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ACCESS

DOES DIGITAL BALANCED SCORECARDS LEAD TO THE SUSTAINABLE PERFORMANCE AMONGST THE JORDANIAN SMEs?

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ARTICLE INFO	ABSTRACT
Article history:	Purpose: This study aims to fill up a literature gap related to the sustainable performance in Jordanian SMEs, where the literature focused on limited variables
Received 31 March 2023	related only to the human capital.
Accepted 30 June 2023	Theoretical framework: The researchers provided a suggested model to be implemented in the SMEs in Jordan as one of the industries that must be activated in
Keywords: SMEs; Jordan;	the country to help the economy. Management accounting system and digital balanced scorecards were the main variables contributing, while variables like capital forecasting and decision making also were playing the role of the dependents variable for the D.BSC.
Management Accounting System (MAS); Sustainable Performance; Decision Making; Capital Forecasting;	Design/methodology/approach: All of the mentioned variable toward sustainable performance in the Jordanian SMEs in this quantitative research tested via randomly distributing questionnaires among the employees of the industry with returned and valid for analysis of 910 surveys. Using SPSS for descriptive analysis and AMOS for the EFA and CFA.
Digital Balanced Scorecards (D.BSC).	Findings: The results deducted as there is a significant mediation role for D.BSC between MAS and decision making and insignificant mediation role for D.BSC between MAS and capital forecasting.
PRERGISTERED	Research, Practical & Social implications: This research is suggesting a model and variables to be used by the SMEs in Jordan. This model will vast the SMEs industry and support the society by affording further employment chances.
OPEN DATA	Originality/value: The paper contributes to the body of knowledge and the Jordanian SMEs industry and Jordanian society. This paper targeting the most important industry in the country currently because such third world countries needed the SMEs referring to the previous studies.
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OS BALANCED SCORECARDS DIGITAIS LEVAM A UM DESEMPENHO SUSTENTÁVEL ENTRE AS PMES DA JORDÂNIA?

RESUMO

Objetivo: Este estudo visa a preencher uma lacuna na literatura relacionada ao desempenho sustentável das PMEs jordanianas, em que a literatura se concentra em variáveis limitadas relacionadas apenas ao capital humano.

Estrutura teórica: Os pesquisadores forneceram um modelo sugerido a ser implementado nas PMEs da Jordânia como um dos setores que devem ser ativados no país para ajudar a economia. O sistema de contabilidade gerencial e os balanced scorecards digitais foram as principais variáveis contribuintes, enquanto variáveis como previsão de capital e tomada de decisões também desempenharam o papel de variáveis dependentes para o D.BSC.

Projeto/metodologia/abordagem: Todas as variáveis mencionadas em relação ao desempenho sustentável nas PMEs jordanianas nesta pesquisa quantitativa foram testadas por meio da distribuição aleatória de questionários entre os funcionários do setor, com 910 pesquisas devolvidas e válidas para análise. Usamos o SPSS para a análise descritiva e o AMOS para a EFA e a CFA.

Conclusões: Os resultados deduziram que há um papel de mediação significativo para o D.BSC entre o MAS e a tomada de decisões e um papel de mediação insignificante para o D.BSC entre o MAS e a previsão de capital.

Implicações sociais, práticas e de pesquisa: Esta pesquisa está sugerindo um modelo e variáveis a serem usados pelas PMEs na Jordânia. Esse modelo ampliará o setor de PMEs e apoiará a sociedade, oferecendo mais chances de emprego.

Originalidade/valor: O artigo contribui para o conjunto de conhecimentos e para o setor de PMEs da Jordânia e para a sociedade jordaniana. Este trabalho tem como alvo o setor mais importante do país atualmente, pois esses países do terceiro mundo precisam das PMEs, conforme estudos anteriores.

Palavras-chave: PMEs, Jordânia, Sistema de Contabilidade Gerencial (MAS), Desempenho Sustentável, Tomada de Decisões, Previsão de Capital, Balanced Scorecards Digitais (D.BSC).

CONDUCEN LOS CUADROS DE MANDO INTEGRAL DIGITALES A UN RENDIMIENTO SOSTENIBLE ENTRE LAS PYMES DE JORDANIA?

RESUMEN

Propósito: Este estudio pretende llenar un vacío en la literatura relacionada con el rendimiento sostenible de las PYME jordanas, donde la literatura se centra en variables limitadas relacionadas únicamente con el capital humano.

Marco teórico: Los investigadores proporcionaron un modelo sugerido para su aplicación en las PYME jordanas como uno de los sectores que deberían activarse en el país para ayudar a la economía. El sistema de contabilidad de gestión y el cuadro de mando integral digital fueron las principales variables contribuyentes, mientras que variables como la previsión de capital y la toma de decisiones también desempeñaron el papel de variables dependientes para el D.BSC.

Diseño/metodología/enfoque: Todas las variables mencionadas en relación con el rendimiento sostenible en las PYME jordanas en esta investigación cuantitativa se pusieron a prueba mediante la distribución aleatoria de cuestionarios entre los empleados del sector, con 910 encuestas devueltas y válidas para el análisis. Se utilizó el SPSS para el análisis descriptivo y el AMOS para el AFE y el AFC.

Conclusiones: Los resultados infieren que existe un papel mediador significativo para el D.BSC entre el MAS y la toma de decisiones y un papel mediador insignificante para el D.BSC entre el MAS y la previsión de capital.

Implicaciones sociales, prácticas y de investigación: Esta investigación sugiere un modelo y unas variables que pueden utilizar las PYME de Jordania. Este modelo ampliará el sector de las PYME y apoyará a la sociedad proporcionando más oportunidades de empleo.

