

THE INFLUENCE OF SUSTAINABLE INNOVATION ON FINANCIAL ENTREPRENEURSHIP PERFORMANCE: GROWTH AND PREDICTION IN AN EMERGING MARKET

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Abstract

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This study aims to perceive the effect of financial entrepreneurship performance (FEP) over sustainable innovation (SI) disclosure in an emerging market. Jordanian banks are tested based on a multiple regression analysis for the periods 2008 and 2018 and a time series forecasting webinar analysis for the period from 2019 to 2029 based on data ranging from 2008 to 2018. Innovation is indicated through disclosed intangible assets (IA), and items related to research and development (R&D) costs. As organizations anticipate stability by concentrating on technological awareness to influence higher innovative performance (Guo, Guo, Zhou, & Wu, 2020), this study came to converse the relationships between previous literature variables; Hussain (2015) as well as Lassala, Apetrei, and Sapena (2017) revealed through the regression models that there is a relationship between FEP and SI. Meanwhile, bank FEP is directed by return on assets (ROA) and return on equity (ROE). Results reveal that bank FEP affects SI disclosure in a positive manner for the period 2008 and at a higher significant level than 2018. In the meantime, the growth prediction analyses divulge that both ROA and ROE are expected to decrease rapidly within a coming couple of years and then increase promptly.

Keywords: Sustainable Innovation, Financial Entrepreneurship Performance, Intangible Assets, Research and Development

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1. INTRODUCTION

Financial innovation is a major deliberation nowadays, as it helps shape the prospected global financial system (Norden, Buston, & Wagner, 2014). Organizations seeking entrepreneurship struggle to improve innovative competencies to assist them to attain competitive advantages (Wang & Dass, 2017). Innovation is considered a highly successful

factor in an extremely competitive and global economy. Innovation perspectives may also help draw a clear picture of future business opportunities (Rajapathirana & Hui, 2018) especially in emerging markets and provide a compacted sustainable innovative basis.

Kapetanious, Samdanis, and Lee (2018) and Partalidou, Zafeiriou, Giannarakis, and Sariannidis (2020) argued that innovation guidelines should

integrate the precise needs of a nation's innovation system and its current financial environmental conditions, as a sustainable indicator. Technological development is a significant component that influences innovation improvement (Mollaahmetoglu & Akçali, 2019). Based on Latan, Jabbour, Lopes de Sousa Jabbour, de Camargo Fiorini, and Foropon's (2020) study, a relationship between continuous innovation and organization performance is stated, leading to continuous innovation improvement, enabling banks to accumulate the intellectual capital necessary to adapt effective tools in order to achieve the objectives of both bank managers and financial statement users (Meles, Porzio, Sampagnaro, & Verdoliva, 2016). Aifuwa (2020) stated that the phrase "sustainability reporting" (SR) is an assortment of the binary concepts: sustainability and reporting; which are mainly based on the disclosure of non-financial information. To stay sustainable based on the vital use of technology and intangibles affecting the performance of the organizations, innovative disclosures are becoming obligatory, accordingly to fulfil a gap in terms of assessing the elements that contribute to entrepreneurship improvement and to not extinct. Hence, sustainability with innovation will help businesses achieve a competitive advantage, through technologies, processes, and business models (Kneipp, Gomes, Bichueti, Frizzo, & Perlin, 2019). The principle of sustainable innovation (SI) implies a need for a stable theoretical framework that may help manage conditions based on global needs (Maier, Maier, Aşchilean, Anastasiu, & Gavriş, 2020). Lassala et al. (2017) indicated that corporate sustainability derived from the practice of its social responsibility will influence financial performance. Jha and Rangarajan, (2020) and Aifuwa (2020) came out with a conclusion that companies with higher or lower sustainable performance will perform likewise in terms of financial entrepreneurship performance (FEP).

