective is to enhance the knowledge about how to measure the social impacts related to the introduction of the CE in businesses. Nevertheless, different authors point out that the stakeholders play an essential role in the adoption by companies of CE principles (Banaite & Tamosiuniene, 2016; Lieder & Rashid, 2016; Stewart & Niero, 2018) and the links of the CE with sustainability accounting and reporting bring this study closer to the

stakeholder theory in line with Aranda-Usón et al. (2020). From the perspective of the social impact, circular business models have been associated with a high potential in terms of job creation (Burger et al., 2019; European Commission, 2014; Ghisellini et al., 2016; Manninen et al., 2018; Rizos et al., 2016). Notably, the generation of new jobs is one of the most cited social impacts in the literature and is often presented as a measure of the positive social outcome of the CE (Llorente-González & Vence, 2020). However, this requires further research.

Although the CE is now understood as a promising model for creating jobs in local infrastructures (Fizaine, 2020), or elsewhere (Larsson & Lindfred, 2019; Padilla-Rivera et al., 2020), further attention must be paid to net job creation in the CE context. Researchers have argued that the transition to a CE has helped create jobs in the last decade (Sánchez-Ortiz et al., 2020; Yuan et al., 2006). An increasing number of authors have used the new jobs related to the CE as an indicator (Coats & Benton, 2015; Hysa et al., 2020; Kristensen & Mosgaard, 2020; Morgan & Mitchell, 2015). Aranda-Usón et al. (2018) determine the impact on employment at the micro level in a region by using the volume of income of the CE-related activities in companies. Girard and Nocca (2019) define 'circular jobs' as those jobs related to the CE's principles, and Rossi et al. (2020) highlight that employment is a social pillar. Moreover, the job creation from circular business and different supply chain activities is an indicator of CE's social implications (Pieroni et al., 2019).

Some authors have analysed the possible adverse effects on workers in sectors with environmental impacts, and there is broad agreement that adopting a CE could result in job creation in some sectors and in job losses in others (Aranda-Usón et al., 2018). Also, Morgan and Mitchell (2015) consider that labour requirements of a growing CE are replacing elsewhere in the economy, for instance, in the production of virgin materials or new products. Thus, new jobs are differentiated from those created by substitution or those resulting from the re-definition of redundant jobs.

Within this social dimension, some studies have also analysed the required skills and education related to a CE (Burger et al., 2019; Kravchenko et al., 2019). In this sense, education and training contribute to the development of these skills, increase labour productivity, and manage the latest technologies for closing the material loops (Chiappetta Jabbour et al., 2020), advancing sustainable development. Stahel (2016) affirms that the remanufacturing and repairing of old goods, buildings, and infrastructure creates

skilled jobs in local workshops. Khan et al. (2020) highlight the relevance of recruiting employees for CE objectives and the need for technical training of production workers to operationalise new plants. Additionally, skills and circular jobs remain too generic and difficult to adequately inform CE policy (Padilla-Rivera et al., 2020). Thus, we can argue that the social performance of CE related to jobs also includes employee skills development and specific training (Golinska et al., 2015).

From another perspective, Azevedo et al. (2017) include other factors that must be measured for CE-related jobs, including work accidents, precarious work, or percentage of contracted women. In addition, the harmfulness of the manufacturing process level of comfort at work has been analysed by Golinska et al. (2015) and Veleva & Bodkin (2017). Notably, the CE can also contribute to setting the disappearance of low-level occupations (Padilla-Rivera et al., 2020), and the social re-valorisation of circular activities could lead to an improvement in working conditions and should be considered from a social perspective (Kirchherr & Piscicelli, 2019). Therefore, indicators applied to these impact categories should include more employment conditions to understand the real social dimension of the CE measured through employment (Kravchenko et al., 2019). Nevertheless, at present, the limited number of indicators considering the social dimension makes it difficult to determine a general approach to this dimension (Kristensen & Mosgaard, 2020).

In some studies, the social goals of a CE have been linked to the sharing economy and participative democratic decision-making that increases the collaborative culture and the number of public partners involved (Girard & Nocca, 2019; Rossi et al., 2020). In this context, sustainability culture must be promoted among employees and suppliers (Khan et al., 2020), and the measurement of the employment in a CE context would include community relationships and user relationships (Kravchenko et al., 2019). Notably, the employee's engagement and awareness in circular businesses is a relevant factor (Chiappetta Jabbour et al., 2020) and Veleva & Bodkin (2017) and provides a starting point for developing specific indicators for CE strategies and employee engagement.

Another factor related to jobs in a CE framework is the innovative character of circular technologies (Momete, 2020). Rossi et al. (2020) argue that innovations required for new product designs and patents related to recycling and secondary raw materials are social indicators of a CE (Golinska et al., 2015; Hysa et al., 2020). Therefore, knowledge for innovation should be promoted among businesses to develop

intellectual capital for the adoption of the CE by firms, because some traditional jobs are likely to suffer in the transition to a circular model (EEA, 2016).

In summary, the CE-related activities introduced in businesses involve specific technical and organisational capabilities embedded in a sustainable, productive paradigm (Llorente-González & Vence, 2020). Thus, the measurement of CE-related employment should include more aspects than the number of new jobs. These specific facets that integrate circular employment and the main studies on this topic are summarised in Table 1.

Table 1. CE-related studies classified by different factors of circular employment at the micro level

Jobs creation as the social indicator of the CE	(Aranda-Usón et al., 2018; Burger et al., 2019; Girard & Nocca, 2019; Horbach et al., 2015; Hysa et al., 2020; Iacovidou et al., 2017; Kristensen & Mosgaard, 2020; Llorente-González & Vence, 2020; Mesa et al., 2018; Momete, 2020; Morgan & Mitchell, 2015; Pieroni et al., 2019; Rossi et al., 2020; Stahel, 2016; Yuan et al., 2006)
Engagement in the CE principles	(Chiappetta Jabbour et al., 2020; Veleva & Bodkin, 2017)
Collaborative culture	(Girard & Nocca, 2019; Khan et al., 2020; Kravchenko et al., 2019; Rossi et al., 2020)
Net balance of employment generation	(Aranda-Usón et al., 2018; Morgan & Mitchell, 2015)
Skills and training	(Burger et al., 2019; Chiappetta Jabbour et al., 2020; Golinska et al., 2015; Khan et al., 2020; Kravchenko et al., 2019; Padilla-Rivera et al., 2020; Stahel, 2016)
Workers' conditions/safety	(Azevedo et al., 2017; Golinska et al., 2015; Kirchherr & Piscicelli, 2019; Kravchenko et al., 2019; Padilla-Rivera et al., 2020)
Knowledge for innovation	(EEA, 2016; Golinska et al., 2015; Hysa et al., 2020; Llorente-González & Vence, 2020; Momete, 2020; Rossi et al., 2020)

Source: Author's elaboration

Despite the studies listed in Table 1, relatively little is known of jobs created by businesses through their CE-related activities. In particular, the analysis of other aspects of circular employment remains fragmented. Thus, this paper aims to assist organisations in reporting on their social perspective of the introduction of the CE, and the following research questions are raised:

RQ1. How can companies measure CE-related jobs at micro level?

RQ2. What are the different dimensions of the employment related to the circular business model that could be reported by companies?

In the following sections, these research questions are answered by reflecting on a different dimension of CE-related employment through a double-focus qualitative methodology.

3. Research design

This study is eminently reflective, and the methodology is mainly based on a desk research method. However, different aspects of the CE-related employment and other social impacts of the introduction of the CE in businesses were explored through a regional case study in Spain.

This study comprises three steps: first, to estimate the impact of the CE in the region, desk research was conducted with a set of specific indicators; second, to analyse perceptions of the adoption of the main CE-related activities in the region at the levels of society, public administrations, and the private sector, 21 semi-structured (in-depth) interviews were conducted; and third, to measure the CE's impacts, employment as a social indicator was analysed.

Semi-structured interviews have also been used in other CE-specific studies because they allow for processing information that otherwise could not be systematically collected through key informants (Geng et al., 2009; Uddin, 2020). Specifically, the methodology for the analysis was adapted to fit the regional context in which CE was in an incipient state of implementation (Everingham et al., 2013) and it is coherent with the methodological insights provided by previous studies (Crowe et al., 2011; Eisenhardt, 1989; Yin, 2009).

The CE in the region was measured through 21 interviews of experts selected by the authors as key informants according to the guidelines of the commitment. Owing to confidentiality agreements with the interviewees, their identities remain with the authors; however, the list of their profiles is included in Table 2. Due to the general objective of the study, one-third of the interviewees represents the regional public administrations, one-third represents society, and one-third represents companies or the business sector, in line with the three main stakeholder categories pointed out by Banaitė and Tamošiūnienė (2016) for a CE.

Table 2. Profile of the experts selected as key informants

Type of organisation	Profile of the experts
Public administration	Four engineers, two lawyers, one economist
Industries and private companies	Five engineers, one economist, one other
R&D institutes, NGOs and other organisations	One engineer, two lawyers, one chemist, one architect, one sociologist, one journalist

Source: Author's elaboration

The interviews, each lasting approximately 30 minutes, were recorded, transcribed and analysed for trends and patterns of response (Dolowitz & Medearis, 2009). All the interviews are analysed in an aggregated manner by using a qualitative method. In addition, experts were asked to assign a value to each opinion using a Likert-type scale ranging from 0 to 10, with 0 being the score that expresses total disagreement or that the interviewee believes the statement to be of no relevance and 10 being the highest valuation, expressing total agreement, or that the interviewees believed the statement to be highly relevant. From the Likert-type scale thus constructed, the opinions expressed are divided into three levels: 0–3 is slightly or not at all relevant, 4–7 is moderately relevant and equal to or greater than 8 is very relevant.

The case is the Spanish region of Aragón, and based on the CE having significant economic, environmental, and social impacts at the territorial level (Aranda-Usón et al., 2018), the impact on employment of the introduction of the CE-related activities in businesses is analysed. This region was selected because of the regional government's commitments to the author that enabled an analysis of the territorial impact of the CE.

In recent years, the selected region has experienced an increase in the number of local, small-scale initiatives to implement some of the circular principles (Aranda-Usón et al., 2018; Portillo-Tarragona et al., 2017; Scarpellini et al., 2019). To date, these initiatives have been mainly adopted in the waste management sector, according to the recommendations for the introduction of the CE (European Commission, 2020), the Spanish Government (Gobierno de España, 2020), and the regional planning for a CE.

This study presents the results of additional analysis of the social impacts of business circular activities. As such, the next section attempts to summarise the perception of experts on the impact on employment from the introduction of the CE in regional businesses.

4. Main results

This study analyses the experts' perceptions of (1) the relevance of the barriers due to a lack of stakeholders' interest, (2) the relevance of the barriers because of a lack of specialised employees, (3) the effectiveness of subsidised training plans for employees, (4) the potential impact of the CE on society, and (5) the potential CE-related job generation. For each question, the average and the frequency of the answers are calculated. Table 3 presents the main results.

Table 3. Summarised results of the interviews

	Lack of stakeholders' interest	Lack of specialised employees	Subsidised training plans for employees	Potential impact of CE on society
MEAN	5.30	5.70	6.38	2.60
MEDIAN	2.00	7.00	8.00	3.00
MODE	5.50	6.50	7.00	3.00
SD	3.15	2.79	2.36	1.23

Source: Author's elaboration

For social impact, informants considered that the implementation of a CE would generate different jobs but would not increase the total volume of employment in the region. They pointed out that the CE would require professionals trained in advanced techniques from different scientific backgrounds. In particular, chemists, biologists, physicists, specialised technicians, and specialised lawyers and economists were demanded in the future. The relationship between employment and CE was stated by most of the experts, but the general impact of the CE on society was not corroborated.

In summary, from the analysis of the semi-structured interviews, the opinion of the experts interviewed differs according to the organisations they represent (Table 4).

Table 4. Summarised results of the interviews, according to the profile of the experts interviewed

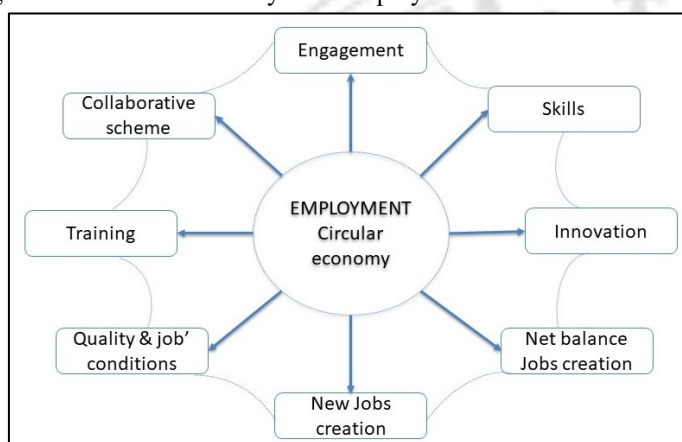
	Lack of stakeholders' interest	Lack of specialised employees	Subsidised training plans for employees	Potential impact of CE on society	Potential CE-related job generation
Private Firms	4.6	4.8	6	2.5	6.8
Public Administration	4	6.2	7.7	2.4	7.2
Society	7.1	5.8	5.5	2.8	6.5
Total	5.3	5.7	6.3	2.6	5.8

Source: Author's elaboration

The most remarkable differences between the respondents' opinions of representatives of public administrations, society, or private companies are detected in the interest of the stakeholders in a CE and the effectiveness of the subsidised training plans.

The improvement of the employability of the workforce through training plans related to CE is one of the results obtained through the interviews. Figure 2 summarises a schematic classification of the different factors related to employment in a CE context.

Figure 2. Multi-faceted analysis of employment as a social indicator of CE in businesses.



Source: Author's elaboration

Based on the results, the leading indicators linked to the employment generated by companies that adopted a circular business model companies are selected. However, Table 4 shows some differences between the respondents' perception and the relevance of these different aspects of the employment and a hierarchic scheme cannot be elaborated for prioritising these dimensions.

It could be argued that the concern of the respondents in this case slightly diverges from the interest expressed by researchers, to date. In particular, academics have widely approached the impact of the CE on employment, but the other specific factors of CE-related jobs are still understudied.

Figure 2 has been elaborated through the results obtained to outline the close relationships between the employment generated and the multiple factors that affect it. It can be seen how all the dimensions of the circular employment are considered connected to each other. However, its arrangement indicates the conjunctions between the various factors in terms of measurement. For example, innovation is closely

linked to the skills of the employees, which in turn form the necessary engagement for the collaborative scheme required in circular environments. Thus, the higher training supposes better work and employability considerations as new jobs generated that imply the net creation of employment that needs to be measured in this multi-faceted social impact in business CE models.

4.1 Discussion

This study is eminently reflective, and the methodology is mainly based on a desk research method. However, the results of a regional case study are summarised in this study with the mere objective of reflecting on the implications of this analysis from different stakeholders' perceptions of this topic. In addition, the approach used in this study is not specifically theory-driven, and the research objective is to enhance the knowledge on how to measure the social impacts related to the introduction of the CE in businesses. Nevertheless, a summarised discussion is presented in next to outline the multiple facets of employment as an indicator of CE.

Generally, the social dimension of the CE addresses the identification, accounting, and management of the values and needs of different stakeholders of a company (Kravchenko et al., 2019). Notably, engagement of stakeholders is necessary to enable a transition towards a CE (Rossi et al., 2020), in line with the results obtained for social and environmental governance of firms (Ortas et al., 2019; Rivera et al., 2017) and carbon disclosure (Guenther et al., 2016). Hence, the analysis of social impacts from the firms' view in a circular context advances the literature to be closer to the stakeholder' theory for reporting processes, in line with Aranda-Usón et al. (2020). Notably, through the reporting, companies may attempt to maintain their licence to operate in a CE and reduce the possible gaps between their stakeholders' expectations in terms of sustainability (Hahn & Kühnen, 2013; Rossi et al., 2020; Stewart & Niero, 2018).

I acknowledge that it would be unrealistic to be unaware of the potential resistance within the institutions of accountancy that makes changes due to the multidimensional character of the CE difficult. Nevertheless, I posit that over the years, accountants have evolved towards sustainability principles, and the presence of environmental accounting standards favours the integration of measurement and reporting in all the dimensions that a CE requires. Since the critical debate initiated by Moneva et al. (2006) on the possible camouflaging of social and environmental accounting and reporting by firms and CSR,

environmental and social accounting and the triple bottom line are now concepts more frequently used in the accounting fields, also in CE studies (Urmanaviciene & Arachchi, 2020).