Originalidad/valor: El documento contribuye al conjunto de conocimientos y al sector de las PYME de Jordania y a la sociedad jordana. Este trabajo se centra en el sector más importante del país en la actualidad, ya que estos países del tercer mundo necesitan PYME, según estudios anteriores.

Palabras clave: PYME, Jordania, Sistema de Contabilidad de Gestión (MAS), Rendimiento Sostenible, Toma de Decisiones, Previsión de Capital, Cuadro de Mando Integral Digital (CMI).

INTRODUCTION

Notably, the dramatic growing competitive advantage in the Small and medium-sized enterprises (SMEs) industry is facing complex challenges in controlling the capital forecasting and decision-making toward achieving sustainable performance among each other, which led to pushing their managers to increase the attention about improving the capital forecasting and decision-making processing in the workplace to ensure achieve the sustainable performance goals (Addo, 2018; Hofmann et al., 2022). SMEs are essential contributors to economic growth and job creation worldwide (Benbekhti et al., 2021). However, like any business, SMEs face several challenges in achieving sustainable performance, especially in Jordan. For example, the challenges for SMEs are accessing the finance they need to invest in sustainable business practices, making it difficult to make long-term capital forecasting in sustainability (Lutfi et al., 2022). Besides, many SMEs may not be aware of the benefits of sustainable business practices or the potential costs of not adopting them (Alharasis et al., 2022). This lack of knowledge can lead to a lack of commitment to make right decision or failure to prioritize sustainability efforts. Moreover, SMEs often have limited resources to allocate to sustainability initiatives (Ibrahim et al., 2021). As a result, they may not have the time, money, or staff to implement sustainable practices effectively.

Capital forecasting is considered the process of measuring the cash position or exercising control over the liquidity position of firms (Wiśniewski, 2022). Capital forecasting is a technique that uses historical data as inputs to make the financial information that is predictive in determining the direction of future perspectives for the firms to make a good decision (Kolari & Sanz, 2022). In social science, decision-making is regarded as the cognitive process leading to determining a course or a belief of action among several possible alternative options. It could be either rational or irrational (Szollosi & Newell, 2020). Therefore, the decision-making process can be classified as a course of action purposely chosen from a set of alternative resources to achieve organizational or managerial objectives or goals (Guo, 2020; Alwedyan, et al., 2023). Thus, capital assets can be considered one of the important resources of organizations, especially SMEs of various types and segments (Li et al., 2020).

Small and medium-sized enterprises (SMEs) contain revenues and employees within certain limits (Burhan Ismael et al., 2021). The abbreviation SMEs is a common short name used by international organizations such as the World Trade Organization, the United Nations, the European Union, and the World Bank to indicate these companies (Batrancea et al., 2022). SMEs make up most businesses operating worldwide and in different sectors such as services,

construction, hotels, logistics, etc. Generally, they are independent firms with an average of employees reaching 250 (Ali et al., 2020). Sarvari et al. (2021) define SMEs as "organizations that serve stockholders and clients, that have always taken significant roles in the world economy to improve specialized projects such as systems development engineering, coaching, and organization and consulting, and create temporary arrangements and systems, which driving force of economic growth.

These companies need high-quality accounting systems to provide them with accurate information about other competing companies to improve the capital forecasting process and make positive decisions towards improving sustainable performance (Alfartoosi & Jusoh, 2021). Due to the spread of competition and challenges in the business environment, providing the necessary information to complete decision-making has become difficult (Bag et al.,2021). This has led to a decline in the effectiveness of management accounting systems towards improving sustainable performance through the capital forecasting and decision-making process (Diegtiar et al., 2021). Thus, it is necessary to support these systems by adopting digital tools such as the balanced scorecard to address the deficit in providing information. In the theoretical side of the literature, there needs to research on mediators and mediators on the relationship between MAS application and implementation of the digital balanced scorecard (D-BSC), especially in SMEs (Mohammed et al., 2022).

SMEs basically looks as one of the industries to leader the country's economy further expanding and job opportunity in Jordan. Accordingly, the industry has scored high scales in the countries employment and income due to the financial crisis that the country going through. One employee out of each nineteen people afford by the SMEs in Jordan as stated in (OECD, 2023). The jobs afforded are such professional services, real estate, and wholesale and retail. Such huge industry supposed to be supported and there must be elimination for all of the limitations of the SME's performance (OECD, 2023).

There was a proposed project named "SME Policy Effectiveness in Jordan", from 2016 to 2019 the government along with OECD (Jordan Enterprise Development Corporation) worked to improve SME conditions and the country must set regulations and policies help and assist the industry as based on the empirical and literature this industry is the future of the country. This developing the body of the existed problem as the industry is active with no much concern by the business owners and the government about the recent used strategies and the scientific and modern manner to run this industry. Using the advantages and strengthen of the industry would change the individual's life in the current difficulties the country suffering of.

Therefore, this study examines the impact of D-BSC as a mediator on capital forecasting and decision-making toward sustainable development among SMEs that use Management Accounting System (MAS). Next, to investigate the significant role in this relationship. This paper conducted a quantitative approach with a survey and was conducted on senior and middle managers in SMEs in Jordan. Furthermore, this research contributes to the literature on D-BSC (MAS practice), enhancing the knowledge of D-BSC through conceptualizing support for the role of capital forecasting and decision-making interventions in supporting the exceptional sustainable performance of SMEs in Jordan.