Kneipp et al.'s (2019) study indicated a positive relation between several variables related to SI practices and FEP. Phan et al.'s (2020b) findings contribute to the literature by indicating the effect of sustainability on the entrepreneurship performance in relation to emerging markets, stated through the disclosure of financial or non-financial data. According to Adams, Jeanrenaud, Bessant, Denyer, and Overy (2016), SI relates to varying philosophy and structural values. Lopez-Valeiras, Gomez-Conde, and Naranjo-Gil (2015) also indicated a positive relationship between SI and FEP. SI refers to a company's strategic and systematic attitude regarding economic, social (Phan et al., 2020b), and environmental aspects (Hussain, 2015) in addition to other features that may affect the FEP.

Based on the importance of SI, this study emanated to assess how the FEP of banks may affect the SI disclosure development due to the conflict of the results in previous studies. The significance of the study came to stipulate the relationship between the variables measured in the study and curtail the research gap of whether FEP may affect SI disclosures in Jordanian banks or not as an emerging market. In the meantime, this paper also contributes to the extension of domain

literature by using regression to increase the thoroughness of the analyses, which intends to predict future bank performance as a beneficial dimension to stakeholders and decision-making, through implying a forecasting exponential formula.

The rest of the research paper is structured as follows. Section 2 focuses on the literature review and hypotheses development. This section is followed by Section 3 indicating the sample of the study, the measurement, and variable proxies, in addition to the equations implied for the analysis. Section 4 presents findings results, and discussion. Section 5 provides conclusion, along with limitations, and recommendations for future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This research intends to help managers and financial statement stakeholders, based on either the data disclosed, or the FEP future predictions in providing users with FEP future predictions within an emerging market. Innovation is used as an element that helps identify the relations and benefits of further adoptive effective cooperation in a sector, as well as detecting and retaining allies. For example, Jiang, Yang, Zhao, and Li (2020) concluded that underestimating such alignment affects the expediting organization innovation. Meanwhile, the increasing variety of customers' demands and technology modifications are expected to affect bank managers in retaining and alluring prospective clients and other stakeholders into the banking business (Chai, Tan, & Goh, 2016) through entrepreneurship.

Innovation performance is a significant element that helps facilitate market performance (Dahms, Cabrilo, & Kingkaew, 2020). As revealed in Hahn's (2019) study, organization management has the influence to adopt the levels of financial control and calibration related to innovation practices and the level of expenditures they are willing to expand on such accounts. Entrepreneurship, especially banks and financial companies are keen to diversify the sources of competitive advantages by introducing new products and developing competitiveness, innovation, and creativity. However, the interest in entrepreneurship issues began to increase and enterprises are turning towards the so-called "sustainable innovation". Therefore, entrepreneurship is developing many strategies to create and integrate an accepted sustainable innovation environment, which makes and promotes the sustainable development of banking services (Weng, Chen, & Chen, 2015).

The following sections came to clarify the exogenous and endogenous variables, and how they may be related, as this research contradictory direction of variables creates inimitability through disclosing information. As the disclosure of data is one of the critical matters that attracted the attention of managers and researchers in accounting, administrative matters are increasing dramatically, especially in the field of banks and financial companies (Bose, Khan, Rashid, & Islam, 2018).

2.1. Sustainable innovation (SI)

Innovation as mentioned previously is a new successful influencer that helps economies develop and sustain. Societies and individuals present the association between the production of goods and services associated with innovation (Palmié, Wincent, Parida, & Caglar, 2020); where, sustainability disclosure is the world's main current concern (Tvaronavičienė, Shishkin, Lukáč, Illiashenko, & Zapototskiy, 2017).