Nonetheless, this study corroborates the arguments of Kristensen and Mosgaard (2020) on the scarcity of the measurement of social impacts in a CE context, an indication of the development of economic and environmental indicators through standards; notably, indicators for the social dimension have not reached the same level of consensus (Kristensen & Mosgaard, 2020). Therefore, the path to the inclusion of the three pillars of sustainability must include moving towards the CE also through accounting and reporting practices.

5. Conclusions

The original purpose of proposing the concept of CE was to close material loops as a conjunction of economic and environmental improvements, and the interaction with society is a more recently considered aspect in the CE framework. Notably, today's business literature has focused mainly on environmental and economic aspects of the CE, not its complex social implications that must be measured for sustainability accounting and reporting in the relationship of firms with stakeholders.

This study highlights that experts scarcely consider the relevance of CE in society in the current phase of development of the CE introduction at micro level. The scarcity of social measurements of CE-related activities introduced by businesses is also corroborated, and it highlights the origins of the concept of CE, more focused on eco-efficiency and the economy versus the environment than on the social foundations of the model.

Undoubtedly, a CE provides substantial environmental and economic opportunities (raw materials saving, competitiveness, and business opportunities) that imply social benefits (jobs generation). However, the forecasted positive social impacts of a CE have not been demonstrated. For this purpose, the companies are required to implement a triple bottom line perspective in which social dimensions of the CE are integrated with environmental and economic aspects as one of the three pillars of sustainability.

In this context, this study fills the gap in the literature by investigating the different aspects of the employment linked to CE-related activities introduced by businesses. The multiple facets of employment must be measured by companies to report social concerns to different categories of stakeholders. Social

indicators are a key pillar of sustainability accounting and reporting and have important legitimacy in reporting to the internal and external stakeholders to accomplish sustainability performance businesses' management in a CE framework.

A contribution derived from the synopsis of this study is the definition of the linkage of circular businesses' and the sustainability accounting and reporting in a CE framework. Moreover, these results claim that novel circular business models must enable an explicit analysis of social implications in a triple bottom line perspective. Notably, conventional accounting seems unsuited to capture the introduction of the CE model in firms. Thus, the integration of the sustainability paradigm into management practices, as has been claimed by environmental and social-accounting scholars, is claimed again regarding the introduction of the CE in businesses.

One challenge facing practitioners is the enhanced measurement of social impacts derived by their CE by integrating specific circular indicators in sustainability reporting. Therefore, managers seeking CE business investments should increase the engagement among employees to improve specific innovation and management capabilities within firms, with the participation of the accounting structures. Similarly, policymakers can further promote CE by providing incentives to firms not only based on the number of new jobs generated but also on the net balance of derived jobs and other indicators for qualitative factors inherent to the employment in a CE framework.

The limitations of this study suggest that further interdisciplinary work on this topic is necessary because of the systemic nature of the CE at a firm level. Further research must also consider employment generated at a meso level when more companies are involved. Empirical investigations of the social impacts of companies that adopt a circular business model could also enhance the results of further research.

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Management Accounting in European Finance for Smart Tourism and Sustainable Destinations: How Organizations Deficiency?

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Abstract

The research investigates the interplay of sustainable tourism, management, monitoring, destination life cycles and stakeholder involvement in Sardinia destinations. Management techniques are considered critical to the sustainable stewardship and competitiveness of tourism destinations, especially in an island context where tourism is business all year round and all seasons. The importance of tourism management and monitoring in destinations and organizations is particularly highlighted through an explanation of sustainable tourism indicator systems such as that created by the European Commission. Systems such as this will help position Europe as the leading sustainable tourism destination in the world both now and in the future. The research followed an inductive approach. According to general principles of the inductive methodology, knowledge is gathered from detailed observation of facts. This study permits to adopt multiple research methods, both qualitative and quantitative. The analysis is grounded in documents, direct observations and questionnaires. In the first phase, only qualitative methods were utilized. This classification is supported by the assessor answers: high to moderate tourism impacts respectively on destination A (North Sardinia) and B (South Sardinia) and a level of contact between tourists and the local population that can be classified as low in the Destination A and between low and moderate in Destination B. The effects of public

policies and tourism development cannot be measured only in economic terms, this paper provides a qualitative-quantitative analysis of the phenomenon and possible proxies.

Keywords: Management Accounting, Organization Settings, Smart Tourism, Sustainable Destinations, Tourism Indicator Systems and Tourism Management and Monitoring.

1. Introduction

Management accounting has a peculiar function with the broader accounting discipline. “Management accounting is concerned with the provision of information to people within the organizations to help them make better decisions and the improve the efficiency and effectiveness of existing operations” (Van der Stede 2015). The peculiarity of management accounting is that it is a science dealing with decision-making, whereas the remaining part of accounting is basically the science of reporting accounting information (Power 2009). The necessity to manage and control tourism and impacts at the local level (Hannan & Freeman 1977) has attracted attention to the basis of the tourism phenomenon: geographic areas defined by administrative boundaries that are perceived in the market through a specific image. Sustainability is regarded as a science (Kates 2001; Levin and Clark 2010; Kates 2011) based on multi-disciplinary approaches. Different disciplines: psychology, sociology, geography, and ecology, contribute to the growth of the field, which are comprised of various aspect included in the concepts of nature, human beings and organizations. The complexity of tourism phenomenon and sustainability topics enriches scientists’ investigation. Sustainability is certainly a multifaceted field of investigation. In literature, an important research has been conducted on destination management and, specifically for our purposes, there is a branch of this research called adaptive management (Larson et al., 2012; Plummer et al., 2009; McCook, 2010; Karatzoglou et al., 2010), which will be mentioned in the following pages, since it is considered related to sustainable tourism management.

The postmodern period of management accounting was encouraged by the development of information technology and the view of the organization as a complex set of interdependencies and relationships (Hopper & Bui 2016). Within a dynamic and competitive environment, in a business world of fast and cheap information flow, management accounting had to solve the problem involving the flexibility and competitiveness of production, while the academic discussion moved onto the question of how to implement management accounting systems in a such a complex and uncertain environment (Biancone, Secinaro, Brescia, Calandra 2020).

The research paradigm followed in the study can be considered interpretative; the destinations represent a composite reality in which it is possible to address observation, investigation and possibly develop and define concepts for future evolvement in the fields (Jones, T., Atkinson, H., Lorenz, A., & Harris, P. 2012).

Management accounting (Van der Stede 2011) is nowadays at a turning point, as pressures from outside call for increased disclosure of information, which “before was mainly relegated to internal decision making” (Power 2007). Moreover, when the crisis happened, due to constrained finance, firm faced the issue of rethinking their decisions, sometimes including their strategic decisions, and “had to set their budgets aside at worst, or revise them at best” (Palermo & Van der Stede 2011). Tourism destination are complex systems that evolve overtime. In the dynamic of tourism demand and supply evolution, destinations can either encounter prosperity or decline. Which type of development is appropriate for destinations? This is the general enquiry the study has considered in its initial formulation, based on the recognition of mass tourism as one of the global change syndromes (Gordon & Narayanan 1984). How can destinations became and remain sustainable over the course of their lifespan? This part of sustainable tourism is less developed in the tourism discourse as it appears less evident than protection of the environment (Clarke 1997; Swarbrooke 1999). Considering the UNWTO definition (2004, pag. 7) related to management, it is stated “Sustainable tourism development requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process and it requires constant monitoring of impacts, introducing the necessary preventive and/or corrective measures whenever necessary”.

In this respect Figure 1 is restructured below to evidence management as a mean to reach the goal of sustainability in destinations. The managerial environment has a broader significance and embraces institutions, organizations, associations, and business (Swarbrooke 1999). Each of these entities usually plays an active role in the management of tourism activities within the environmental boundaries of a destination. Hence, sustainable tourism is a human-centred concept (Mitchell, 1997), in which social groups participate and contribute to the realization of sustainable attributes of destinations. Managing tourism also involves tourists, as the UNWTO definition (2004, pag. 7) points out “Sustainable tourism should also maintain a high level of tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability issues and promoting sustainable tourism practices amongst them”.

International acknowledgement of the importance of the environment and its related issues and the relevance to tourism management are stated in the core message of the Brundtland report, “Our common future”. This document can be considered a main justification for declarations of political commitment to the environment. The key concept in this report is the compromise between present and future developments in order to preserve the primary resource of tourism: the destination. It is indicated that policy directions should aim to follow a sustainable path in development patterns.

Adequate management accounting systems (Galbraith 1973) may be useful for detecting issues at an early stage and informing the management about the feasibility of any financial or economic inconvenience before it develops into an important risk and captures the attention of key stakeholders.

Following the previous considerations, the research questions this study aims to answer are: a) Which kind of managerial tools allow destinations to preserve the current natural heritage to guarantee the conservation for future generations? b) Are these managerial tools effective for sustainable management of tourism in destinations as to ensure the future existence of destinations? The underlying hypotheses of this study are: first, the effective management of tourism impacts in destinations requires adequate indicator systems; second, the effectiveness of indicator systems rely on destination stakeholders’ commitment; and third, that sustainability, area life cycle, and governance are intrinsically related in destinations.

The main gap in the literature is the analysis of a particular case, but at the same time representative of an evolved civil society like that of the islands. This idea is true first of all for a certain degree of

independence from the central country system and then for the cultural openness to the limit of uniqueness that only an island can offer. The smart tourism destination in an island context is fundamental as regards aspects of work and the quality of life. Our choice falls in Sardinia where tourism is business all year round and all seasons.

To answer these research questions and provide support for the related hypothesis, the methodology adopted in the study is inductive; overall, qualitative methods provide the core foundation for this research, as it is explained in the followings paragraphs.

Figure 1. Outcomes of Corporate Social Responsibility



Source: Our Elaboration

2. Literature review

2.1 Institutional settings: Contingency theory and issues of financial pressure

The activity of internal auditors, and the processes and control systems they deal with, are not predictable ex ante and are depicted contingently, they cannot rely on a “one-size-fits-all” procedure, but need to be adjusted to the specific context of a specific firm at a specific time. That said, management accounting as a discipline is able to identify specific procedures, which can better match specifically defined situations in which the organization may be involved.

According to contingency theory (Fischer 1995), situational factors (or contingent or contextual factors) influence the design of the management accounting system, while organizational performance and effectiveness depend on the quality of fit of the management accounting system, when designed ad hoc, and the specific situational factors that activated it. These characteristics of the discipline make it difficult to undertake big numbers-based empirical studies, as each organization is unique and the potential situational factors are infinite and nested with each other, while the effectiveness of the fit between the management accounting system and the situational factors is often not easily measurable.

To simplify the application of management accounting to practical issues, theorists have variously tried to categorize the situational factors.

The external environment and its level of uncertainty are relevant situational factors, related to change in the environment, which occur unexpectedly, such as the financial crisis of 2008. When the conditions under which the firm operates are more stable, the external environment will be considered as more certain.

On the contrary, dynamic conditions are the premise for an uncertain external environment (Eckles, Hoyt & Miller 2014). It is documented that firms operating in a more stable and certain environment adopt a formula-based approach to the measurement of management accounting systems effectiveness, whereas firms operating in a dynamic and uncertain environment adopt a subjective approach to performance evaluation. In the current situation, a formula-based approach, which presupposes the meeting of targets, will easily fail if the uncertain dynamics of the environment make the targets inappropriate. Uncertainty (Chenhal & Morris 1985) is also correlated with the level of sophistication of the management accounting system, given that a certain external environment needs only internal, financial and historical information, whereas an uncertain external environment will require a more sophisticated management accounting systems, which can also gather information that is external, less financial and future-oriented, as well as generally requiring decentralization in the organizational (and decisional) structure.

The competitive strategy adopted by the firm is also a situational factor, which is able to shape the management accounting systems (Chapman 2006). A low-cost competitive strategy will require a formula-based approach, requiring significant attention paid to cost control mechanisms and frequent

and detailed quantitative reports on performance. On the other hand, a differentiation strategy will control costs less effectively and be mainly focused on non-financial measures of performance.

Destinations are the basis of tourism at local level; they are the primary resource of tourism business, and are the object of management strategies and policies aimed at adequately conserving it as a resource. This is the priority of sustainable tourism destinations, which, in a modern approach, cannot be implemented without being collectively addressed through stakeholders participation. It has also to be noted that an ideal equilibrium state is impossible to reach in composite systems as destinations, where complex system of resources, tools, management levels and stakeholders types are in place.

Sustainable destination can then appear in their holistic vision, as integrated, adaptive socio-ecological system. These are the elements that will be discussed:

- a. destination as an integrated systems;
- b. destination as a social system;
- c. destination as a socio-ecological system;
- d. destination as an adaptive system.

A sustainable tourism destination is an integrated system characterized by a high degree of complexity. The notion of system is relevant to appreciate the elements that make up the concept of sustainable destination, and their value within the composite system. A system is not simply the sum of its elements, but is notably distinguished by a specific combination of elements derived from interrelation and exchange. The destination is a unique and original entity in comparison to its single attributes, and has a value that exceeds the potential of the distinct elements of which it is composed. In the paper, the destination has been identified through the attributes of attractions, amenities, human resources, accessibility, image and price. In the context of this paper, those same attributes will be highlighted as part of a destination system, in which they can play a role in qualifying and defining the destination profile.

In pointing out the social system of a destination, the complexity of sustainable tourism destination systems appears evident. The destination is an entity with distinctive elements on the ground, such as beaches, buildings, roads, etc., comprised of people that are part of different social groups within the economic environment, families, enterprises, associations and public administrations. In tourism destinations this social clusters can be regrouped to represent the different parts of the society with interest in tourism. In this respect, the social groups are named, stakeholders, and though informed participation, the composition of their interests makes the social system sustainable (Sautter and Leisen 1999).

The destination is a mix of society and nature, in which the composition of different stakeholder approaches is the real challenge for destinations committed to sustainable behaviors. In this sense, the last character of destinations as sustainable systems is the necessary to adopt flexible and adaptive forms of management that are able to face the continuous evolvement of tourism interest groups and society, and ensure the adaption of the natural and physical environment to global and local changes. Specifically, the branch of tourism management know as adaptive management is defined in literature as, “the process of building resilience and coping with the uncertain inherent in complex systems through a continual process of experimenting, monitoring and social learning” (Miller and Twining-Ward, 2005, pag. 19). Environmental crises related to climate change are constantly increasing, creating grater impacts on communities and vulnerable people, such as indigenous and poor populations. Managing risks and developing mitigation and adaption planning approaches has been conceptualised and implemented worldwide (Page 2010). The need to reduce vulnerability of the environment to crises, which can also impact on tourism, will require stakeholder involvement and collaborative management based on multilevel policies and programmes.

Finally attention on technology will also determine the appropriateness of the management accounting system, as formula-based approaches and process costings are able to measure the performance of process and mass production, whereas job costing are more relevant to batch production technologies.

2.2 Stakeholder theory framework for tourism analysis

The stakeholder theory is also employed to explain stakeholder relationship in business belonging to different sectors, including the tourism sector. The theory can contribute to regulating relationship

between tourism actors at the destination level. In particular, the principles of the theory are considered more significant in the case of destinations involved in sustainable tourism development, due to the role stakeholders should play. Indeed, as described in previous paragraphs, international and European sustainable tourism organizations consider the involvement and the commitment of all stakeholders in planning and in the decision-making process at the destination level as a fundamental step in sustainable tourism development.

Many studies aim to identify stakeholder of tourism. Sautter and Leisen (1999), refer to workers, local enterprise, residents, tourists, public administrators, competitors, activists and international chains as the stakeholders involved in tourism planning at a destination level. Ryan (2002), considering potential stakeholders of an hypothetical tour operator in an hypothetical destination, identifies government, travel agencies, local administrators, accommodation enterprises, natural and urban environment, workers, brokerage houses and other special interest groups. Currie (2009) considers the Mitchel (1997) categories and identifies local indigenous enterprises as dormant stakeholders, fishing and sailing enterprises as discretionary stakeholders, the water managing authority as demanding stakeholders, governmental authorities as dominant stakeholders, tourism and accommodation enterprises as dependent stakeholders, environmentalists as dangerous stakeholders, and natural resources managing enterprises as definitive stakeholders. Byrd (2007) selects the current and potential community and tourists as the stakeholders principally involved in sustainable tourism development at the destination level.