LITERATURE REVIEW

Sustainable Performance

Sustainable performance is a critical concept that has gained significant attention in recent years due to the growing concern about environmental degradation, social inequality, and economic sustainability. According to Shah et al. (2022), introduced the concept of the triple bottom line, which encompasses economic, social, and environmental performance. They also defined sustainable performance as the ability to meet present needs without compromising future generations' ability to meet their needs. Alsayegh et al. (2020) identified the indicators of sustainable performance to measure the economic, social, and environmental impacts of an organization's activities. For example, the Global Reporting Initiative (GRI) provides a framework of indicators to measure an organization's sustainability performance, including environmental impact, social impact, and economic impact, specially for SMEs.

Some studies have investigated the relationship between sustainable performance and firm performance in SMEs. Pham (2020) found that firms that implement sustainable practices can improve their financial and non-financial performance, including employee satisfaction and innovation capabilities. Additionally, Le (2022) found that SMEs that adopt sustainable practices can improve their reputation and increase customer loyalty, leading to better financial performance.

In Jordan, sustainable performance is particularly important, given the country's limited natural resources and its dependence on imported energy. Al-Gasawneh et al. (2022) conducted a study on sustainable performance in the Jordanian hospitality industry. The study found that there is a positive relationship between sustainable practices and organizational performance. Additionally, the study found that the adoption of sustainable practices by hotels can enhance their reputation and competitiveness. Furthermore, Alrwajfah et al. (2019) conducted a study

on sustainable tourism development in Jordan. The study found that sustainable tourism practices can enhance the economic, social, and environmental performance of the tourism industry in Jordan. Additionally, the study identified several challenges that need to be addressed, including the lack of public awareness, weak policies and regulations, and limited resources.

Thus, the literature review suggests that sustainable performance is a critical issue in Jordan. The studies highlight the importance of sustainable practices in enhancing organizational performance and achieving sustainable development. Moreover, the studies identified several challenges that need to be addressed, such as weak policies and regulations, limited resources, and low public awareness. These findings emphasize the need for a coordinated effort by stakeholders to promote sustainable practices and enhance sustainable performance in Jordan, especially in SMEs.

Capital Forecasting

According to Zheng et al. (2022), capital forecasting is a crucial process for organizations, including SMEs, as it allows them to plan for future financial requirements, such as investments, working capital, and debt financing. Zhu et al. (2019) found that cash flow forecasting is a useful method for SMEs to forecast their capital requirements, as it helps them to identify potential short-term liquidity problems and plan for future financing needs. In addition to, Shikumo and Mirie (2020) found that SMEs may face challenges in obtaining accurate financial data and may be more susceptible to external economic factors that affect their capital requirements.

Moreover, Osazevbaru (2021) found that external economic factors, such as interest rates and exchange rates, can significantly affect SMEs' capital forecasting. Besides, Baker et al. (2019) suggested that SMEs should improve their financial management practices, such as cash flow management and working capital management, to enhance their capital forecasting. In addition to, Szollosi & Newell (2020) explained the importance of the capital forecasting in the making a better decision-making or increased operational efficiency by understanding their future capital needs, SMEs can prioritize investments that will have the greatest impact on their business, such as expanding their product line or investing in new technology.

However, the external factors, such as stakeholder satisfaction and enhanced Investor confidence, can significantly affect SMEs' capital forecasting. According to, Li et al. (2020) capital forecasting can improve investor confidence by demonstrating that an SME has a clear

understanding of its financial situation and is taking proactive steps to manage its resources. Additionally, Suripto (2023) recommend that if stakeholders are satisfied with the SME's financial performance and decision-making, it suggests that the SME's capital forecasting process is effective and well-regarded. Thus, the studies highlight the importance of capital forecasting methods, the accuracy of forecasting, factors affecting capital forecasting, and best practices for capital forecasting in SMEs. These studies underscore the need for SMEs to adopt effective capital forecasting practices and seek external advice when necessary to enhance their financial planning capabilities.

Decision-Making

Making decisions is an ongoing and vital aspect of managing any business or organization. Decisions are made to sustain all business activities and achieve sustainable performance (Azevedo & Almeida, 2021). Elbanna et al. (2020) suggest that decision-making can help SME decision-makers access relevant knowledge that positively influences sustainable performance. Similarly, Khaliq et al. (2021) emphasize that focusing on decision-making can help organizations maintain their competitive advantage and leadership. Additionally, the decision-making process can improve capital and enable accounting systems to make profitable price choices when capacity bottlenecks occur (Gardi et al., 2021).

Moreover, decision-making is crucial for the success of SMEs for various reasons. For example, Alsayegh et al. (2020); Malahim, S. S. (2023) said that SMEs often have limited resources, including financial, human, and material resources. Therefore, effective decision-making helps to allocate these resources efficiently to maximize their benefits. Besides, Alfartoosi & Jusoh (2021) recommended that decision-making needs to be agile and quickly adapt to changing market conditions. Thus, effective decision-making helps SMEs stay flexible and responsive to new opportunities and challenges.

However, the decision-making is vital in managing risks, especially in the business world by evaluating potential risks and opportunities. Reffering to Lee et al. (2023), the SMEs face various risks, including financial, operational, and reputational risks. Therefore, effective decision-making helps SMEs manage these risks and avoid potential pitfalls. Studies have demonstrated that decision-making can enhance the sustainable performance of firms, especially SMEs, and has implications for organizational performance, culture, values, and employee motivation and commitment. Therefore, understanding the decision-making process

and its implications can assist organizations in making better decisions and achieving their objectives.