To be more specific, financial innovation is an important part related to the financial sector enhancement (Khuong, Shabbir, Sial, & Khanh, 2020). Financial innovation is also known as an intermediary that may support upsurge consistency and transparency (Fontin & Lin, 2019). The financial sector furthermore proved to be essential in relation to sustainable improvement (Nizam, Ng, Dewandaru, Nagayev, & Nkoba, 2019). Even though FEP reporting disclosures are mandatory but may not include all information required by users to be disclosed, some voluntary SR appeal to an increased number of outside users (Oncioiu et al., 2020). Several stakeholders also base their decisions on enterprises that are either socially responsible or environmentally friendly (Ching, Gerab, & Toste, 2017) in relation to sustainability.

Organizations are expected to retain stability by concentrating on the intensity and the change of technological knowledge in order to reach higher innovative performance (Guo et al., 2020). Based on the innovation theory, new competitors may provide more manageable and economical goods and services through competitive innovative technology methods (Phan, Narayan, Rahman, & Hutabarat, 2020a). Banking expanded rapidly over the past period in emerging countries by persuading the development of the banking systems (Léon & Zins, 2020), actually requiring amendment or enhancement of the disclosure preparation affecting the type of accounts disclosed, especially those related to the intellectual and innovative performance. As Schoenmaker and Schramade (2019) mentioned, it may be prudent not to standardize creativity and innovation when disclosing accounting information in the financial reports.

Some studies engendered inadequate results that strengthened permanent intellectual arguments about those most constructive to innovation (Medase, 2020). It is verified in Meles et al.'s (2016) study that intellectual capital competent expenditure in general and innovation in specific affect the FEP of the US banking sector. On the contrary, Phan et al. (2020b) illustrated a negative relationship between the growth of financial technology innovation and bank performance in Vietnam. In the meantime, and in relation to the direction of this research variable directions, Nnamani, Onyekwelu, and Ugwu's (2017) study reveals that SI disclosure has a positive significant effect on FEP.

This literature is the only study found based on the researchers' point of view that allies with its exogenous and endogenous variables. From here came the main idea of the study to test the change in the SI disclosure and based on previous studies and the variables and elements disclosed in the Jordanian banks' financial reports, this study divided innovation elements into two main indicators, which are the banks' intangible assets (IA) and research and development (R&D).

2.1.1. Intangible assets (IA)

Intangible assets (IA) are with no physical substance in nature, even though, they have antipathy characteristics compared to tangible assets. Both types of assets are essential for the necessity of organization survival. Efficient and reasonable improvements are rather based on IA, not the tangibles (Oppong & Pattanayak, 2019). IA such as proficiencies and data proved to represent a basis of existent economic values for organizations (Gao & Hitt, 2012; Medase, 2020).

Bank managers tend to rely on the important roles of intangibles that implement the formation significance procedure, as intangibles substantiated a precarious source of viable benefit (Chen, Danbolt, & Holland, 2018). However, Andonova and Ruíz-Pava (2016) indicated that IA explain an insignificant share of the total variance of organization performance, measured by adding IA as a reasonable expedient.

2.1.2. Research and development (R&D)

Research and development (R&D) is an improvement intended to produce new or enhanced technology providing an economical benefit or growth of the enterprise or even the industry. Performing a harmonized practical valuation for R&D disclosures might assimilate organizations' customary measures of voluntary disclosure (Coluccia, Dabić, Del Giudice, Fontana, & Solimene, 2020). Based on that the definition of R&D, it may be used in pragmatic research as an innovation proxy (Ho, Huang, Shi, & Wu, 2018). R&D is mainly a key issue in manufacturing companies, causing a high level of pursuing to endorse eco-innovation (Kobayashi et al., 2011). R&D unit tries to create perceptions and products that allow companies to perform in a unique way where competitors cannot replicate and consider the key element concerning productivity and social welfare.

Research results reveal that the less the organization is willing to spend on its employees either through training or any other aspect; this will affect the organizations' innovation activities negatively by reducing its innovation achievements for more R&D intensiveness (Howell, 2016). In specific and in relation to banks and financial businesses, R&D affects the quality, nature of contributions, and generation of innovation (Fatima, Fatima, & Fatima, 2018).