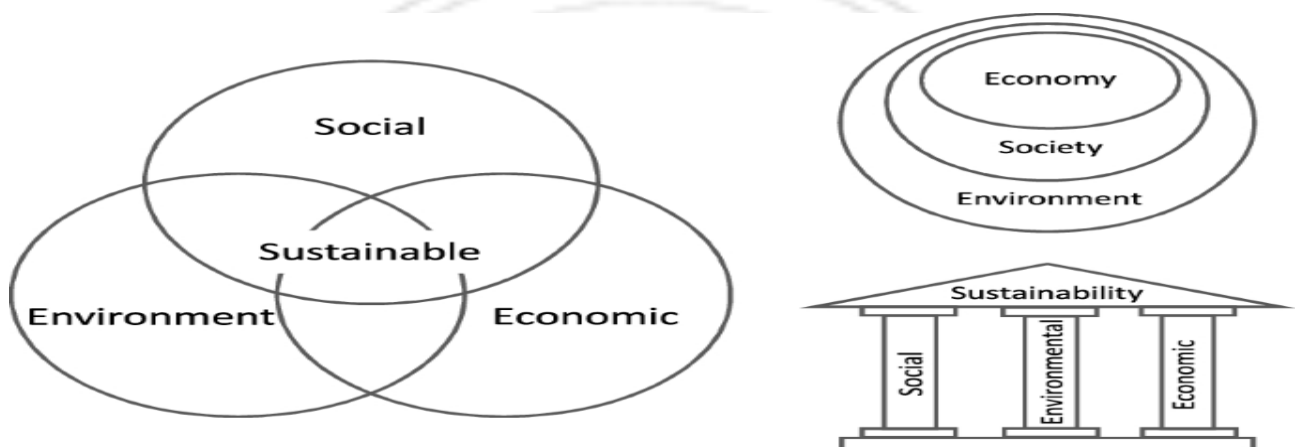
According to the traditional approach, the interests of the three stakeholder groups are incompatible. For example, actions aimed at the maximization of business profits could cause damage on the natural environment. Expectations of workers could be conflicting with business profit objectives. Environmental associations and local authorities could conflict in the management of natural resources.

However, according to a different perspective, stakeholders interests can be considered complementary. In destinations focused on tourism development, and especially sustainable tourism development, business cannot pursue economic goal that negate the efforts to safeguard the natural and cultural environment. This is because natural and cultural attractions represent the core of tourism products and the most interesting destination features for tourists.

Their degradation entails a loss of destination value, a tarnished image, and other indirect negative consequence on the tourism industry.

For these reasons, the involvement and commitment of all destination stakeholders in planning and developing strategies is recommended to define joint and balanced actions in sustainable tourism development (Figure 2).

Figure 2. Balanced Sustainable Tourism Development



Source: Our Elaboration.

The current variety of instruments used to protect and manage the environment and tourism is sophisticated and has been intensively developed in the last decades, following the environmental consciousness of stakeholder in destinations. Over time, relevant decision-makers, organization and institutions, academia and professionals have contributed to develop programs, policies and systems to improve the sustainability of tourism, economies and societies.

A first group of sustainable initiatives is related to land-use planning, such as zoning, quotas, and protected areas. These initiatives are specifically planned and coordinated within public tourism management.

A second collection of sustainable efforts is related to the acknowledgment of unique sites of interest, which are promoted by international institutions. A third set of sustainable programs is focused on enterprises, including environmental management systems and the like. These can be

developed through private associations, such as tour operators, or other organizations and institutions with interest in sustainable tourism development.

Public policies, plans and initiatives play a strategic role in the sustainability of tourism destinations. In fact, the public sector has the power to legislative and use fiscal instruments that can determine and characterize a destination either toward exploitation or conservation of the natural, economic, social and cultural environment. This is true in different parts of the world where the state of nature and humans have been altered by tourism development. The positive and negative impacts of tourism need to be balanced through public intervention in order to regulate tourism investment, processes, decision and activities that occur in geographic areas governed by public institutions.

Undoubtedly, public stakeholders have different priorities for the governance of territories. These priorities are influenced by linked elements, such as the quality and nature of resource, the way of life of the area, stakeholder commitment, etc. Additionally, debates over the compromise between economic growth and welfare and the consequences on the environment frequently engage policy makers.

Sustainability in the development of territories and population is aimed at reaching economic goals while preserving the value and identity of destinations for next generations. Sustainability is the perspective requires financial resources to fund sustainable initiatives that protect the integrity of destinations.

The more relevant and powerful public management capability is, the more limited land utilization options become. Development is a long-term process that first calls for land-use planning through legislation that can be supported by appropriate analyses conducted on the ground, carrying capacity and limits of acceptable change, and then regulation on specific sites, including zoning, the creation of protected areas, quotas and the like.

In regards to the funding mechanism for sustainability, several public initiatives can contribute to the economic support of sustainable tourism, eco-taxes, user fee and donations.

In a hierarchy of main public concerns, legislation on tourism is positioned, according to the vision of O'Riordan (1981), after a national commitment on security and economic growth, and immediately

after regional development and income distribution. The first national goal also encompasses community health and employment. In this context, the environment does not represent a priority but is seen as an instrument that supports the national goals. The second national goal is focused on a redistribution of wealth that guarantees equitable social opportunities. This is another instance where there is no specific interest in environmental protection but it is once again beneficial to national and regional policies.

The degree to which attention is given to the environment as a national and sub-national goal depends on the value that public stakeholders attribute to nature, considering internal and external forces that place pressure on the side of preservation rather than consumption.

Recently, there has been increasing attention given to sustainable issues and the need to implement regulation. Surprisingly, this consciousness has also been spreading into developing countries, which will have to pay costs that developed countries did not face during their stages of development in the past.

The sophistication of sustainability tools that advise public policies in land-use planning can be analyzed through studies on carrying capacity and limits of acceptable change.

3. Methodology

The research employed different methods. In the first phase of the study, literature and documents related to private and public instruments for the management of sustainable destinations were considered (Baxter & Jack (2008). Their principles, guidelines, procedures, purposes and indicator sets were examined in a qualitative and quantitative approach. The conditions for use, and their weak and strong points were also identified (Brasini 2010).

In this part of the paper an empirical investigation is employed to answer the research question and hypotheses, expressed as follows: a) Which kind of managerial tools allow destinations to preserve the current natural heritage to guarantee the conservation for future generations?; b) Are these managerial tools effective for sustainable management of tourism in destinations as to ensure the future existence of destinations? And hypotheses: first, the effective management of tourism impact in destinations requires adequate indicator systems; second, the effectiveness of indicator systems rely

on destination stakeholders' commitment; and third, that sustainability, area life cycle, and governance are intrinsically related in destinations (Castellani & Sala 2010).

Considerations have also been traced on the effectiveness of managerial and control tools in tourism sustainability on the comparison among indicator system with potential and value for tourism stakeholders (Corbetta 2003).

The empirical investigation adopts a multiple case study approach based on the analysis of two destinations that are participating in an international program. Each destination represent a single case study. The program covers a limited number of destinations. Questionnaires were addressed to destination assessor involved in the program, including all the destinations assessed for sustainability policies and practices (Coyne, I.T. 1997). Among these destinations, a purposed sampling, based on a subjective choice and not at random (Guarte and Barrios, 2006) was selected. The two destinations were chosen intentionally according to the following criteria:

a. the life cycle stage of the destination. To address the third hypothesis that sustainability, life cycle area, and governance are intrinsically related in destinations, all the stage of life, ascertained through the destination assessor answer, needed to be included in the destination sample for the analysis (Creswell 2013).

b. the significance of the destination for the aims of the research. To investigate the relationship between tourism management and monitoring, destination life cycle, stakeholder interest and involvement, and the level of sustainability in destinations, the sample of destinations, representative of the population in the international program (Battaglia 2011), is characterized as follows: geographical pertinence to the different world continents, inclusion of developed and developing destinations, variety of destination attributes, and relevance of tourism sector (Miller 2001).

The research followed an inductive approach. According to general principles of the inductive methodology, knowledge is gathered from detailed observation of facts. In the process of induction, observations are the starting point of the research, which lead to abstract generalizations as the outcome of the study (Baltaretu 2011). Compared to the deductive approach, the object of inductive research is not intended to test known theories but to build an abstraction.

In accordance with this approach, the research questions arose from a real experience: the involvement in international and European programs of tourism impact monitoring at the destination level (Thomas 2006). The direct participation in the programs brought her to reflect upon management and monitoring systems for sustainable tourism and their effectiveness in developing sustainability in tourism destinations (Buckley 2012). Based on these considerations, the research questions and the related hypotheses were established, specifically deriving from two sources related to a scientific interest in sustainable tourism themes, and an in-field experience on the subject.

The research area of the study (Bocken, Short, Rana & Evans 2014) has focused on sustainable tourism at a sub-national level; this subject explains the chosen unit of analysis destination. Research has been limited to the managerial aspect of sustainability through indicator systems (Baltaretu 2011), involving stakeholders and the related organizations in the tourism sectors. Observations on the local destination context, including the implemented sustainable tourism initiatives, the level of tourism development, the stakeholder’s management skills and approach, etc., have deeply contributed to the current study (Berke & Conroy 2000). This tries to investigate the possible relationships between tourism management and monitoring, progress in destination development, the stakeholder interest and involvement, and the level of sustainability in those territories. There is profound association among quality of life and quality of tourism destinations. After defining the purpose of the study, the research design was elaborated and methods were selected (Tab 1, 2, 3, 4 and 5).

Tab. 1 Template Descriptive Data Sampling

Interviews	20	Year	2014
Object of investigations	Sustainable Sardinia Tourism Associations, Smart Destination & Digitalization		
Data Sampling	Random 50% North Sardinia and 50% South Sardinia		

Source: Our Elaboration

Tab. 2 North Sardinia Elaborations

Destination	Questions	% Reponse	% Positive Relevance
A North Sardinia	Population	55	88
	Climate	65	77
	Attractions	44	33
	Amenities	32	67
	Accessibility	77	87
	Human Resource	88	99
	Price	99	89
	Image	58	56

Source: Our Elaboration.

Tab. 3 South Sardinia Elaborations

Destination	Questions	% Reponse	% Positive Relevance
B South Sardinia	Population	77	67
	Climate	88	88
	Attractions	56	99
	Amenities	34	66
	Accessibility	66	44
	Human Resource	77	33
	Price	89	45
	Image	67	43

Source: Our Elaboration

Positive Relavance = 100 Standard Value – X Management Rating Issues

Tab. 4 Management Class Issues

Management Issue	Class Value
Understanding	1-50
Validating	1-40
Forfaiting	1-10

Source: Our Elaboration

Tab. 5 Valuation Effect of Management Issue

Destination Issues	% Understanding	% Validating	% Forfating
A North Sardinia	44	33	9
B South Sardinia	34	23	7

Source: Our Elaboration

This study permits to adopt multiple research methods, both qualitative and quantitative. The analysis is grounded in documents, direct observations and questionnaires. The need to investigate different aspects of the phenomenon justifies the choice of mixed methodologies (Cook & Reichardt 1979).

The research was developed into two phases.

In the first phase, only qualitative methods were utilized. Public and private management and monitoring instruments were analyzed through a review of literature, with particular attention given to their effectiveness in supporting sustainable development in tourism destinations. International and European sustainable tourism management and monitoring indicator systems for destinations were considered. In the second phase, qualitative and quantitative methods were employed and a case study approach was utilized.

The application of a specific sustainable tourism management and monitoring system for destinations was observed in the context of different case studies. The choice of this specific sustainable system was primarily determined as direct experience, observing the implementation of the program in one of the destinations selected by the international organization. Secondly, this experience allowed to develop an indirect knowledge of the other destinations involved in the program (Adams 2020). The organization selected participants on the basis of their international significance in terms of natural, cultural and social environment of the destinations and of image in the tourism market, and also of recognition of the sustainable tourism efforts in that territories.

A case study approach entails an intensive and in depth analysis of a single case. A case can be a location, a person or an organization. In particular, case study research is utilized when a case is characterized by complexity and particular nature. When more than one case study is considered, a multiple-case study approach is employed (Adelman, 2017). The utilization of more than one case

allows one to compare the findings derived from the analysis of each case. This research focused on case studies on international destinations that are currently involved in a sustainable tourism program. The destinations selected were evaluated by an internationally accredited organization according to recognized international criteria and indicators of sustainable tourism development. Data related to the destinations was collected through virtual documents and a questionnaire. The collection of data through virtual documents is a qualitative method. In contrast, a self-completion questionnaire is a typical instrument of quantitative research.

Each case study was analyzed through the general information found in virtual documents and the specific information derived from the questionnaire responses. Findings related to each destinations were systematized and compared. The comparison allowed for the realization of the final considerations. Findings derived from the two phases of the analysis in conclusion of the study were analyzed. This conducted to conclusive reflections and permitted to answer to the research questions.

Finally, the two destinations for the aim in the study were chosen solely based on their stages of involvement, development and consolidation, totaling two case study destinations.

4. Results

The research employed different methods. In the first phase of the study, literature and documents related to private and public instruments for the management of sustainable destinations were considered. Their principles, guidelines, procedures, purposed and indicator sets were examined. The conditions for use, and their weak and strong points were also identified. From the joint assessment of all the four systems, some reflections were expressed.

In the second phase, the case studies were analyzed (Gomm, Hammersley & Foster 2000). Different kinds of information were collected.

A first group of information relating to general data and the features of destinations were obtained through virtual documents found on destination's website. In this research, the website considered were all update and appeared authentic and credible. The general data used to determine the case studies includes: size of the destination, morphology, population, climate and economy. This data is consistent with the composition of a destination profile.

Data about the selected destinations were summarized considering the principal attributes of a destination, as the first highlighted: attractions, amenities, accessibility, human factors, price, and image.

Another group of information relating to the stakeholder involvement and commitment to the management of the destination, the characteristics of sustainable development, and the area life cycle stage of each destination was collected through questionnaires, developed into different sections, addressed to international organization engaged in the sustainability assessment (Battaglia 2011).

The questionnaires were self-completed and then returned by e-mail. Utilizing self-completed questionnaires that are disseminated through e-mail is a method that is cheap, quick, and simple to use, and assures the consistency of investigation techniques throughout all the case studies considered (Kothari 2004).

In this study the questionnaire is used to gather and compare information about key aspects of tourism management in the selected destinations, which have been investing in sustainable initiatives. The set of questions addressed to respondents is designed to obtain the desired information.

In the construction of the questionnaires evaluations concerning wording, measuring scale of responses, sequence of questions and layout are conducted to favor useful and meaningful results, considering their nature of self-completed questionnaires as well.

The questionnaire begins with an explanation of the object and the goals of the research (Stake 1995). The first section, dedicated to the destination life cycle information, seeks to investigate some characteristics of tourism development level and tourism impacts on the destination.

In the second section, dedicated to stakeholder involvement and interest, the level of stakeholder participation and some relevant aspects of destination governance were explored, such as the capability of stakeholders to manage the destination as a system, and the existence of a tourism plan (Stake 2013).

In the third section, focused on the level of sustainability in destinations, some significant features of sustainable development in the destinations, some significant features of sustainable development in the destination were investigated, including those relating to planning, monitoring, the reporting

instruments adopted, and the regulations and policies implemented to protect cultural and natural heritage and to combat seasonality in the destination. Closed questions are exposed in the questionnaires using horizontal or vertical format.

To show, observe and analyze the questionnaire data for the current study every question is coded through numbers (Suri 2011). Each questionnaire is processed coding the answers and, then, a destination survey data is fulfilled.

The analysis of questionnaires was performed section by section, with a joint examination of destination responses for each question. In particular, the analysis of section one aimed to ascertain the stage of tourism development in the destinations. The analysis of section two intended to investigate the hypothesis that the effectiveness of indicator systems entails a significant commitment by destination stakeholders (Alexis 2017).

The analysis of section three investigated the hypothesis that adequate indicator systems are needed for the effective management of tourism in destinations.

Data analysis is conducted considering the aspects investigated and the results are shown through diagrams, measure of central tendency, and frequency table. To investigate the third hypothesis that sustainability, governance and area life cycle are connected characteristics in destinations, the quantitative and qualitative analysis developed aimed to explore the interrelation of the findings of the three sections. The data collected about destination background was utilized to frame, and if possible, explain responses.

This classification is supported by the assessor answers: moderate to low development of tourism; partial participation of local community with some facilities provided to visitors; a clear tourism season and emerging tourism markets; high to moderate tourism impacts respectively on destination A and B; and a level of contact between tourists and the local population that can be classified as low in the Destination A, and between low and moderate in Destination B.