Management Accounting System (MAS)

The use of Management Accounting Systems (MAS) is crucial in the decision-making process of Small and Medium-sized Enterprises (SMEs). This review of current literature explores different research studies on MAS in SMEs. According to study by Mohammed et al. (2022); Widiastini, et al., (2023)., they focused on the impact of MAS on the circular economy in Iraqi SMEs, highlighting the potential for increased innovation and customer satisfaction leading to improved competitiveness. Another study by Bani-Hani et al. (2020) explored the role of organizational culture in the selection of MAS information and its impact on firm performance in Malaysian SMEs. Alliyah and Dewi (2022) investigated the characteristics of MAS and their direct effect on the performance of Indonesian SMEs, as well as the role of innovation as a mediating variable. These studies offer insights into the potential benefits of MAS implementation for SMEs.

MAS provides financial information to managers that can help them make informed decisions, this information include budgets, forecasts, and financial reports, which can help managers determine whether to invest in new equipment, hire new employees, or pursue new business opportunities (Diegtiar et al., 2021). MAS also can help SMEs control their costs by tracking expenses and identifying areas where cost reductions can be made. This can help the company stay profitable and competitive (Iyenhen & Sabit, 2023). Therefore, MAS works to help SMEs communicate financial information more effectively to stakeholders such as investors, lenders, and employees (Gyamera et al., 2023). This can help build trust and confidence in the company's financial position.

However, some studies have not found a significant positive relationship between MAS and sustainable performance in SMEs. While MAS implementation was found to have a positive impact on sustainable performance, but the impact was not statistically significant (Mohammed et al., 2022). Therefore, further research is necessary to understand the relationship between MAS and sustainable performance in SMEs, as well as the challenges that SMEs face in implementing MAS.

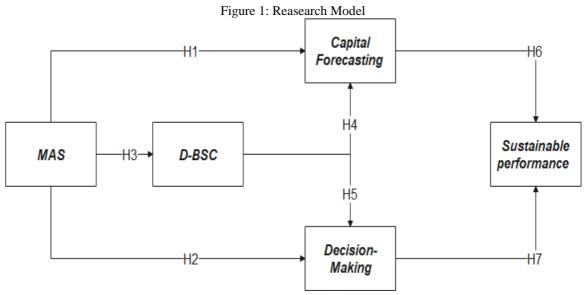
Digital Balanced Scorecard (D-BSC)

The Digital Balanced Scorecard (D-BSC) is a contemporary version of the traditional Balanced Scorecard (BSC) developed by Robert Kaplan and David Norton in the 1990s (Mohammed et al.,2022). According to Fabac (2022), the D-BSC offers several advantages such as enhancing communication and collaboration, allowing real-time monitoring of performance, and offering a comprehensive view of the organization's performance. Additionally, it can quickly identify problems and opportunities for improvement as highlighted by Saprianto & Lukito (2020). The D-BSC framework comprises four perspectives, including financial, customer, internal processes, and learning and growth, which incentivize employees to focus on achieving the organization's strategic goals (Slamet et al., 2021).

Furthermore, D-BSC can combine data from multiple sources such as social media, mobile devices, and other digital platforms, to offer real-time insights into performance, as emphasized by Yamamoto (2020). Therefore, D-BSC can mediate communication, collaboration, and alignment between different levels and departments of an organization, thus providing real-time insights into performance and aligning individual and departmental goals with the organization's overall strategic objectives.

However, D-BSC can be a useful tool for organizations to manage their digital performance, it is important to be aware of its potential disadvantages and to use it in conjunction with other management tools and approaches. For example, Schräge et al. (2022) said the organizations may struggle to identify the most relevant metrics for their D-BSC performance, or they may choose metrics that do not align with their overall strategic goals. Thus, D-BSC may lead to siloed thinking, where each perspective is managed separately and does not take into account the interdependencies between different perspectives, this can limit the ability of organizations to achieve their overall strategic goals (Fadel et al., 2021).

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Source: Prepared by the authors (2023).

METHODOLOGY

Research Design

This is a quantitative descriptive research designed to fit the population and sample of this research and observe a fact and phenomenon in the population and industry of the study, which accordingly serve the research by achieving the research objective and answering the research questions to test the hypothesis of the research. This study been conducted as crosssectional study within five months (October 2022- February 2023). By distributing the questionnaires adapted from the previous studies and translated to Arabic to be well understood by the respondents.

Population

The population of this study is the small medium enterprises in Jordan, Jordan has over 100,000 SMEs (97% of all companies), making up more than 50% of the country's GDP, employing 60% of the Jordanian workforce, and accounting for 45% of exports in the country (Middle East Investment Initiative, 2018). Between the year 2011-2013 the estimated number of employees hired in the SMEs was 487,861 (Amawi, 2013). Currently the expected number of employees in SMEs in Jordan around 741,861. The criteria to select the employees is just to be an employee in an organization has 5-50 employees to be as an employee in the SMEs.

Sampling

The criteria to select the employees is just to be an employee in an organization contains not less than 5 employee and not more than 50 employees. Accordingly, the researcher selected the simple random sampling in this research which is the only sampling method suitable for the population due to the impossibility of using cluster or strata sampling method which will be going to be burden on the research and impossible to be proceeded. According to (Sekaran, 2003) the sample size suits this population size is not less than 384 employees from the Jordanian SMEs. The researchers is targeting to move to the margin error of 3.5% instead of 5.0% in the confidence 95% which will be reflected on the sample size to be 783, and justified by (Hair et al., 2014) advised to double the sample size to avoid collecting less than the required sample size.

RESULTS

Demography Analysis

The section contains the first part as the demography of this study's sample features, the sample of this study as shown in table 1, were majority from the age group 20-25 years old which is representing the reality of this industry as it is established usually by young generation and run by them as well. The SMEs required much energy usually and active persons to handle it which was reflect as only one single participant only aged more than 36 years old.

Scale	Frequency
Below 20 years old	19
20-25 years old	476
26-30 years old	390
31-35 years old	24
36 and above years old	1
	910
Male	692
Female	218
	910
School education	72
Diploma	89
Degree	704
Master	45
	910
Less than 3 years	441
3-5 years	326
6-10 years	141
11-15 years	1
16 and more years	1
	910
	Below 20 years old 20-25 years old 26-30 years old 31-35 years old 36 and above years old Male Female School education Diploma Degree Master Less than 3 years 3-5 years 6-10 years 11-15 years

Source: Prepared by the authors (2023).

The demography analysis indicates that most of the respondents were males what is representing the nature of the industry in Jordan, while the education level in the Jordanian SMEs was very good as the highest number of the respondents were holding degree 704 with a vast difference with the other educational level and just 45 respondents are holding master. Additionally, the experience of the employees in the Jordanian SMEs mostly in the range of less than 3 years and only one participants of each 11-15 years and more than 16 years.

Descriptive Analysis

The following table shows the values indicating the flow of the data into the SPSS software, the variables MAS and D-BSC scored the highest mean to be the most variables with agree and strongly agree answers. The lowest was capital forecasting which is not a good indication for the variable and might effect the correlation and regression tests. There is a high standard deviation for the variables 2.138, 2.972 for the variables capital forecasting and decision making respectively, the values of skewness and kurtosis in the range of -2 to +2 according to (Kim, 2013).

Furthermore, the validity of the data was measured by the reliability and composite reliability with a score exceeded 0.7, the good indication was also composite reliability higher than the reliability scores.

Table 2: Descriptive Analysis					
	MAS	D-BSC	Capital	Decision	Sustainable
			Forecasting	Making	Performance
Mean	4.211	4.028	1.115	3.088	3.627
S.Deviation	0.854	0.732	2.138	2.972	1.987
Skewness	1.321	0.031	-0.098	1.092	1.423
Kurtosis	1.042	0.091	-0.210	0.803	-1.832
Reliability	0.832	0.784	0.911	0.752	0.782
Composite	0.911	0.894	0.935	0.881	0.900
Reliability					

Source: Prepared by the authors (2023).

Hypothesis Testing

Using the software AMOS the hypothesis of the study were tested and the most important scores as shown below. Confirmatory Factor Analysis CFA was done then moving to the Exploratory Factor Analysis EFA, the CFA ended with eliminating two items from MAS and one item of each capital forecasting, DBSC and decision making for the goodness of the model toward further progress in the analysis. The regression of the variables divided into direct and indirect relationships, the relationships score highest estimation in the structural model in

effect of MAS to capital forecasting, MAS to decision making and DBSC to decision making all up to 0.6.

Table 3: Direct Effect			
Path	Estimation	Sig	
MAS > Capital forecasting	0.743	0.000	
MAS > Decision Making	0.607	0.000	
MAS > D.BSC	0.311	0.008	
D.BSC > Capital Forecasting	0.183	0.055	
D.BSC > Decision Making	0.774	0.013	
Capital Forecasting > Sustainable Performance	0.210	0.000	
Decision Making > Sustainable Performance	0.529	0.000	

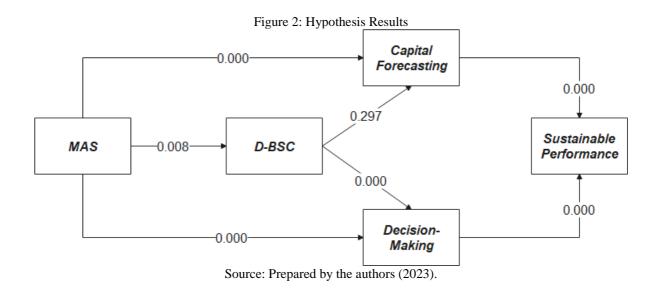
Source: Prepared by the authors (2023).

The Significance of the relationship is indicating the effect of the variables on each other, there is a significant relationship between MAS and capital forecasting, MAS and decision making, and MAS with D.BSC. The other indirect relationships between the variables which contains the mediator role on the variables of the study. The mediation role of D.BSC between MAS and capital forecasting is actually lower estimated as 0.129 with insignificant role as the significancy score was 0.297 in the relationship. The other mediation role was D.BSC mediates the relationship between MAS and decision making which was estimated with high score 0.571 and a significant score as 0.000 as in table 4.

Table 4:	Indirect Effect	
th	Estimation	Sig
AS > D.BSC > Capital Forecasting	0.129	0.297
AS > D.BSC > Decision Making	0.571	0.000
<u> </u>	$\frac{0.571}{1 \text{ by the outhors (2022)}}$	

Source: Prepared by the authors (2023).

Finally, the results indicate that there is a significant impact of MAS on each of capital forecasting, decision making and the mediator D.BSC, the mediator D.BSC has insignificant impact on capital performance with 0.055 and a significant impact on the decision making with a score of 0.013. Capital forecasting and decision making significantly impact the sustainable performance. Due to insignificant impact of D.BSC on capital forecasting which is one of the criteria for the mediation relationship that there should be a direct significant impact between the mediator and the dependent variable (Baron and Kenny, 1986) means there mediating impact of D.BSC between MAS and Capital forecasting is not excited.



Thus, this structural model scored the values below as results of AMOS software, which were all accepted.

	Table 5: Structural Model Resu	lts
	Recommended Value	Achieved Scores
Chi-square	< 3	1.759
RMSEA	< 0.07	0.059
GFI	> 0.90	0.970
AGFI	> 0.80	0.902
CFI	> 0.90	0.911
Pclose	> 0.0	0.290
n n	D 11 1 1 (2	0.00

Source: Prepared by the authors (2023).