With reference to the stakeholder approach, it can be observed that stakeholder self-interest in the destination is considered to a great extent. There are collaborative relationship between primary

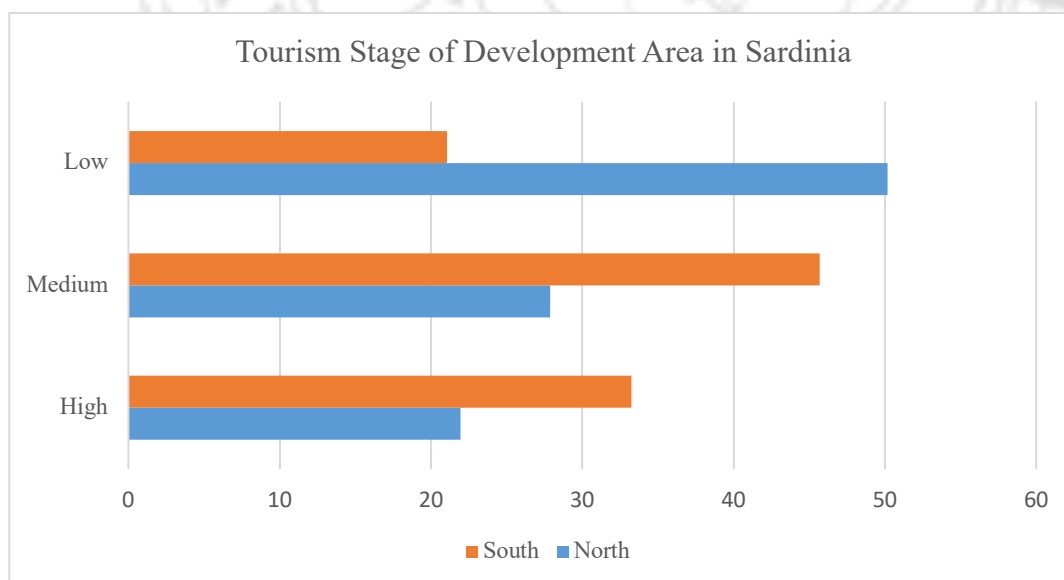
stakeholders, and many of the group of stakeholder are involved, but in destination B a higher level of collaboration is necessary, as reported in the assessor answer (DeNichilo 2020).

A governance board does exist, but considering the assessor answer, in destination B the organization was inactive at the time of the assessment and the destination itself intended to reinvigorate it . In both destination A and B, there are political efforts aiming to establish multi-year tourism plans and stakeholders responsibilities (DeNichilo 2020).

Regarding sustainability, both destinations have a solid legal and regulatory framework supporting the planning, implementation, and continuity of sustainable development practices. However destination B has not fully developed a program for enterprise awareness about changes in landscape (Andriotis 2018).

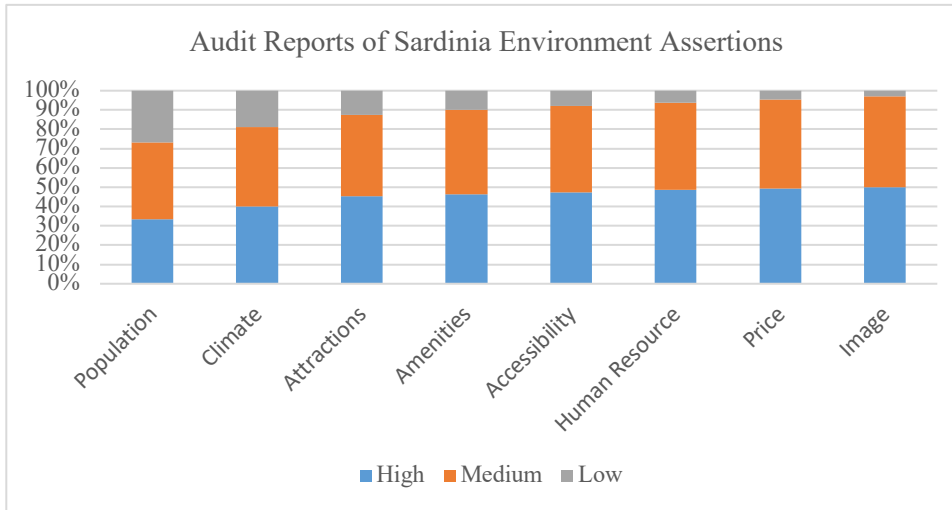
In addition, destination B lacks a multi-year sustainable tourism strategy, as will be discussed in detail. Furthermore, an improved system for monitoring tourism’s direct and indirect economic contributions is necessary. According to the assessor, destination promoting is appropriate, including promotion of destination products as well.

Graph 1. Tourism Stage of Development Area in Sardinia



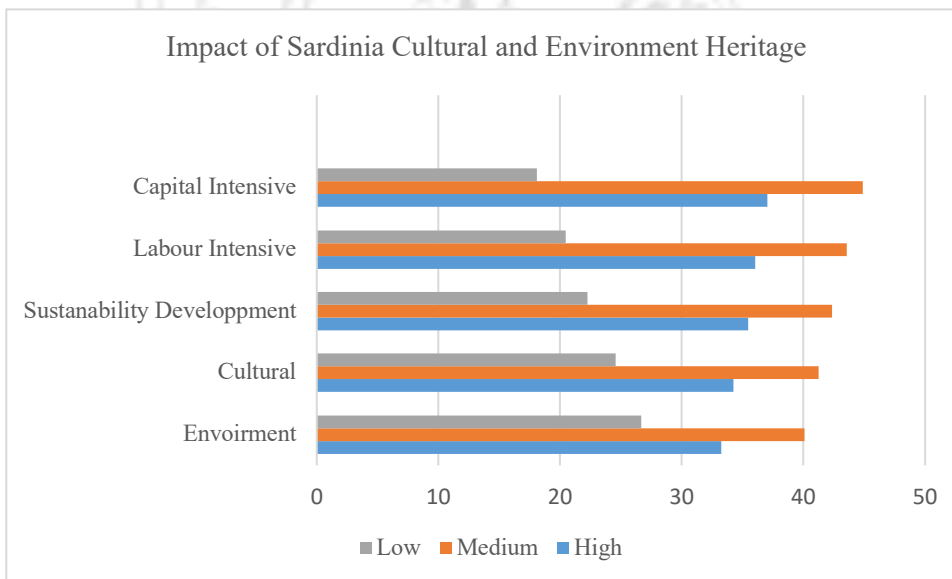
Source: Our Elaboration of Audit Reports

Graph 2. Audit Reports of Sardinia Environment Assertions



Source: Our Elaboration of Questionnaires

Graph 3. Impact of Sardinia Cultural and Environment Heritage



Source: Our Elaboration of Internal Focus

5. Conclusion and Discussion

Sustainability is the consciousness of the uniqueness of the attributes found in destinations worldwide. Sustainability also often reflect the quality of life present in destinations, existence and use of public transport and alternative transportation, cost of living, availability of services, education,

recreation parks, employment, security, access for all, governance, and healthcare facilities. Consequently the sustainability of tourism is now much broader than just environmental considerations. It is commonly considered to be comprised of the three pillars: the environment, the economy and the community. Sustainability and its basic assumption act as a philosophy that dictates the life phases of the destination. It is a way of being, culture that influences behaviors and a sum of ethical principles that inspire decision-makers.

When the risk of failure approaches the role of internal auditing, and control systems in general, it becomes more and more evident and serious (Birnberg 2000). New deals for management accounting, as academic discipline and as a professional tool, recently overcame the traditional vision of internal auditing activity, which today is also accountable to third parties. The traditional accounting discipline was settled with the aims of disclosing information on the organization, moving certainty and reliability about business contracts towards the business community. The postmodern view of management accounting discipline clarifies that the certainty of contracts in the business community is hardly believable. The best way to maintain environmental uncertainty is to smooth over the information and the requisites for the accounting of failure. Accordingly, discussions on the organizational performance should move from statements of what happened towards projections on what will happen, supporting the reliability of traditional management accounting systems with a forward-looking strategy of “as-if” planning, thus evolving risks into opportunities. When the financial performance of the organization deteriorates, some important decisions are urgently required. A sudden but effective action should change the trend and mitigate the financial pressure. Traditionally, responsibility for unsuccessful performance is attributed to the top management team by linking the roots of the crisis to unfortunate or inappropriate decisions made by executives, and to the willfully inefficient control exercised by non-executives. Appropriate designing a management accounting system and related activities may help to manage the financial pressure issues, although not every event is predictable and not every consequence of uncontrollable situational factors can be concretely mitigated.

The empirical side of this research is at evaluating the relationship between destination stakeholders commitments, sustainability, and life cycle phase through the employment of case studies. With regards to this purpose, the following section summarizes the critical points revealed in the analysis of the destination case studies. A first conclusion is related to the relationship between sustainability

and area life cycle phases (Modica 2008). The analysis emphasizes the lack of case studies involving destinations in the first and last stage of development. None of the destinations participating in the sustainable development monitoring program are experiencing the phase of exploration or stagnation. It is probable that issues of sustainability are perceived as priorities when the tourism product is already developed and can still be designed according to sustainability principles. Moreover, the empirical evidence highlighted that sustainability cannot be considered as being completely interrelated with area life cycle. Indeed, high levels of sustainability characterize all of the destination examined. The preservation of natural and cultural heritage and the improvement of social and economic welfare in destinations can be pursued and achieved at any stage of tourism development. The area life cycle significantly affects the aspects in which sustainability is reached. Destination amenities, accessibility and image are characterized differently at each stage of area life cycle. These attributes, in turn, have various impacts on sustainability at the destination level (Modica 2012). The destinations examined are not rich in infrastructure. In destination A, amenities are almost entirely absent. In destination B, services for tourist are not distributed equitably throughout the island; there are some areas with few hotels and other with a wide variety of accommodation services that can offer all levels of comfort. Both in the narrow and broad sense, accessibility level is high. In the destination at the involvement stage, sustainability is primarily based on respect for natural and cultural heritage. In general, the destinations image are recognized worldwide.

In analyzing the relationship between stakeholder commitment and level of sustainable tourism, and between stakeholders involvement and tourism destination development, different remarks can be highlighted. The active involvement of public and private destination stakeholders occurs in all the case studies, and stakeholder participation is considered a fundamental condition for sustainable tourism development (Modica 2015). The level of stakeholder commitment is not the same for all the phases of destination development. It seems to be more important in the initial stages of the development, and decreases with higher levels of the economic development. It is likely that young destination, where infrastructure and services are still insufficient, need more significant levels of involvement by private and public tourism actors to develop sustainable tourism.

As limitation and future research our study can conclude that the destination in the first stage attribute more relevance to environmental preservation and to local culture and customs conservation. The destinations in advanced stage of development are focused on customer care and economic and

social welfare of local community. In other words, the area life cycle stage does not affect the quantity but the quality of sustainability.

Finally organizational should equilibrate the instruments adopted to control uncontrollable situational factors and adequately combine objective and subjective instruments for management accounting. Excessive reliance on objective performance metrics leads to business as usual, while new opportunities are missed out on. While, in business life nowadays, there is no room for demonizing objective metrics and relying on a purely subjective approach to evaluations, which would likely be affected by hidden pitfalls and side effects, there is a general call to avoid myopic evaluations and look at performance dynamically, with a continuous approach to management accountants' role as risk mitigators, while considering risks and financial distress as facilitators for turnaround activity, which is positively centered on innovation.

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Moderating role of Organizational Culture between adoption of Agile Project Management Methodology and Project Success

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Abstract

Purpose of this research is to investigate the moderating role of organizational culture between adoption of agile project management methodology and project success, as well as impact of agile project management methodology on project success. The data for this study has been collected from Telecommunication Services Provider Industry of Pakistan. Total sample size of 197 professionals was recorded. A questionnaire was distributed among the participants via hard copy and internet survey websites. Using collected data, we tested the effect of agile project management methodology on project success and further examined the moderating effect of organizational support between agile project management methodology and project success. The examination included Pearson's correlation coefficient as well as regression using IBM SPSS Statistics Version 20. Results indicated that project management methodology has a strong correlation with project success and this correlation is not moderated by organizational support. The research findings have practical implications both in organization and project manager's perspectives. Our research was limited to specific geographic area due to time and cost constraints. Future researchers may opt to conduct the study in other geographic areas of Pakistan and different industry including additional and different moderating variables.

Keywords: Project Management Methodologies, Agile, Iterative, Project Success, Organizational Support, Telecom Industry

1. Introduction

Worldwide, There has been an intense debate to define / redefine theory of project management for complex and uncertain project situations (Koskela & Howell, 2002) argued that traditional theory of project management is outdated especially in managing uncertainty and rapidly changing project environment. Projects that are complex in nature, uncertain and time-constrained therefore traditional project management methodology can be inappropriate and potentially unfavorable (T. Williams, 2005). Companies are facing many challenges and changes in process to adopt Agile Project Management Methodology (Pace, 2019). Transformation in organizational culture is one of them. With substantial increase in research on project management methodologies and its effect on project success it was found that traditional project management methodology was not giving optimal results in certain scenarios (Dybå & Dingsøy, 2008) therefore researchers and practitioners started looking for alternative methods for project implementation. Earlier Agile Project Management methodology was developed as an alternative to Traditional Project Management methodology as it offers less risk, more visibility, increased business value, more adaptability, faster delivery and reduced costs (Canty, 2015) also Stakeholders' feedback has been given extra value in agile project management methodology which proved to be beneficial (Highsmith, 2003). Project efficiency/success is measured as performance of the project management methodology (Serrador & Pinto, 2015) against the time, cost and quality constraints (triple constraints) of the project. The direct effect of agile project management methodology on project success remain implicit and is not directly addressed in the most focused and concerted way in the available literature yet. To explore this an empirical study on effect of agile project management methodology and its effect on Project Success with moderating role of Organizational culture.

The present study adds value to theory and practice in multiple ways. First, it evaluates the direct relationship between agile project management methodology and project success. Second, it investigates the moderating role of organizational culture in the relationship between agile project management methodology and project success. By using a structural equation modeling (SEM) technique for agile project management methodology, we will test and validate that organizational culture can work together for project success. This study will be a value addition in literature and help policy makers in organizations in adopting correct project management methodology to increase project success rate.

Researchers (Bloch, Blumberg, & Laartz, 2012) found that project failure can be so disastrous for a company that it may threaten the existence of the company. These alarming situations put scholars and practitioners in search of solutions to cater the problem of project failure and to produce consistent project success. This outlines the underlying issue driving this study further research is needed to examine the relationship between successful delivery and project management methodology (Garland, 2009; Joslin & Müller, 2016; Pinto, 2014; Turner & Keegan, 2001; ul Musawir, Abd-Karim, & Mohd-Danuri, 2020).

Considerable attention have been given to agile project management methodology during the last 02 decades (Dybå & Dingsøy, 2008) researchers recommended that organizations are required to be more agile, more adaptable to changes to achieve more success (Sherehiy, Karwowski, & Layer, 2007). Historical models and studies on project management methodology were mainly focused on project governance and its role in project decision making, project success and strategy implementation (Garland, 2009; Joslin & Müller, 2016; Pinto, 2014; Turner & Keegan, 2001; ul Musawir et al., 2020). However, the effect of implementation of agile project management methodology and its effect on project success remain implicit and is not directly addressed in the most focused and concerted way in the available literature yet.

Research is fairly new in this field, several characteristics e.g. Collaboration, Modularity, Iteration, Time-Bounding, Parsimony, Adaptiveness and Incremental development (Miller, 2001) are to be associated with the Agile Project Management, Organizational culture and Project Success. We will be exploring the new avenues to test effectiveness of the agile philosophy and its relationship with project success. Though agile project management methodology is popular due to many reasons (less risk, more visibility, increased business value, more adaptability, faster delivery and reduced costs) but researchers need to explore the possibilities to make this claim valid. So far, previous research on agile project management methodology was incidental and more focused research in this area will help practitioners and researchers to add value in agile project management methodology literature and practical implementation.

(Lee & Xia, 2010) have concluded after quantitative and qualitative analysis on software development agility that there is no positive relationship between agile project management methodology and the project success. The adoption of the agile methods in any organization is not unproblematic challenges are being encountered while migrating to agile project management methodologies (Boehm & Turner, 2005; Chan & Thong, 2009; Cockburn & Highsmith, 2001) and employees behave reluctantly in accepting this transformation (Nerur, Mahapatra, & Mangalaraj, 2005). The main objective of this research is to investigate that for achieving project success adoption of agile project management methodology works better than traditional project management approaches with moderating role of organizational culture. Agile project management methodology has become a preferable approach for planning and executing projects (Pace, 2019) however there are still some issues in adoption of agile culture in organizations. The purpose of this paper is to investigate, through a quantitative study, the evidence that that for achieving higher rate of project success adoption of agile project management methodology works better than traditional project management approaches with moderating effect of organizational culture

This research sheds light on:

To determine the impact of adoption of agile project management methodology and its effect on Project Success.

To check moderating role of organizational culture between agile project management methodology and Project Success.

Following questions will be addressed in this Research paper.

To what extent does agile project management methodology influence project success?

To what extent does project management methodology influence project success and is this relationship influenced by moderating role of Organizational Culture?