The values in the table above shows the goodness of the model, which is resulted by the acceptance of the model and the acceptance of the model's variables. There are some insignificant indications such as the relationship between D.BSC and capital forecasting. At the same time the model shows the significance and effectiveness each of MAS and D.BSC to the SMEs firms in Jordan.

DISCUSSION

The sustainable performance amongst the Jordanian SMEs was reported in several previous studies (Alkhodary, D. 2021; Lutfi, A., et al., 2022; Lutfi, A., et al., 2022. Alkhazali, Z., et al., 2021), in those previous studies variables such as knowledge sharing, ability of HR practices, motivation, opportunity, lean management, human resource management, total quality management, Electronic-Human resource management, and mainly the technological, environmental and organizational context to lead the Jordanian SMEs toward sustainable

performance. This research filled up a new research and theoretical gap by testing new variables related to the accounting systems in the SMEs, this reflection of the accounting variables on the sustainable performance would find out a new alternative solutions, suggestions and recommendations to the industry. Sustainable performance was connected to more than those variables such as in (Ibrahim, I. 2021; Ibrahim, I., et al., 2021). While balanced scorecards was tested with the sustainable performance (Hasrin, A., 2020) but this study was in Malaysia and D.BSC was not examined as mediator at all in any of the previous studies. Thus, this research is suggesting this semi-integrated model to be implemented in the specify industry in Jordan and its also available to be implemented in the same industry in different countries. The sustainability of the organization's performance is coming from the sustainability of all the organizational context working together to hit the sustainability. Nowadays, sustainability is the most and trendy concept all over the world due to the rapid changes and technological revolution the world going through, SMEs considered as one of the most active industries especially in third world countries because its providing a lot of jobs, increasing the income of individuals, helps in the economy's growth, initiate the suitable environment to improve the human capitals skills and knowledge, supporting the families and needy people and taking the countries into another different level and curve which is for the goodness of the economical activities in these countries. Accordingly, Jordan is one of the countries focusing and concerning the SMEs industry in the recent years which is notable on google scholars by high ratio of researches and the government support to such projects.

CONCLUSION

This study concludes that in the Jordanian SMEs there is significant mediation role for D.BSC on the relationship between MAS and decision making, while there is insignificant mediation role of D.BSC on the relationship between MAS and capital forecasting. Thus, capital forecasting is significantly effecting the sustainable performance, means the variable is important to improve the sustainable performance. MAS is significantly impacting D.BSC, capital forecasting, decision making and sustainable performance. Only the use of D.BSC should not be implemented at the same time with capital forecasting. Finally, this research is recommending the SMEs in Jordan to implement the MAS in the Jordanian firms, also D.BSC should be used in the firms to ensure the sustainable performance. This research recommends to avoid the combination of capital forecasting with D.BSC in the same firm at the same time. The study's limitations was the distance between the SMEs in Jordan because the researcher

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was targeting the area that has as much as possible firms and employees, in such business was very hard to take the employees time to fill up the questionnaires accordingly the researchers left the questionnaires with the employees to be collected later on.

REFERENCES

Addo, L. K. (2018). Factors influencing agripreneurship and their role in agripreneurship performance among young graduate agripreneurs. International Journal of Environment, Agriculture and Biotechnology, 3(6).

Alfartoosi, A., & Jusoh, M. A. (2021). A Conceptual Model of E-accounting: Mediating effect of Internal Control System on the Relationship Between E-accounting and the Performance in the Small and Medium Enterprises. International Journal of Economics and Management Systems, 6.

Al-Gasawneh, J. A., AlZubi, K. N., Anuar, M. M., Padlee, S. F., ul-Haque, A., & Saputra, J. (2022). Marketing performance sustainability in the Jordanian hospitality industry: The roles of customer relationship management and service quality. Sustainability, 14(2), 803.

Alharasis, E. E., Tarawneh, A. S., Shehadeh, M., Haddad, H., Marei, A., & Hasan, E. F. (2022). Reimbursement costs of auditing financial assets measured by fair value model in Jordanian financial firms' annual reports. Sustainability, 14(17), 10620.

Ali, Y., Younus, A., Khan, A. U., & Pervez, H. (2020). Impact of Lean, Six Sigma and environmental sustainability on the performance of SMEs. International Journal of Productivity and Performance Management, 70(8), 2294-2318.

Alkhazali, Z., Al-Daoud, K., Alshamayleh, H., & Aledeinat, M. (2021). High performance work system and sustainable development among Jordanian SMEs: knowledge sharing as a moderator. Entrepreneurship and Sustainability Issues, 8(4), 280.

Alkhodary, D. (2021). The impact of e-HRM on corporates sustainability: A study on the SMES in Jordan. International Journal of Entrepreneurship, 25(6), 1-15.

Alliyah, S., & Dewi, N. G. (2022, December). The Impact of Management Accounting System on SME's Performance. In 3rd Borobudur International Symposium on Humanities and Social Science 2021 (BIS-HSS 2021) (pp. 628-633). Atlantis Press.

Alrwajfah, M. M., Almeida-García, F., & Cortés-Macías, R. (2019). Residents' perceptions and satisfaction toward tourism development: A case study of Petra Region, Jordan. Sustainability, 11(7), 1907.

Alsayegh, M. F., Abdul Rahman, R., & Homayoun, S. (2020). Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. Sustainability, 12(9), 3910.

Alwedyan, A., Soumadi, M. M., Aldiabat, M., Almarshad, M., Aityassine, F., & Obeidat, S. F. (2023). The Impact of the Human Resources Empowerment Strategy on Achieving Strategic

Objectives in Commercial Banks in Jordan. International Journal of Professional Business Review, 8(3), e0881-e0881.

Amawi, M. (2013, May). Challenges of Starting a Small Business in Jordan. In The Jordan Strategy Forum (JSF).

Azevedo, A., & Almeida, A. H. (2021). Grasp the challenge of digital transition in SMEs—A training course geared towards decision-makers. Education Sciences, 11(4), 151.

Bag, S., Gupta, S., Kumar, A., & Sivarajah, U. (2021). An integrated artificial intelligence framework for knowledge creation and B2B marketing rational decision making for improving firm performance. Industrial Marketing Management, 92, 178-189.

Baker, H. K., Kumar, S., & Singh, H. P. (2019). Working capital management: evidence from Indian SMEs. Small Enterprise Research, 26(2), 143-163.

Bani-Hani, A., Auzair, S. M., & Amiruddin, R. (2020). The effect of organizational culture on firm performance: the mediating role of management accounting systems. South East Asia Journal of Contemporary Business, Economics and Law, 21(1), 32-41.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173.

Batrancea, L. M., Balcı, M. A., Chermezan, L., Akgüller, Ö., Masca, E. S., & Gaban, L. (2022). Sources of SMEs Financing and Their Impact on Economic Growth across the European Union: Insights from a Panel Data Study Spanning Sixteen Years. Sustainability, 14(22), 15318.

Benbekhti, S. E., Boulila, H., & Bouteldja, A. (2021). Islamic Finance, small and medium enterprises and job creation in turkey: An empirical evidence (2009-2017). International Journal of Islamic Economics and Finance (IJIEF), 4(SI), 41-62.

Burhan Ismael, N., Sorguli, S., Mahmood Aziz, H., Sabir, B. Y., Abdalla Hamza, P., Gardi, B., & Al-Kake, F. (2021). The impact of COVID-19 on small and medium-sized enterprises in Iraq. Annals of RSCB, ISSN, 1583-6258.

Diegtiar, O. A., Bezuhlyi, O. V., Tararuyev, Y. O., Suslova, T. O., & Romanchenko, T. V. (2021). Certain aspects of the management accounting system for small and medium-sized enterprises. Universal Journal of Accounting and Finance, 9(3), 469-476.

Elbanna, S., Hsieh, L., & Child, J. (2020). Contextualizing internationalization decisionmaking research in SMEs: towards an integration of existing studies. European Management Review, 17(2), 573-591.

Fabac, R. (2022). Digital Balanced Scorecard System as a Supporting Strategy for Digital Transformation. Sustainability, 14(15), 9690.

Fadel, S., Necib, H., Rouaski, K., Challal, M., & Bouaicha, H. (2021). The Balanced Scorecard (BSC) as a Multidimensional Performance Measurement System Tool: Case the Company of Algeria Post, Financial Markets, Institutions and Risks, 5(4), 87-105. https://doi.org/10.21272/fmir.5(4).87-105.2021 Gardi, B., Abdalla Hamza, P., Sabir, B. Y., Mahmood Aziz, H., Sorguli, S., Abdullah, N. N., & Al-Kake, F. (2021). Investigating the effects of financial accounting reports on managerial decision making in small and medium-sized enterprises. Bawan Yassin and Mahmood Aziz, Hassan and Sorguli, Sarhang and Abdullah, Nabaz Nawzad and Al-Kake, farhad, Investigating the Effects of Financial Accounting Reports on Managerial Decision Making in Small and Medium-sized Enterprises (April 28, 2021).

Guo, K. L. (2020). DECIDE: a decision-making model for more effective decision making by health care managers. The health care manager, 39(3), 133-141.

Gyamera, E., Abayaawien Atuilik, W., Eklemet, I., Henry Matey, A., Tetteh, L. A., & Kwasi Apreku-Djan, P. (2023). An analysis of the effects of management accounting services on the financial performance of SME: The moderating role of information technology. Cogent Business & Management, 10(1), 2183559.

Hasrin, A. (2020). An investigation into the importance and relevance of intangible assets in Malaysian digital small and medium-sized enterprises (SMES) performance: The balanced scorecard approach. University of Salford (United Kingdom).

Hofmann, K. H., Jacob, A., & Pizzingrilli, M. (2022). Overcoming Growth Challenges of Sustainable Ventures in the Fashion Industry: A Multinational Exploration. Sustainability, 14(16), 10275.

Ibrahim, I. (2021). factors effecting employees retention in the Malaysian manufacturing industry during the pandemic Covid-19: the mediating role of job satisfaction. Asian Journal of Research in Business and Management, 3(3), 24-39.

Ibrahim, I., Ali, K., Al-Suraihi, W. A., & Al-Suraihi, A. H. A. (2021). The impact of COVIDpandemic and media on sustainability and employee retention, in Malaysian industries. International Journal of Management and Human Science (IJMHS), 5(2), 1-6.

Iyenhen, C., & Sabit, M. S. (2023). The Evolution and Development of Management Accounting Theories and Practices: A Review of Theoretical Frameworks. Central Asian Journal of Innovations on Tourism Management and Finance, 4(2), 40-54.

Khaliq, A., Umair, A., Khaniukova, R., Iqbal, S., & Abbas, A. (2021). Leadership and decision making among SMEs: management accounting information and the moderating role of cloud computing.

Kim, H. Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. Restorative dentistry & endodontics, 38(1), 52-54.

Kolari, J. W., & Sanz, I. (2022). Forecasting Bank Capital Ratios Using the Prophet Model by Facebook. Available at SSRN 4141575.