2. Literature Review

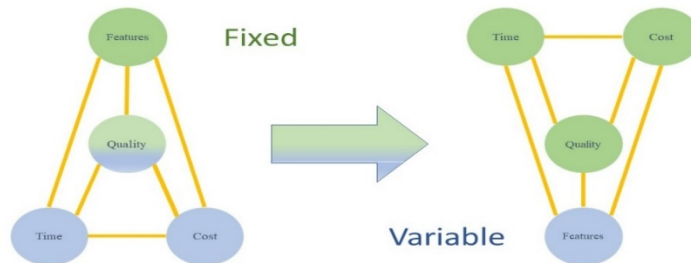
2.1. *Concept and Definitions*

With ever growing complexity of the projects, organizations seem to be more vigilant in choosing a suitable application of project management methodology (Joslin & Müller, 2016) as it plays a very critical role in making a project successful or failure. Up till now, research and the findings on project management methodologies are biased to some extent e.g., available literature is divided on whether success of the project is directly related to project methodologies or not (Lehtonen & Martinsuo, 2006). While researching the impact of project management methodologies on project success (Milosevic & Patanakul, 2005) inferred that project management methodologies, higher or singular level, may not be sufficient in concluding the effect of project management methodology on project success. To get a complete understanding and clarification of project management methodology element(s) and their inconsistent impact on project success in depth analysis and knowledge is required as some element(s) may have a greater impact on project success in collective manner than being studied alone.

2.2. *Agile Project Management Methodology*

Integration of planning and execution phase is core of agile project management methodology which allows an organization to build up a working force capable of responding to emerging requirements in an efficient manner through collaborative working and then prioritizing work packages i.e. lowest level of WBS. Although the agile techniques are set of guidelines that are performed in the software development and it is new method to achieve the project goals and to quickly perform the tasks by reducing the impact of the factors that delay the project. Meaning of term agile is comprehensible, adoption of agile project management methodology is making a paradigm shift in project management techniques by using best practices of management science (Anderson, 2004). Agile project management methodology focuses on delivering maximum value against business priorities i.e. features of the product by applying very tight discipline to "Time and Cost" and keeping iteration on review and prioritization of the features whereas in traditional project management approaches feature were considered to be fixed by the time the project is initiated.

Figure 1 What's Different about Agile?

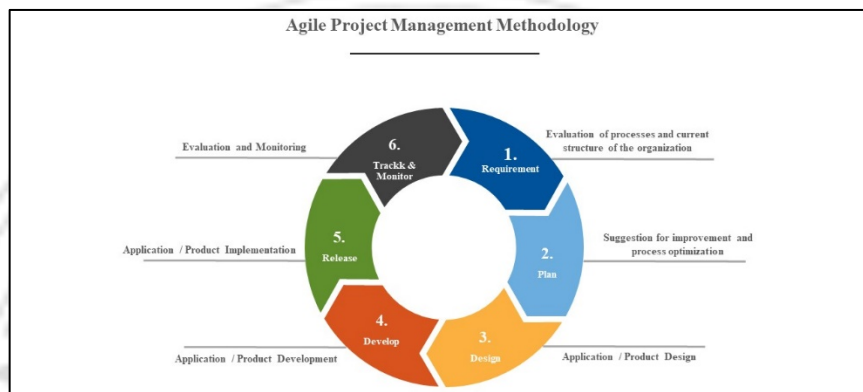


Source: Author elaboration

Whenever any organization decides to adopt agile project management methodology major change in traditional culture, mindset and sometime in project team are also required. Considering the need for smoothing the process of project planning, the iterative technique was introduced in which re-planning during the execution phase of the project was considered. Experienced project managers believe that margin should be kept in planning phase of the project considering the uncertain environment and changing business needs so that adjustments can be made at the later stages of planning as well. Agile technique therefore was required to deal with such needs of the project managers where they can modify plans in accordance with the demanding situations. In 2001, the "Agile Manifesto" was written which states that agile implementation need to cognizance on 04 values and 12 principles (Dybå & Dingsøy, 2008) which are that there should be interaction among the individuals over the technique, there should be interactions with the client and their requirements should be negotiated and lastly the plan should be changed according the responses received. Project documentation is not a top priority in the agile project management methodology like traditional project management and this is to facilitate the project managers in the dynamic environment where the plans need not to be rigid and there is a cushion so that the response can be documented by project managers when and where required. It is also to be noted that unlike traditional planning techniques, in agile more flexibility is utilized for project management. (Lindvall et al., 2002) stated that the agile strategies have turned out to be more effective because they immediately deal with the issues that are raised specially when the projects are being executed and managed in dynamic environments. Project managers from numerous organizations were interviewed to validate this and it was inferred that project managers need to modify their plans according to the changing timelines, resources, techniques etc. (Collyer, Warren, Hemsley, & Stevens, 2010). Although

agile is flexible method of project planning and changes can be later made but it is also important to note that the agile project management methodology does not ignore the planning in the earlier stage of the project. The fact is to be understood that the planning phase in agile method is not just confined to one point but is spread over the course of cycle in place of plans been made in one go.

Figure 2 Agile Project Management Methodology



Source: Author elaboration

(Serrador & Turner, 2015) analyzed 1386 projects and found an inverted-U relationship between agile project planning and success of the project, in terms of planning time. By this study, they observed that if much amount of time is given to the planning it will have a negative impact on the project success, and vice versa. (Mann & Maurer, 2005) explained that thorough iterative planning technique in agile project management methodology success rate of the projects can be increased. With ever growing popularity of agile project management methodology one limitation of agile project management methodology was also under observation of researchers and it was concluded that agile technique can't be applied on mega-scale projects however in small-scale projects it is considered to be most effective and followed technique (Paasivaara, Lassenius, Heikkilä, Dikert, & Engblom, 2013). Most of this analysis is based on narratives and smaller number of samples were studied. An example can be quoted to explain this, 48 respondents were interviewed from 08 groups to study the variation among organizations that have adopted the agile techniques of project planning and organization that have not yet adopted the agile planning technique. It was noted that the project success in terms of completing the project withing budget and time was similar in both agile and non-agile organizations (Feldt & Magazinius, 2010) it was also concluded that although planning strategies have progressed through the years, there are other elements too which are

to be associated with the non-compliance of project goals. The consequences of such research have confused organizations for the adoption of agile planning technique.

2.3. Project Success

To have a holistic view and to obtain a learning opportunity for future project, Scope, Schedule, Cost, Team Satisfaction, Customer Satisfaction and Quality are the main objective and subjective criteria which are considered to measure the true effectiveness of the project. Project success could also be summarized by comprehensive assessment of external factors starting from Initiation, Planning, Execution, Monitoring and Control to the Closing phase. For a project to be successful there must be acknowledgement of the role of project management within project.

Adopting a relevant and efficient project management methodology is very vital for achieving project success. Many researchers have tried to make a consensus on notion of project success and believed that the conventional / traditional project management methodologies were mainly focused on triple constraints of PMI i.e. time, scope and cost and producing a quality project (Parker, Parsons, & Isharyanto, 2015; P. Williams, Ashill, Naumann, & Jackson, 2015). There are 10 dimensions of success of project described by (Müller & Turner, 2007) while they were contributing to the research and have great collection of study on the capabilities of the project managers. (Kloppenborg, Manolis, & Tesch, 2009) restated similar concept that project success is linked with the traditionally used triple constraints where all these collectively contribute as the necessary elements of the project success. A vast correlation among efficiency of project and success of the project was found by (Serrador & Turner, 2015) they argued the efficiency is not alone measurement scale for project success, but it also can't be overlooked while (Pinto, 2014) focused on satisfaction of stakeholder expectations. The use of right project management methodology to deliver unique results does involve financial investment for organizations (Fisher, 2011). Project success is now being measured through the lens of organizational achievement instead of meeting the constraints.

2.4. Organizational Culture

Culture is the environment we live in. Organizational culture is a system of the shared values, beliefs, ideologies, principles, attitudes and the set of assumptions (McLaughlin, 2013) also unwritten rules that have been developed over time and are

considered to be integral part of social and psychological environment of an organization. These rules and values are required to be abided by the employees. These values, beliefs, ideologies, principles, attitudes and the set of assumptions have a strong influence on the employees in the organization and outside the organization (Iivari & Iivari, 2011). According to the previous research (Iivari & Huisman, 2007) organizational culture is based on vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits of the organization. The model presented by (Quinn, 1984; Quinn & Rohrbaugh, 1983) was mainly focused on values as core constituents of organizational culture. Organizational culture has been associated with different opinions (Smircich, 1983) presented a framework in which system development depends upon organizational culture. (Cameron & Quinn, 2011) explained that there are 04 types of organizational cultures: Clan (family-like), Adhocracy (dynamic and entrepreneurial), Market (results oriented), and Hierarchy (structured and controlled). Organizational culture, more particularly, influence employees' insights of the work environment and their behaviors and creates a relatively more homogeneous working environment among employees which directly impacts organizational progress and functioning (Borucki & Burke, 1999). Specific research has also been done on the relationship between agile project management methodology adoption and organizational culture (Siakas & Siakas, 2007; Strode, Huff, & Tretiakov, 2009; Tolfo & Wazlawick, 2008) and its effects (Robinson & Sharp, 2005) which clearly depicts a strong impact of organizational culture on transforming behaviors of employees. Different studies identified and recommended certain characteristics to achieve the compatibility with agile project management methodology. Few researchers argued hard to change the entire culture of the organization (Tolfo & Wazlawick, 2008; Tolfo, Wazlawick, Ferreira, & Forcellini, 2011) though it's quite difficult.

2.5. Agile Project Management Methodology and Project Success

Research on the project success and project management has been carried out for more than 03 decades but in the recent times adoption of agile project management methodology has shown a significant improvement in statistics of project success and it is dominating other project management methodologies (Stankovic, Nikolic, Djordjevic, & Cao, 2013). After thoroughly analyzing the data available from previous researchers (Sheffield & Lemétayer, 2013) concluded that culture of the organization is the key aspect of the project success. Agile project management methodology has evolved substantially to respond to the modifications that were required during the course of the project. This paradigm shift from conventional project management methodology like Waterfall to Agile project management methodology was not only limited to software-based industries (Serrador & Pinto, 2015) due to the facts that it is different and efficient in project results. Agile project management methodology emphasis on communication with all the stakeholders at each level of the planning to cater the ongoing changes which make agile project management methodology the best iterative technique in project management. Organizations should be extra cautious in understanding agile project management

methodology before adoption (Nerur et al., 2005). Agile project management methodology is not only limited to software industry. Traditional project management methodology is outdated, complicated in nature and becoming obsolete with time. (Conforto, Salum, Amaral, Da Silva, & De Almeida, 2014) said that opportunities must be created within the organizations / industries to implement agile project management methodology for achieving project success. Many researchers have denied the fact that project success is related to agile project management methodology adoption as not much difference was observed between the companies that are using agile project management methodology and the companies which use conventional / traditional project management methodology. Seasoned Project Managers and (Magazinius & Feldt, 2011) concluded that project success is not only a factor to measure relation between project management methodology adoption and project success. A distinction of opinion has been highlighted within available literature and therefore aim of this paper is to examine through quantitative analysis the relation between the adoption of agile project management methodology and success of the project.

2.6. Moderating role of Organizational Culture between Agile Project Management Methodology and Project Success

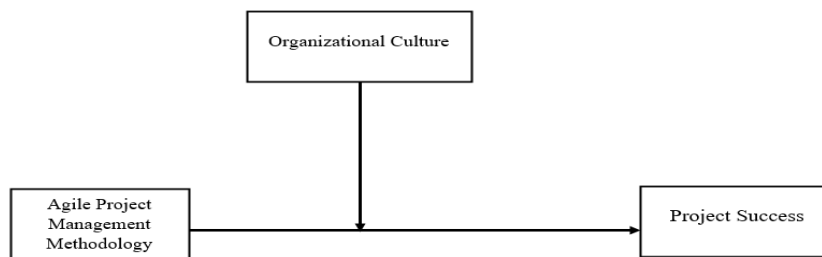
It is not easy to change the culture of any organization overnight and if project success is intended then agile project management methodology should be blended with traditional project management technique (Boehm, 2002). Transformation in organizational culture is essential for agile project management methodology adoption (Pace, 2019) as there are many challenges and changes to overcome during this process. Researchers also recommended that organizations and enterprises need to be more responsive to change to achieve higher project success rate (Sherehiy et al., 2007). Project Management Institute (PMI) in their annual global survey of project, program and portfolio track and publish the major trends in project management and in edition of 2017 PMI mentioned that ‘organizational culture sets the tone that change the work-life experiences of employees which ultimately translated in to Organizational and Project Success’. Previous researchers (Cameron & Quinn, 2011) examined the 04 types of organizational cultures and how it contributes to projects success and summarized that Clan orientation culture (family-like) had the strongest association with project success and organizational culture. Agile method strongly advocates that organizational culture has an effect on the extent to which an agile method

is used and for effective and efficient creation of project management culture, organizations must understand the benefits it can bring along with.

2.7. Summary of Literature

Hypothesis and conceptual framework for this research study listed as:

Figure 3 Theoretical Model underlying empirical research



Source: Author elaboration

H₁: Agile Project Management Methodology is positively and significantly associated with Project Success.

H₂: Organizational Culture moderates the relationship between Agile Project Management Methodology and Project Success.

3. Method

Research was carried out to find how the impact of Agile Project Management methodology relates with the Project Success with moderating role of Organizational culture. Questionnaire was developed on the basis of previously established questions available in literature. The survey questionnaire contained two (02) sections, including demographic information while the other part comprised of questions related to variables under investigation. We have used three (03) variables naming Agile Project Management Methodology (APM), Organizational Culture (OC) and Project Success (PS) these variables were measured using 5-point Likert Scale that ranges from 01 (strongly agreed) to 05 (strongly disagreed). Seven (07) Questions for variable APM were adopted from research work of (Lu & Ramamurthy, 2011), Twelve (12) Questions related to OC were taken from research work of (Iivari & Iivari, 2011) and four (04) Questions for variable PS were adopted from research work of (Aga, 2016).

Main reason for adopting the questionnaire owes to its appropriateness in measuring adoption of agile project management methodology, organizational culture and project success. All the variables and measurement items are mentioned in Appendix - A

3.1. Research design and data collection

Data collection for this research study has been conducted through “Questionnaire” technique. The population selected for this study was Telecommunication Services Provider Industry of Pakistan. The use of simple random sample selection allows researchers to determine the appropriate sample size of participants, which can be generalized to a larger population (Trochim, 2006). The sampling frame consisted of individuals and non-probability sampling technique was adopted, based on their willingness to participate. Initially questionnaire was distributed to the employees working in different telecommunication services providing organization operating in Pakistan which includes Huawei, Jazz, PTCL, Telenor, Ufone, Zong and ZTE. Respondents were selected randomly and there were no specific numbers for any organization, role, gender etc. The study was performed from February to May 2020. Initially fifty (50) questionnaires were distributed with 41 returned out of which 38 were valid questionnaires in second phase of data collection due to COVID-19 pandemic it was not possible to collect the response through visits and meetings. Therefore, researcher utilized ‘SurveyMonkey’ and ‘Google Forms’ to deliver the questionnaire and 159 responses were recorded via internet which makes the total to 197 responses.

3.2. Data Analysis

Detailed analysis of the collected survey responses was performed via Statistical Package for the Social Sciences (SPSS). The data was confirmed to have no missing values which might prevent accurate analysis. The results of Skewness and Kurtosis with respect to each variable independently shows that all the values are well within range. The reliability of every variable scale used was tested through Cronbach's Alpha (α) calculation and all the values of Cronbach's α were greater than 0.7, which confirms that the questionnaire has a very good reliability.

Table 1 Results of reliability

Reliability Statistics		
Variable Name	Cronbach's Alpha α	Number of Items
Agile Project Management Methodology (APM)	0.872	7
Organizational Culture (OC)	0.843	12
Project Success (PS)	0.893	4

Source: Author elaboration

Data preparation for factor analysis was done using Kaiser-Meyer-Olkin (KMO) and Bartlett's tests. KMO measure of sampling adequacy value is greater than 0.4 that indicates that sample is adequate. Bartlett's Test of Sphericity significance level is less than 0.05 which indicates that factor loading analysis is suitable for the data.

Table 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	.837
Bartlett's Test of Sphericity (Sig.)	.000

Source: Author elaboration

4. Result

Research survey questionnaire also includes demographic scale such as the Gender, Age, Qualifications and Experience of the respondents. 66% respondent were male, 72% respondent holding Project Management Experience, 79% respondent have experience between 8 to 11 years, and 95% respondent working on Projects. Descriptive analysis shows that variables distributions proved to be normal, Skewness and Kurtosis with respect to each variable independently shows that the values are well within range. In our factor analysis any value less than 0.70 have been be dropped in order to have acceptable results overall. Therefore, values against APM6, APM7, OC5, OC8, OC10 and OC12 were dropped in further analysis.