Le, T. T. (2022). Corporate social responsibility and SMEs' performance: mediating role of corporate image, corporate reputation and customer loyalty. International Journal of Emerging Markets.

Lee, C. W., Chen, H. C., Peng, C. L., & Chen, S. H. (2023). Sustainability of Taiwanese SME Family Businesses in the Succession Decision-Making Agenda. Sustainability, 15(2), 1237.

Li, G., Luo, Z., Anwar, M., Lu, Y., Wang, X., & Liu, X. (2020). Intellectual capital and the efficiency of SMEs in the transition economy China; Do financial resources strengthen the routes?. PloS one, 15(7), e0235462.

Lutfi, A., Alkelani, S. N., Al-Khasawneh, M. A., Alshira'h, A. F., Alshirah, M. H., Almaiah, M. A., ... & Ibrahim, N. (2022). Influence of Digital Accounting System Usage on SMEs Performance: The Moderating Effect of COVID-19. Sustainability, 14(22), 15048.

Lutfi, A., Al-Khasawneh, A. L., Almaiah, M. A., Alsyouf, A., & Alrawad, M. (2022). Business sustainability of small and medium enterprises during the COVID-19 pandemic: The role of AIS implementation. Sustainability, 14(9), 5362.

Lutfi, A., Alsyouf, A., Almaiah, M. A., Alrawad, M., Abdo, A. A. K., Al-Khasawneh, A. L., ... & Saad, M. (2022). Factors influencing the adoption of big data analytics in the digital transformation era: case study of Jordanian SMEs. Sustainability, 14(3), 1802.

Malahim, S. S. (2023). The Relationship Between the Risk Disclosure and Risk Management Committee on Banks Value: Empirical Evidence From Jordan. International Journal of Professional Business Review, 8(3), e0572-e0572.

Mohammed, A., Sulaiman, S., & Md Zin, N. (2022). Exploring the agile-adaptive balanced scorecard benefits towards improving the management accounting system: a case study of Iraqi SMEs. Social and Management Research Journal (SMRJ), 19(2), 139-168.

Mohammed, A., Sulaiman, S., & Zin, N. M. (2022). The effect of management accounting system on circular economic: Using agileadaptive balanced scorecard as mediator. International Journal of Accounting, 7(40), 78-94.

Osazevbaru, H. O. (2021). Interest rate and exchange rate volatility and the performance of the Nigerian informal sector: Evidence from small and medium-sized enterprises. Ekonomski horizonti, 23(1), 19-32.

Pham, T. M. D. P. (2020). On the relationship between total quality management practices and firm performance in Vietnam: The mediating role of non-financial performance. Management Science Letters, 10(8), 1743-1754.

Saprianto, R., & Lukito, J. (2020, February). The role of a digital balance score card in increase the effectiveness of and efficiency to face business competition. In Journal of Physics: Conference Series (Vol. 1469, No. 1, p. 012089). IOP Publishing.

Sarvari, H., Chan, D. W., Alaeos, A. K. F., Olawumi, T. O., & Aldaud, A. A. A. (2021). Critical success factors for managing construction small and medium-sized enterprises in developing countries of Middle East: Evidence from Iranian construction enterprises. Journal of Building Engineering, 43, 103152.

Schräge, M., Muttreja, V., & Kwan, A. (2022). How the Wrong KPIs Doom Digital Transformation. MIT Sloan management review, 63(3), 35-40.

Shah, S. Q. A., Lai, F. W., Shad, M. K., & Jan, A. A. (2022). Developing a green governance framework for the performance enhancement of the oil and gas industry. Sustainability, 14(7), 3735.

Shikumo, D. H., & Mirie, M. (2020). Determinants of lending to small and medium enterprises by commercial banks in Kenya. arXiv preprint arXiv:2010.12550.

Slamet, S., Adhim, M. M., & Azmala, I. (2021). Difference analysis of digital marketing implementation in enterprises performance: balanced scorecard perspective. Jurnal Manajemen Bisnis, 8(2), 236-244.

Suripto, S. (2023). Decision-making model to predict auto-rejection: An implementation of ARIMA for accurate forecasting of stock price volatility during the Covid-19. Decision Science Letters, 12(1), 107-116.

Szollosi, A., & Newell, B. R. (2020). People as intuitive scientists: Reconsidering statistical explanations of decision making. Trends in Cognitive Sciences, 24(12), 1008-1018.

Widiastini, N. M. A., Arsa, I. K. S., Syah, A. M., & Hajarrahmah, D. (2023). How do Micro, Small, and Medium Enterprises (MSMES) in Bali Survive the Pandemic? a Qualitative Study in Buleleng, Tabanan, Gianyar, and DenpasarHow do Micro, Small, and Medium Enterprises (MSMES) in Bali Survive the Pandemic? a Qualitative Study in Buleleng, Tabanan, Gianyar, and Denpasar. International Journal of Professional Business Review, 8(3), e0829-e0829.

Wiśniewski, J. W. (2022). Financial liquidity and debt recovery efficiency forecasting in a small industrial enterprise. Risks, 10(3), 66.

Yamamoto, S. (2020). A strategic map for digital transformation. Procedia Computer Science, 176, 1374-1381.

Zheng, X., Zhou, Y., & Iqbal, S. (2022). Working capital management of SMEs in COVID-19: role of managerial personality traits and overconfidence behavior. Economic Analysis and Policy, 76, 439-451.

Zhu, Y., Zhou, L., Xie, C., Wang, G. J., & Nguyen, T. V. (2019). Forecasting SMEs' credit risk in supply chain finance with an enhanced hybrid ensemble machine learning approach. International Journal of Production Economics, 211, 22-33.