4.1. Variable Relationship

Correlation tells the intensity of the relationship between all the variables under discussion Pearson. Correlation analysis was conducted for this research work which shows that the relationship between APM and OC is very weak and not significant (+0.080), relationship between APM and PS is very strong and significant (+0.733) and relationship between OC and PS is weak but significant (+0.010).

Table 3 Correlation between Variables

		APM	OC	PS
Agile Project Management Methodology (APM)	Pearson Correlation	1		
	Sig. (2-tailed)			
	N			
Organizational Culture (OC)	Pearson Correlation	.080	1	
	Sig. (2-tailed)	.262		
	N	197	109	
Project Success (PS)	Pearson Correlation	.733**	.184**	1
	Sig. (2-tailed)	.000	.010	
	N	197	197	

** Correlation is significant at the 0.01 level (2-tailed).

Source: Author Elaboration

4.2. Linear Regression

In our study Linear Regression analysis shows Adjusted R Square value 0.535 that shows independent variable Agile Project Management Methodology (APM) will bring 53.5% change in dependent variable Project Success (PS). To calculate variable moderation effect, direct & indirect effects and conditional effects of Moderator Variable i.e. Organizational Culture (OC) researchers' used Model Number-1 of Preacher and Hayes with bootstrap (n = 1000, 95% CI) using SPSS

Path	R-Sq.	Adjusted R Sq.	Beta Value	T Value	P Value
APM → PS	.537	.535	.733	15.037	.000

Model Summary

From the results we can clearly observe that model is significant. Moderator (OC) have significant positive effect on Project Success as p-Value < 0.05. Results shows that with addition of Organization Culture support Project Success is enhanced.

R	R-Sq.	MSE	F	df-1	df-2	p Value
.745	.555	6.457	88.810	3.000	193.0	.000

Model Details

	coeff	se	t	p	LLCI	ULCI
constant	14.839	0.183	80.903	0	14.478	15.201
OC	0.105	0.042	2.513	0.013	0.023	0.187
APM	0.794	0.05	15.938	0	0.696	0.893
int 1	-0.013	0.015	-0.853	0.395	-0.043	0.017

Agile project management methodology is showing significant positive effect on project success as p-Value < 0.05 and effect of agile project management methodology (79.4%) is much higher than Organizational Culture (10.5%). In interaction-1 (int_1) it is visible that confidence interval i.e. LLCI and ULCI values range from -.043 to .017 and it contains value 0 in its range which depicts that in our moderation interaction is not significance. Further it is interesting to note here that interaction have a negative effect (-.013) and with p-Value (0.395) > 0.05 means it is statistically insignificant relationship.

Table 7 Conditional effect of X on Y at values of the moderator(s)

Level	OC	Effect	se	t	p	LLCI	ULCI
Low	-4.866	0.857	0.091	9.44	0	0.678	1.036
Medium	0	0.794	0.05	15.938	0	0.696	0.893
High	4.866	0.732	0.087	8.421	0	0.56	0.903

*Values for quantitative moderators are the mean and plus/minus one SD from mean.

*Values for dichotomous moderators are the two values of the moderator.

Source: Author elaboration

Moderator value(s) defining Johnson-Neyman significance region(s)

Table 8 Johnson-Neyman Conditional effect of X on Y at values of the moderator(s)

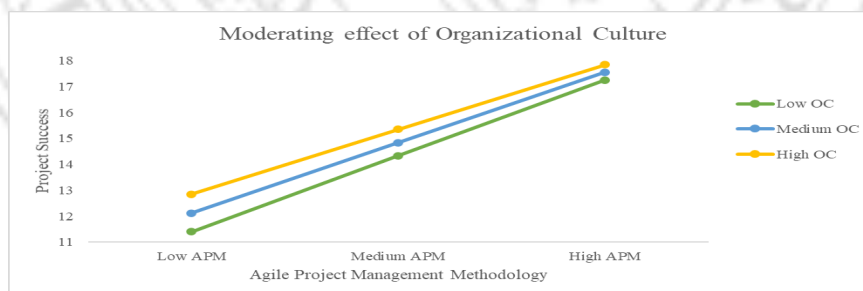
OC	Effect	se	t	p	LLCI	ULCI
-7.191	0.824	0.162	5.074	0.000	0.502	1.146
-6.227	0.791	0.142	5.552	0.000	0.509	1.074
-5.263	0.758	0.123	6.152	0.000	0.514	1.002
-4.298	0.725	0.105	6.904	0.000	0.516	0.933
-3.334	0.691	0.088	7.816	0.000	0.516	0.867
-2.37	0.658	0.075	8.795	0.000	0.51	0.806
-1.406	0.625	0.066	9.483	0.000	0.494	0.755

OC	Effect	se	t	p	LLCI	ULCI
-0.441	0.591	0.064	9.293	0.000	0.465	0.718
0.523	0.558	0.069	8.117	0.000	0.422	0.695
1.487	0.525	0.08	6.575	0.000	0.367	0.683
2.452	0.492	0.095	5.186	0.000	0.304	0.68
3.416	0.458	0.112	4.089	0.000	0.236	0.681
4.38	0.425	0.131	3.25	0.002	0.166	0.685
5.344	0.392	0.15	2.605	0.011	0.094	0.69
6.309	0.359	0.171	2.102	0.038	0.02	0.697
6.574	0.349	0.176	1.983	0.05	0.000	0.699
7.273	0.325	0.191	1.701	0.092	-0.054	0.704
8.237	0.292	0.212	1.377	0.171	-0.128	0.713
9.202	0.259	0.233	1.11	0.27	-0.204	0.721
10.166	0.226	0.254	0.887	0.377	-0.279	0.73
11.13	0.192	0.276	0.697	0.487	-0.354	0.739
12.094	0.159	0.297	0.535	0.594	-0.43	0.748

Source: Author elaboration

Further Johnson-Neyman Conditional effect of X on Y at different values of the moderator was studied which shows that up to a certain level Moderator (OC) helps in creating a positive effect of IV (APM) on DV (PS) beyond that effect becomes insignificant i.e. p-value > 0.05

Figure 4 Moderating effect of Organizational Culture



Source: Author elaboration

Hence, we can conclude that OC has insignificant moderator effect on relationship APM and PS. Whereas, Conditional effect of X on Y at different levels of the moderator (Low, Medium and High Level) depicts that when the value of Moderator (OC) is increased value of effect of IV (APM) on DV (PS) tends to decrease.

Results of Hypothesis

The results of hypothesis after detailed analysis is mentioned in Table 9
Table 9 Result of Hypothesis

Sr. No.	Hypothesis	Result
1	Agile Project Management Methodology is positively and significantly associated with Project Success.	Supported
2	Organizational Culture moderates the relationship between Agile Project Management Methodology and Project Success.	Not Supported

Source: Author elaboration

5. Discussion

The relationship between Project Success and Agile Project Management Methodology is a noteworthy issue. Reasons for this are the profusion of the concept of organizational culture, popularity of agile methodology for project planning and execution, ambiguity of the concept of agility in the context of project management and the variety of ways the two variables may be related with each other. While the theories that support agile project management methodology adoption are attractive and logical what has been missing is empirical validation. Projects with Agile Project Management Methodology are more likely to succeed than the one that relies on traditional approaches ?

Our findings suggest that there is research support for the application of agile project management methodology in achieving higher project success rate. This study described whether and how agile project management methodology effects the project success through a comprehensive and empirical analysis of Telecommunication Services Provider Industry of Pakistan. Study also discussed that with varying levels of agile approaches Project Success factor can be increased. Our findings offer limited support for previous research work by (Budzier & Flyvbjerg, 2013) in which the relationship between agile project management methodology and project success was explored in data set of IT projects and they found that agile project management methodology appears to improve project delivery times but no evidence was found that agile project management methodology have positive impact on other success factors. An insignificant moderator effect of organizational culture was observed between agile project management methodology and project success, through the bootstrapping results. There is also additional empirical

evidence resulted out of this study to support the fact that organizations and enterprises need to be more agile, more responsive to changes to achieve more success (Sherehiy et al., 2007).

6. Conclusion

Aim of this study was to explore the direct effect of agile project management methodology on project success and what are the indirect effect of agile project management methodology on project success via organizational culture. There was positive relationship witnessed between agile project management methodology on project success. On the other hand, the proposed moderator organizational culture has insignificant effect on relationship between agile project management methodology and project success. It is interesting to note that our original regression analysis showed statistical significance but low values for percentage of variance explained (R^2). It is witnessed that up to a certain level moderator helps in creating a positive effect of IV on DV after which if level of organizational culture is increased the effect of agile project management methodology on project success becomes insignificant.

6.1. Theoretical and Practical Implications

This study has enabled us to understand the concept of agile project management methodology, organizational culture and how these variables effects project success via their relationship as described in theoretical framework. We have examined the linking of agile project management methodology and project success through Telecommunication Professionals sample. First, agile project management methodology has been studied with regards to the project success perspective and then addition of proposed moderator organizational culture. This study is an addition to literature of agile project management methodology and provides a guideline to the policy makers in organizations that are striving to maximize project success and are not very clear about the adoption of effective and efficient project management methodology. We have also found that the theoretical model got the practical implications, both for the managers and organization involved in project. This study can be referred to adopt these changes establishing relationships between agile project management methodology, project success and organizational culture.

6.2. Limitation and Future Work

Although our findings offered some intriguing perspectives on the adoption of agile project management methodology and its direct impact on project success, there were also some limitations to the study that need to be acknowledged. First, ‘non-response’ errors in survey questionnaire i.e. the participants fail to understand and respond to particular questions in its true essence and ‘response error’ survey questionnaire i.e. where the participant does not give an accurate response or gives an incomplete response (Cooper & Schindler, 2001). Secondly, limitation of this research was an examination of the impact of underlying factors of organizational cultural behaviors (shared values, beliefs, ideologies, principles, attitudes etc.) on the relationship between agile project management methodology and project success. Although Agile has been used for project planning for several years now, to our knowledge, this research report is one of the first empirical studies on adoption of the of Agile methods for project success in Telecommunication sector of Pakistan. Future researchers should examine underlying factors of organizational culture and establish their relationship with project success, as measured by multiple perspectives (efficiency, stakeholder satisfaction etc.) and using different flavors of agile project management methodology (Agile Scrum Methodology, Lean Software Development, Kanban, Extreme Programming etc.)

Conflict of Interest

There is no conflict of interest

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Appendix A

Measurements for Agile Project Management Methodology (APM), Organizational Culture (OC) and Project Success (PS)

Variable Name	Measurement Question
Agile Project Management Methodology (APM)	<p>APM-1: We are quick to make and implement appropriate decisions in the face of market/customer-changes.</p> <p>APM-2: We constantly look for ways to reinvent/reengineer our organization to better serve our market place.</p> <p>APM-3: We utilize our skills better in agile practice.</p> <p>APM-4: We fulfill demands for rapid-response, special requests of our customers whenever such demands arise; our customers have confidence in our ability.</p> <p>APM-5: We can quickly scale up or scale down our production/service levels to support fluctuations in demand from the market.</p> <p>APM-6: Where necessary, members of this team try to simplify existing code without changing its functionality.</p> <p>APM-7: Whenever there is a disruption in supply from our suppliers we can quickly make necessary alternative arrangements and internal adjustments.</p>
Organizational Culture (OC)	<p>OC-1: The organization values feedback and learning.</p> <p>OC-2: Social interaction in the organization is trustful, collaborative, and competent.</p> <p>OC-3: The organization values teamwork.</p> <p>OC-4: The organization is flexible and participative and encourages social interaction.</p> <p>OC-5: The project manager acts as a facilitator.</p> <p>OC-6: The organization enables empowerment of people.</p> <p>OC-7: The management style is that of leadership and collaboration.</p> <p>OC-8: The organization values face-to-face communication.</p> <p>OC-9: Communication in the organization is informal.</p> <p>OC-10: The organization is results oriented.</p> <p>OC-11: The leadership in this organization is entrepreneurial, innovative, and risk taking.</p> <p>OC-12: The organization is based on loyalty and mutual trust and commitment.</p>
Project Success (PS)	<p>PS-1: The project was completed on time when agile methodology was followed.</p> <p>PS-2: The project was completed according to the budget allocated in agile practice.</p> <p>PS-3: Agile Project specifications were met by the time of handover to the target beneficiaries.</p> <p>PS-4: Given the problem for which it was developed in agile environment, the project seems to do the best job of solving that problem.</p>

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Barangay Governance in Northeast of Catanduanes, Philippines: Basis for Catanduanes State University Panganiban Campus Extension Program

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ABSTRACT

Governance is an act or a process of governing with power and performing the duties and functions within one's jurisdiction. Barangay governance gives an important role in setting direction to the people in the barangay level. It is an empowerment of the local government units in the country where this present study is interested. This quantitative-qualitative research study intended to look into the Barangay Governance Capabilities among Barangay Captains in Northeast of Catanduanes, Philippines as basis for Catanduanes State University Panganiban Campus Extension Program. The data gathered through the questionnaire and interview guide concluded that the Respondent-Barangay Officials in Northeast of Catanduanes are in the Middle Age, Male, College Level in Educational Attainment, Barangay Council Members and a neophyte in barangay governance having served for three years and below as barangay officials. The indicators of governance revealed that Barangay Captains are more equipped with Barangay Fiscal Administration than in Legislative and Judicial functions. The unstructured interview about the problems regarding the governance capabilities of barangay captains reveals the incompetence of the Barangay Captains, the non-cooperation of the residents or the constituents themselves, and the non-cooperative Barangay Kagawad that genuinely affects the capability of the Barangay

Captain. Given the situation, the study recommends that barangay officials, particularly the barangay captains, are enjoined to attend Barangay Governance Capability training seminar. Intensive monitoring and assessment of their barangay performance should be done regularly. A proposed training package will be carried out where all Catanduanes State University Panganiban Campus Faculty-Extensionists will be involved.

Keywords: barangay governance competency; barangay officials; Local governance; local government code of 1991

1. Introduction

In the broadest sense, governance is an act governing with power and exercise of authority within one's jurisdiction (Boysillo 2017; Aquino et al. 2017). Governance is a process of administering with authoritative direction or control (Boysillo 2017). It is also a leader's continuous exercise of authority and performs functions as a Government unit.

In a specific sense, Barangay governance sets directions to the people in the barangay level. It is empowering Local Government Units (LGUs), particularly in the barangay level, where this present study is focused. In the Philippine setting, the barangay is the least political and yet significant political figure in the community (Flores 2019). It is more inclusive and participatory rather than exclusive barangay governance (Shore 2011).

One introduced a connection with the concept of good governance and decentralization in the light of connected thoughts and theories. The idea of 'governance' to 'good governance' to 'local government' is based on the socio-economic and the socio-political context (Nadeem 2016). Another author concludes the concept of networked governance that promotes democratization while establishing allied power (Porio 2012).

In the same manner, The Commission on Higher Education Memorandum Order No. 52, series of 2016 states that the Philippine higher education institutions are mandated to engage in Extension programs to allow faculty members discover practical, evidence, and science-based answers that can address real-world social, cost-effective, and environmental challenges of partner communities.

The concepts of governance at the barangay level and community outreach programs of higher education institutions both required partnerships and, therefore, this research is abstracted.

The product of this research will be used as a basis for the Catanduanes State University Panganiban Campus (CatSU PC) Extension Program activities and rerouting its priorities. Community outreach programs are a way to express a deep sense of responsibility of the faculty members in Higher Education Institutions (HEIs). The faculty members are more knowledgeable and highly skilled than those in the community sectors. Through the extension program activities, they are not only delivering academic matters but also performing community service (Rubio et al. 2016). Thus, the present study is significant.

The study identified the Barangay Governance in Northeast of Catanduanes, Philippines as the basis for CatSU PC Extension Program. This research specifically presented the Respondent-Barangay Officials profile in Northeast of Catanduanes in terms of Age; Sex; Educational Attainment; Position in the Barangay and Number of Years as Barangay Official. It determined the Respondent-Barangay Officials' perception in Northeast of Catanduanes regarding their Barangay Captain's Governance Capabilities in terms of Legislation; program/project implementation; barangay justice system; barangay fiscal administration. It further ascertained the problems do the Respondent-Barangay Officials considered that affect the barangay governance capabilities of the Barangay Captain; and the significant difference in the Summary Responses of the Respondent-Barangay Officials in Northeast of Catanduanes regarding their Barangay Captain's Governance Capabilities in terms of their Position in the Barangay. Based on the findings, a three-year extension program can be proposed to enhance barangay governance capabilities among Barangay Captains in Northeast of Catanduanes.

2. Literature Review

The legislation of the Philippine Republic Act (RA) 7160, which recognized as the Local Government Code (LGC) of 1991, transformed many of the laws and regulations governing national down to barangay units by decentralizing many of the tasks previously performed by the central government. The Philippines has a comprehensive decentralization in governance. That includes a high amount of discretion among barangay officials leading to ineffectiveness in local management (Yilmaz & Venugopal 2013). The inability to deliver better essential services in the barangay is also evident (Layug et al. 2010). The barangay units perform as the principal authority in developing and implementing government guidelines, plans, programs, projects, and activities. However, to fulfill the barangays' mandates confined in the LGC, the Punong Barangays must be prepared with the necessary capabilities. They should observe not only the orders but also practice morally upright actions. One argued that competency measures of the local barangay officials are monitored rarely (Caldo 2015). In some cases, it is evaluated subjectively through intuitions and their impressions and feeling to the barangay officials, and therefore this process is not helpful to the elected barangay officials. At the same time, Capuno (2005) said to formalize simple yet realistic citizen-feedback systems to let clients express their agreement or disagreement with barangay officials' quality of service without fear and with the guarantee to address the issues of concern. The self-assessed survey tool for barangay officials suggests identifying performance gaps. That includes administration, social services, economic development, and environmental management. The issues posed in the present study may awaken awareness and commitment to perform duties and functions expected to the barangay officials (Medina-Guce et al. 2018). Their political ideals and governing procedures is a significant indication of active local community building (Nalbandian et al. (2013).

The community development depends on the capability of leaders at the national level and, more particularly, on LGU to the lowest political unit of governance, which is the barangay. It is then essential that we look at the barangay level's leadership aspect through the barangay captains. The

formulation of an intervention mechanism reveals a significant concern for good governance (Nalbandian et al. 2013).

There also suggests creating additional funding in barangays considering minimal budget allotment (Medina-Guce et al. 2018) that may help the kind of governance and performance of the barangay officials' duties. The study on the development of barangay legislators' leadership scale in Davao City determined that to become a good leader, one should set directions on good and personal qualities and primary values (Padilla & Eguia 2010).

Further, studies revealed that the punong barangays have a satisfactory performance level in implementation, legislation, peacekeeping, planning, and fiscal management (Noble-Nur 2018) and "very competent" in barangay governance. Nevertheless, the respondents identified the community residents' lack of planning and decision-making as one of the significant problems that affected Good Governance (Noble-Nur 2018).

Another study on Barangay Governance concluded that the majority of the Barangay Chairpersons deliver very satisfactory public services in their barangays, which indicated that governance core values are being fair, transparent, and accountable (Boysillo 2017). One proposed that the local officials stay self-reflective or aware of their accountabilities in the barangay to maintain barangay governance (Nalbandian et al. 2013) to provide vital services and increase the excellence of their capability to render community services (Flores 2019).

The different contentions of the authors mentioned guided the discussion of the present study. Yet, they are challenged further to increase their impact on other local and international academic communities through information dissemination for an effective research output.

3. Theoretical Framework

This present study anchor on constructivism theory and human capital theory to further discuss barangay governance. Constructivism is a knowledge theory that originated in the field of psychology, explaining how individuals obtain knowledge and learn from it. It involves a

participatory process, contemplation, deliberation, collaboration as a way of discoveries, and learning (Yoders 2014). The theory indicates that individuals build knowledge and their meaning based on experiences. While Human capital theory implies that people compensate human capital ventures through excellence in intelligence and skills of the labor force. Productivity enhancement among the labor force serves as an essential part of economic development (Zeynalli 2020).

The lack of skilled human resources is one of the main obstacles for the Social entrepreneurs' development yet they could create positive social impact to ensure profit despite the lack of managerial skills (Urmanaviciene & Arachchi 2020)

With the given context, constructivism theory; and human capital theory harmonizes with the problems posed by the present paper since the Respondents-Barangay-Officials are considered human capital who are always learning through their experiences and enhances their Barangay Governance Capabilities.

4. Methods

4.1 Nature of Research

This study used a quantitative-qualitative type of research intended to look into the Barangay Governance Capabilities among Barangay Captains in Northeast of Catanduanes, Philippines. This investigation is quantitative since it collects, analyzes, and interprets the present phenomena while qualitative because it collects and reports data that differs from traditional-quantitative methods. This study is also a descriptive type of research since it describes the honest responses of the respondent-barangay officials about barangay governance indicated in the questionnaire that depended much on the correctness of the gathered data.

4.2 Research

The Northeast of the island province comprises the Municipalities of Bagamanoc, Panganiban, and Viga in Catanduanes, Philippines. It is roughly 63 kilometers away from the Municipality of Virac, Catanduanes that is considered as the principal town or city-to-be of the province.

4.3 Sampling Design

The word 'population' refers to an assembly of people, events, or things of interest that the researcher wants to examine or investigate. In the present study, this considers the Barangay Officials of the Northeast of Catanduanes. Moreover, it is presented in table 1 the 73 Respondent-Barangay Officials from Bagamanoc; 82 Respondents from Panganiban; and 118 Respondent-Barangay Officials from Viga, Catanduanes. There are 273 Respondent-barangay Officials from the Northeast of Catanduanes, or 38.61% participation.

Table 1. Population of the Study

Municipality/Number of Barangays	Position in the Barangay	Population	Sample Size	Participation Percentage
Bagamanoc (18)	Barangay Captain	18	15	83.33
	Barangay Council Member	126	30	23.81
	Barangay Secretary	18	15	83.33
	Barangay Treasurer	18	13	72.22
Panganiban (23)	Barangay Captain	23	15	65.22
	Barangay Council Member	161	36	22.36
	Barangay Secretary	23	16	69.57
	Barangay Treasurer	23	15	65.22
Viga (31)	Barangay Captain	31	21	67.74
	Barangay Council Member	217	54	24.88
	Barangay Secretary	31	22	70.97
	Barangay Treasurer	31	21	67.74
TOTAL		707	273	38.61

Source: Developed by the author

There were two sampling techniques used in the study; the quota sampling and complete enumeration. The Quota Sampling was applied to identify the Barangay Councilor's sample size, while for the Barangay Captain, Barangay Secretary, and Barangay Treasurer, a complete enumeration, was used since there are only one of them for each of the barangay. The quota sampling is considered a non-probability method that aims to make the sample representative of the population by setting and filling quota control. This researcher found the most appropriate procedure in determining the respondent-barangay councilor in the barangays of the three Municipalities of the Northeast of Catanduanes.

4.4 Survey Instrument

The study's primary instrument is a set of researcher-made questionnaires formulated to gather data to answer the research questions posed in this inquiry. The Part-I of the Questionnaire is the Profile of the Respondents that includes the name of the Respondent-Barangay Officials, the Barangay; Age; Sex; Educational Attainment; Position in the Barangay; and the Number of Years as Barangay The official that includes their previous term/s). The Part-II of the Questionnaire are the 16-item Barangay Governance Indicators categorized into Legislation; Program/Project Implementation; Barangay Justice System; and Barangay Fiscal Administration. The study used the Five-Point Likert Scale in determining the barangay governance capabilities are ranging from fully capable of not capable. Part III of the instrument is an open-ended question about the problems the respondents they considered that affects the barangay governance capabilities of the Barangay Captain done in a semi-structured interview.

The instrument was shown to former barangay officials to solicit comments and suggestions along with Barangay Governance indicators that made the questionnaire to be revised and improved. With the establishment of the questionnaire's validity, the researcher ensures clarity, completeness, and acceptability of the instrument using a comprehensive and realistic formulation of items/statements included in the Questionnaire. To establish the instrument's reliability, this researcher got 0.96 Cronbach's Alpha Coefficient from the 16-item Questionnaire, and therefore, the research instrument was considered "reliable."

The researcher first sought approval from the office of the Mayor of the three (3) municipalities before floating the questionnaires to the respondents. Upon the mayors' support, the float of the Questionnaire has been administered to the targeted respondents in the Third Quarter of 2019.

4.5 Ethical Considerations

The respondents are fully informed and free to participate in the conduct of research. Ethical considerations for human participants were strictly followed (Gajjar 2013). The study did not include Respondents-barangay officials who refused to participate during the data gathering. Duly signed Informed Consent Form was obtained individually for every Respondents-barangay

officials. The study observed the utmost confidentiality of the gathered data. Only this faculty-researcher has access to the collected data to ensure data privacy.

4.6 Statistical Treatment

In computing the replies, a five-point Likert scale was used. Every answer was given value and was tallied through frequency count to determine the degree of capability of the barangay officials in barangay governance. The ANOVA F-Test was used as statistical tool to test the significant difference in the Summary Responses of the Respondent-Barangay Officials in Northeast of Catanduanes regarding their Barangay Captain's Governance Capabilities in terms of their Position in the Barangay.

5. Results and Discussion

5.1 Respondents

Table 2 shows that most of the respondents were aged ranged from 36 to 50 years old. In terms of their sex, the male is higher in figure than female. In terms of Educational Attainment, most of them are at the college level. In terms of position in the barangay, most of the respondents are the barangay council three years and below as barangay officials.

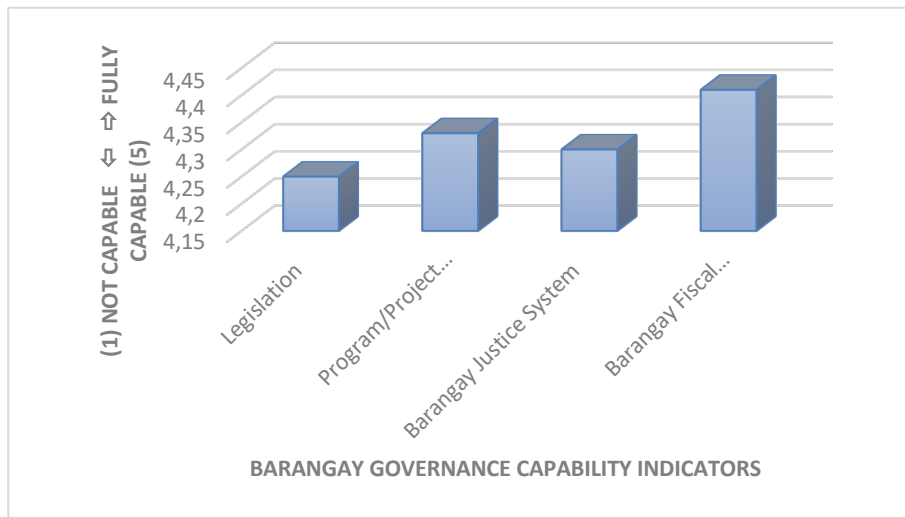
Table 2: Profile of the Respondent-Barangay Officials in Northeast of Catanduanes

Profile		Frequency	Percent
Age	35 years old and below (Young Age)	48	17.58
	36 years old to 50 years old (Middle Age)	130	47.62
	51 years old and above (Old Age)	95	34.80
	Total	273	100
Sex	Male	156	57.14
	Female	117	42.86
	Total	273	100
Educational Attainment	Elementary Level	11	4.03
	High School Level	80	29.30
	College Level	177	64.84
	Masteral Level	5	1.83
	Total	273	100.00
Position in the Barangay	Barangay Captain	52	19.05
	Barangay Council Member	122	44.69
	Barangay Secretary	52	19.05
	Barangay Treasurer	47	17.22
	Total	273	100.00
Number of Years as Barangay Official	3 yrs. and below	127	46.52
	4 yrs. to 6 yrs.	65	23.81
	7 yrs. to 9 yrs.	28	10.26
	10 yrs to 12 yrs.	19	6.96
	13 yrs. to 15 yrs.	15	5.49
	16 yrs. to 18 yrs.	8	2.93
	19 yrs. and above	11	4.03
	Total	273	100.00

Source: Developed by the author

Figure 1 presents the Bar-graph view of the Barangay Captain’s Governance Capabilities to show that the Barangay Captains are *fairly* capable (in higher degree’) in ‘Barangay Fiscal Administration’ while *fairly* capable (in lower degree’) in ‘Legislations’ in Barangay Governance. Given this finding, it generally shows that the Respondent-Barangay Officials can still initiate, establish, disseminate, and implement barangay ordinances, but the struggle to discharge their duty along with legislation.

Figure 1: Over-all Barangay Captain’s Governance Capabilities



Source: Developed by the author

Table 3.1. The Perception of the Respondent-Barangay Officials in Northeast of Catanduanes regarding their Barangay Captain’s Governance Capabilities (a) LEGISLATION

Item No.	Indicators	Fully Capable (5)	Fairly Capable (4)	Capable (3)	Less Capable (2)	Not Capable (1)	Summary of Responses		
							AvR	QnR	QIR
Legislation									
1	Initiates the Implementation of barangay ordinances.	138	78	48	6	3	4.25	4	Fairly Capable
2	Establishes barangay policies for better community development.	127	97	40	7	2	4.25	4	Fairly Capable
3	Disseminates properly barangay ordinances.	135	86	39	10	3	4.25	4	Fairly Capable
4	Implements fairly barangay ordinances.	137	86	33	14	3	4.25	4	Fairly Capable
Sub Average							4.25	4	Fairly Capable

Source: Developed by the author

Table 3.1 presents the perception of the 273-Respondent-Barangay Officials in Northeast of Catanduanes regarding their Barangay Captain’s Governance Capabilities in terms of Legislation. All four statements have the same Average Response (AvR) of 4.25 and Qualitative Response (QIR) of Fairly Capable and they are: (1) Initiates the Implementation of barangay ordinances; (2) Establishes barangay policies for better community development; (3) Disseminates properly barangay ordinances; and (4) Implements fairly barangay ordinances.

In terms of Program/Project Implementation (Table 3.2), among the 4-item statements, the following three (3) statement garnered AvR of 4.40 and they are also presented with their corresponding item number before the number indicated in the questionnaire: (5) Encourages the community residents to participate in planning activities of the barangay; (6) Monitors and evaluate the implementations of programs and activities in the barangay; (7) Participates and represents the barangay in the municipal level activities while the item statement (8) Consults the community residents in decision making and other barangay undertakings got the lowest AvR of 4.10 with a QIR of Fairly Capable.

Table 3.2. The Perception of the Respondent-Barangay Officials in Northeast of Catanduanes regarding their Barangay Captain’s Governance Capabilities (b) PROGRAM/PROJECT IMPLEMENTATION

Item No.	Indicators	Fully Capable (5)	Fairly Capable (4)	Capable (3)	Less Capable (2)	Not Capable (1)	Summary of Responses		
							AvR	QnR	QIR
Program/Project Implementation									
5	Encourages the community residents to participate in planning activities of the barangay.	158	75	32	7	1	4.40	4	Fairly Capable
6	Monitors and evaluate the implementations of programs and activities in the barangay.	161	70	33	9	0	4.40	4	Fairly Capable
7	Participates and represents the barangay in the municipal level activities	157	77	32	6	1	4.40	4	Fairly Capable
8	Consults the community residents in decision making and other barangay undertakings.	113	95	48	14	3	4.10	4	Fairly Capable
Sub Average							4.33	4	Fairly Capable

Source: Developed by the author

Given the findings, the research data shows that the Barangay Captains find difficulty in involving the community residents in decision making and other barangay undertakings which following Aquino et al. (2017) study revealing that the punong barangay is “not competent” in encouraging the community residents to participate in planning activities of the barangay and do not encourage the participation of the community residents in decision-making.

The given finding is challenged by ur Rehman et al. (2020) arguing that sustainable development that is mainly influenced by the organizational hierarchy internal polices and strategies and their operational implementation that is purely dependent on the top management. If the Barangay Captain manifests lack of skills along project implementation particularly involving the community in decision making and any other barangay undertaking, sustainable development may be difficult to achieve in the barangay level.

Table 3.3. The Perception of the Respondent-Barangay Officials in Northeast of Catanduanes regarding their Barangay Captain’s Governance Capabilities (c) BARANGAY JUSTICE SYSTEM

Item No.	Indicators	Fully Capable (5)	Fairly Capable (4)	Capable (3)	Less Capable (2)	Not Capable (1)	Summary of Responses		
							AvR	Qn R	QJR
Barangay Justice System									
9	Settles conflict among community residents.	136	78	49	9	1	4.24	4	Fairly Capable
10	Keeps himself available when conflicts arises in the community.	135	83	45	8	2	4.25	4	Fairly Capable
11	Shows good leadership in the implementation of barangay justice system.	165	64	38	5	1	4.42	4	Fairly Capable
12	Observe neutrality in settling conflicts.	152	66	41	11	3	4.29	4	Fairly Capable
Sub Average							4.30	4	Fairly Capable

Source: Developed by the author

Moreover, in Table 3.3 which in terms of Barangay Justice System, given the 4-item statements, they all garnered a QJR of Fairly Capable and are presented below arranging from highest to lowest AvR with their corresponding item number before the number indicated in the questionnaire: (11) Shows good leadership in the implementation of barangay justice system. (4.42); (12) Observe neutrality in settling conflicts. (4.29); (10) Keeps himself available when conflicts arise in the community. (4.25); (9) Settles conflict among community residents. (4.24).

Given the findings, the research data shows that the Barangay Captains are Fairly capable in their discharge of duty along with the Barangay Justice System and are considered to possess good leadership in its implementation. As Labawig (2011) and Padilla and Eguia (2010) argued also

that the Development depends on the capability of leaders and Barangay leaders must be monitored to ensure that proper leadership skills are being imposed and exercised not only in the justice system but also in other aspects of Barangay Governance.

Table 3.4. The Perception of the Respondent-Barangay Officials in Northeast of Catanduanes regarding their Barangay Captain’s Governance Capabilities (d) BARANGAY FISCAL ADMINISTRATION

Item No.	Indicators	Fully Capable (5)	Fairly Capable (4)	Capable (3)	Less Capable (2)	Not Capable (1)	Summary of Responses		
							AvR	Qn R	QIR
Barangay Fiscal Administration									
13	Shows accountability in allocating the barangay budget.	184	51	28	8	2	4.49	4	Fairly Capable
14	Observe transparency in Public Fund Disbursement.	177	59	26	6	5	4.45	4	Fairly Capable
15	Apportions budget efficiently based on the needs of the community.	164	68	32	7	2	4.41	4	Fairly Capable
16	Implements Tax Collection/Revenue Raising as sourcing fund for the development of the barangay.	146	68	48	8	3	4.27	4	Fairly Capable
Sub Average							4.41		Fairly Capable

Source: Developed by the author

Ultimately, in Table 3.4 which in terms of Barangay Fiscal Administration, given the 4-item statements, they all garnered too a QIR of Fairly Capable and are presented below arranging from highest to lowest AvR with their corresponding item number before the number indicated in the questionnaire: (13) Shows accountability in allocating the barangay budget. (4.49); (14) Observe transparency in Public Fund Disbursement. (4.45); (15) Apportions budget efficiently based on the needs of the community. (4.41); (16) Implements Tax Collection/Revenue Raising as sourcing fund for the development of the barangay. (4.27). With the findings, it proves generally that the Barangay Captains are Fairly capable in their discharge of duty along with Barangay Fiscal Administration. And their strengths are being manifested in being accountable in budget allocation and transparency observance while their weakness is on the implementation of Tax Collection and/or Revenues. The statement ‘Implements Tax Collection/Revenue Raising as sourcing fund for the development of the barangay.’ that garnered the lowest AR among other statements on

Barangay Fiscal Administration indicates the constraints of the Barangay Officials is obtaining money to support the programs and activities in the barangay. This finding aggravates incapability of the Barangay Captains in their discharge of duties as divulged in the interview since how are the programs and activities if they lack budget which is also the same with the contentions of Guce et al. (2018) and Boysillo (2017) papers saying that barangays lack funds because of not raising enough own-source revenues in their localities and improving their use of corporate powers.

de Nichilo (2020) reveals the issues of budgetary constraints that may affect future policies and thus suggests budgetary operations that follows a clear logic of decision-making, research, analysis, drafting and reporting. Policy-makers may focus on issues of performance in audit and financial issues to support the programs in a certain organization.

And with this finding of the present study that the barangay officials are ineffective with the implementation of Tax Collection and/or Revenues, the challenge of de Nichilo (2020) and the suggestions of Guce et al. (2018) may be considered. The collection of barangay fees and taxes that may be implemented on the use of barangay properties and facilities; Peddlers; Breeding of fighting cocks; Use of barangay roads, waterways, bridges, and parks; Parking; Clearance/certification; Fines/penalties for violation of barangay ordinances and among other fees may be imposed such as Commercial breeding of fighting cocks and on cockpits and cockfights; Places of recreation with admission fees; Billboards, signboards, neon signs and other outdoor advertisements and among other fees.

In summary, the present study discovered that the Barangay Captain's Governance Capabilities is 'fairly capable' is substantiated by Noble-Nur study (2018), revealing that the punong barangays have a satisfactory level of performance in areas of implementation, legislation, peacekeeping, planning, and fiscal management. The study of Boysillo (2017) entitled Governance of the Barangay Chairpersons in the Municipality of Ubay Bohol revealed that the Barangay Chairmen's Level of Performance of Governance on the three indicators namely the Executive Functions, Legislative Functions, and Judicial Functions indicated that the majority of the 44 Barangay Chairpersons were able to deliver a very satisfactory public service in their barangays. Hence they were able to cope up with all the roles and responsibilities. However, when the weighted mean of

the responses was looked into, among the three functions, the Legislative and Judicial Functions are lower than the Executive Function. The reactions may infer that the barangay officials themselves need to capacitate in Legislative and Judicial functions, following the present finding that among the indicators of Barangay Governance capabilities, 'legislation' is the lowest weighted mean, among other signs.

The general finding of the present study that the Barangay Captain's Governance Capabilities are 'fairly capable.' The given finding was validated through unstructured interview among the subordinates of the barangay captains *i.e.* Barangay Kagawad, Barangay Secretary, and Treasurer. Generally, they claimed that their barangay captains are capable of barangay governance, which is actually in conformity with the quantitative data gathered by this researcher. However, when the researcher asked them what problems do they considered that affects the barangay governance capabilities of the Barangay Captain, three themes appeared in the common responses presented below:

The first theme is related to the incompetence aspect of the Barangay Captain. Other barangay officials and selected constituents verbalized the following comments:

'Inadequate knowledge about the ordinances'; 'Lack of pieces of training.'; 'Not firm in the decision-making.'; 'Favoritism'; 'Lack of Technical Knowledge.'; 'Family problem'; 'Barangay captain does not listen to suggestions'; 'The barangay captain does not agree with the suggestions or proposals of constituents'; 'Lack of Education'; 'Political party affiliation.'; 'Lack of training and expertise.'; 'Lack of Knowledge / not correctly oriented.'; 'Not capable.'; 'Focus on the next election.'; 'Disrespectful to the barangay kagawad.'; 'Mismanagement'; 'Lack of capabilities'; 'Barangay Captain – No action'; 'Miscommunication....do not follow official protocol in communication...using the verbal mode of communication in the conduct of special meeting'; 'Lack of Proper communication and making decisions on her own without consultation with the barangay officials.'; 'Poor communication by not following steps and processes'; 'Do not care about the works in the barangay.'; 'Barangay Captain is not a resident in the barangay of his jurisdiction'; and 'Lack of budget.'

The second theme is about non-cooperation of the residents or the constituents themselves, and most of the respondents mentioned the following observations:

-'No cooperation among community residents to participate in the planning activities of the barangay.'; 'Less cooperation of the constituents'; 'Constituent Lack of interest to participate.'; 'Lack of participation of the constituents in the planning activities'; 'Lack of community participation.'; 'Residents do not follow the rules and regulations'; 'Negative thinking, Constituent.'; 'Constituent negative attitude.'; 'Barangay constituents do not follow barangay ordinances.'; 'Hard-headed constituents' and 'Constituents are not concerned with the welfare of the barangay.'

The third theme identified was being a non-cooperative Barangay Kagawad aspect that affects the capability of the Barangay Captain. The respondents mentioned the following remarks:

-'Barangay Kagawad are disrespectful to the Barangay Captain --- they have no plan during the meeting.'; 'Lack of Awareness of the barangay ordinances'; 'Lack of Quorum'; 'No unity between and among barangay officials and residents'; 'Lack of discipline.'; 'Lack of Education'; 'Poor cooperation. The barangay has Excellent Programs for the welfare of the barangay as a body. But the Punong Barangay cannot carry out all the implementation process due to Lack of cooperation by other members of the Sanguniang Bayan'; and 'some Barangay Kagawad members are not participating in the barangay activities.'

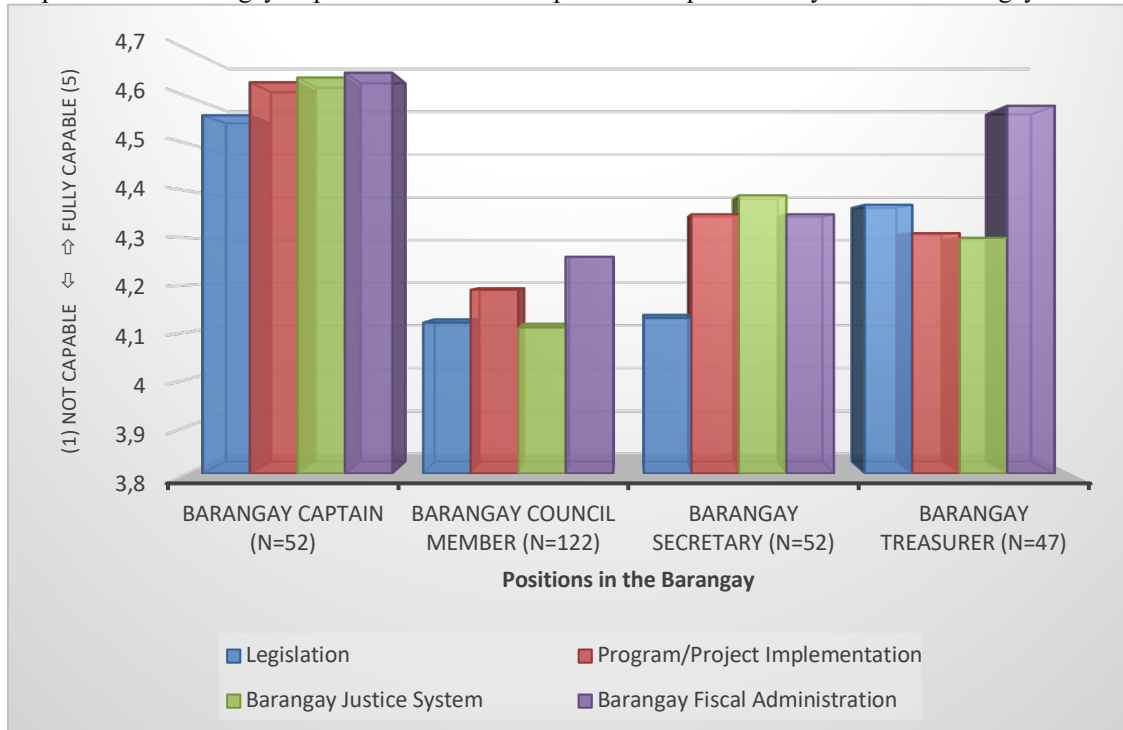
From the ideas shared by the barangay kagawad, barangay secretary and treasurer-respondents on their perception of the governance capability of Barangay Captains. Particularly the factors that affect their governance capability, it can be deduced that truly Barangay Captain is relatively capable in barangay governance considering the quantitative data yet with the qualitative data established from the statements mentioned above hinders the Barangay Captains' capability in governing the barangay. We can genuinely conclude that the different themes discussed above, such as the incompetence aspects of the Barangay Captain; the non-cooperation of the residents; and the non-cooperative Barangay Kagawad aspect truly affect the efficiency and effectiveness in the discharge of duties and functions of the barangay captains. The above discussions that are attested by Medina-Guce et al. (2018), Padilla and Eguia (2010) on the argument that monitoring

and assessment of barangay officials may maximize the potentials of local officials in collaboration with the various groups or organizations to address the different concerns in the barangay that impedes the performance of the barangay officials. The idea of positive role expectations to the general public is quite unclear, resulting in passive and non-cooperative residents and inactive barangay officials are participating in barangay concerns and activities. The research of Padilla and Eguia (2010) on the development of barangay legislators' leadership scale in Davao City determined the appropriate leadership scale. These are the setting directions, qualities, personal qualities, full scanner, and primary values that the local government should take concrete actions to develop and establish a continuing professional leadership education program for barangay councils to cope with increasingly complex demands of the environment and other constraints within their barangays. With these arguments, the Barangay Officials' ineffectiveness and inefficiency, particularly the Barangay Captain mentioned above, may be considered to address the present study's issues.

Therefore, the over-all Barangay Captain's Governance Capabilities that is 'Fairly capable rests on perceptions of the barangay officials themselves because, in reality, all the limitations and inefficiencies of the barangay captains revealed in the interview, as mentioned above.

A bar-graph view in figure 2 shows how confident the Barangay Captains about their Governance Capabilities while other Barangay Officials show fairly capabilities of their Barangay Captains' Governance. Given these findings, it generally indicates that the Respondent-Barangay Officials proved the difference in perception-rating since it manifests self-confidence on the Barangay Captains' part about their 'Full Capabilities' in Barangay Governance. In contrast, other Barangay Officials show 'fair capabilities' of their perception of their Barangay Captains' Barangay Governance.

Figure 2 presents the Barangay Captain's Governance Capabilities as perceived by Different Barangay Officials.



Source: Developed by the author

Table 4. Test of significant difference in the Summary Responses of the Respondent-Barangay Officials regarding their Barangay Captain's Governance Capabilities in terms of their Position in the Barangay

Respondents according to their Position in the Barangay	Statistical Test Used	Computed Value	Tabular Value at .05 Probability	Degrees of Freedom	Decision	Interpretation
Barangay Captain (n=51)	F – Test	33.32	2.76	3/60	Reject Ho	There is a significant difference
Barangay Council Member (n=120)						
Barangay Secretary (n=53)						
Barangay Treasurer (n=49)						

Source: Developed by the author

Utilizing ANOVA F-Test in Table 4, it proved that there is a significant difference in the Summary Responses of the Respondent-Barangay Officials in Northeast of Catanduanes regarding

their Barangay Captain's Governance Capabilities in terms of their Position in the Barangay given the $F(3, 60) = 33.32, p \approx 0$. The data demonstrates the difference of the perception-rating of the respondent-barangay officials since it manifests confidence of the Barangay Captains about their Fully Capabilities in Barangay Governance. In contrast, other Barangay Officials show the fair capabilities of their Barangay Captains' Barangay Governance.

This finding aligns with Caldo (2015) paper that revealed that selected respondents are uncertain of their Punong Barangay competence. The research data may infer that the barangay officials except for the barangay captain themselves are also hesitant about their respective Barangay captain's ability.

6. Conclusion and Recommendation

The outcomes of the baseline information study revealed that the barangay captains are relatively capable in barangay governance. Furthermore, looking at the indicators of governance, Barangay Captains showed that they are more equipped with Barangay Fiscal Administration than in Legislative and Judicial functions; hence they needed to be capacitated in the weak areas of their governance. The responses according to the type of respondents revealed differences, showing the confidence of the Barangay Captains about their Full Capabilities in Barangay Governance. In contrast, the rest of the Barangay Officials demonstrated the perception of being fair capabilities of their Barangay Captains' Barangay Governance. With the different results, the study further validated through an unstructured interview among the barangay kagawad, barangay secretaries and treasurers with an open-ended question about the problems they encountered on their respective barangay captains' governance capabilities. It arrived with the three common themes revealing the incompetence of the Barangay Captains; the non-cooperation of the residents or the constituents themselves; and the non-cooperative Barangay Kagawad that genuinely affects the capability of the Barangay Captain.

Given the situation, the study recommends that all barangay officials, particularly the barangay captains, are urged to attend Barangay Governance Capability training program and seminar to improve and enrich their Barangay Governance Capability skills and strategies. Intensive monitoring and assessment of their barangay performance may be regularly to awaken their awareness and commitment to perform their duties and functions expected of them is also considered. The study may find a proposed training package where all Catanduanes State University Panganiban Campus Faculty-Extensionists will be involved in the extension services program. The programs and activities geared towards strengthening more their Barangay Governance Capability Skills and Strategies. The results of this study will be presented in a Research Fora, be discussed with all concerned for information purposes, and published for widest dissemination. Lastly, the conducted extension-based research in the future is in line with the programs of the Catanduanes State University – Panganiban Campus, such as Bachelor of Elementary Education, Bachelor of Technical and Vocational Teacher Education, and Bachelor of Science in Agriculture. Further, future researchers may consider research-based extension programs that the community needed.

This study has limitations: First, the interpretations of the gathered data rely purely on the answers of the respondents in the questionnaire, where this writer relies on their honest replies. Second, the present study results may not be generalized in provincial or regional levels because it only represents the three municipalities of Catanduanes i.e. Viga, Panganiban, and Bagamanoc. In future research, this writer will consider specific aspects of Barangay Governance, specifically on Education and Literacy aspects, in the Barangay Level since the Faculty Extensionists are experts in Education.

Conflicts of interest

This researcher declares no conflict of interest in this manuscript.

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