2.2. Banks' financial entrepreneurship performance (FEP)

Mainly in countries with inadequate financial development, the quality of the banking system and extinguishment services in relation to inclusion and competition are necessary to endorse entrepreneurship performance (Chauvet & Jacolin, 2017). Based on the conceptual framework, the purpose of financial reporting is to provide useful information for both the shareholders' and stakeholders' decisions (Sutopo, Kot, Adiati, & Ardila, 2018). Bataineh, Abed, and Suwaidan (2019) stated that the process of financial performance measurement mainly aims to identify the financial strengths and weaknesses in the organization. It helps management predict how successful the enterprise is in the long and short run and at the same time achieve growth.

Banks engage their influence over their borrowing organizations by emancipating them when facing financial constraints. However, when banks lose their financial capabilities, their power will decline and will be unable to rescue any enterprise (Sasaki & Suzuki, 2019), even though preference aggregation and beneficiaries support the market and investment decisions (Delsen & Lehr, 2019). Competitive banks are found to favor organization growth only at high levels of financial inclusion. Financial entrepreneurship is well known as the main entrance to world development; as proved by Nizam et al. (2019), financial capabilities have a significant positive influence on bank FEP in most estimation models controlling for both bank-specific and macroeconomic variables.

ROA and ROE proved to be effective and efficient indicators examining bank performance regardless in developed or developing countries (Oino, 2018; Srouji, Ab Halim, Lubis, & Hamdallah, 2016; Robin, Salim, & Bloch, 2018; Hamdallah, Srouji, & Abed, 2021). Banks' specialization in financing innovation mitigates the impact of bank distress on innovation (Spatareanu, Manole, & Kabiri, 2019); assuring that such a technique may influence the stakeholders' investment or credit decisions, based on the FEP disclosures (Hamdallah, 2012). Most importantly, it bridges a gap in the literature by utilizing bank FEP indices as exogenous variables on SI disclosures as endogenous variables, deliberating that all variable disclosures were mandatory in both periods based on Amman Stock Exchange market rules and regulations. To our knowledge, an exhaustive examination of such relationship is understudied. Validating the purpose of this study based on the previous literature, it came to derive the following hypotheses:

H1: There is a relationship between the Jordanian banks' FEP and the SI disclosures in 2008.

H2: There is a relationship between the Jordanian banks' FEP and the SI disclosures in 2018.

3. STUDY DESIGN AND METHODOLOGY

3.1. Sample selection

Banks take an important role in retaining economic growth and attaining sustainable improvement through financial activities and investment decisions for economic and social development projects (Singh, 2000). Evidence from banks in an emerging country as Jordan is tested whereas Jordanian banks are known as the largest capital sector affecting the economy, in addition to performing through a high internal control and authoritarian corporate governance based on Amman Stock Exchange and Central Bank of Jordan rules and regulations when compared with other performing sectors (Hamdallah, 2012; Hamdallah et al., 2021). Disclosed data of 15 Jordanian banks is analyzed based on SI and FEP disclosures for the fiscal years ended on December 31, 2008 and 2018 respectively. The two periods have been chosen, as there is a consistency and homogeneity in the sample, as after and before this period new banks opened or closed or even some merged. The idea was only to test this period, in favor of its increasing in the future. However, interviewing the financial managers of each bank may also give information related to such relationship, but the rigidity to reach such personals in all banks came as a border that could not be used

in this study to improve the results by using both primary and secondary data. So the test of the two altered time eras, 2008 and 2018, is based on the idea that SI actually altered dramatically worldwide, but the core enquiry was to indicate whether the FEP of the banks actually made a difference or not in this disclosure. Financial markets tend to control the idea that corporations with obvious solid financial positions are better managed and directed for analysis (Wei, Nan, & Wei, 2020); therefore, Bank Safwa is excluded from the analysis as it was sold twice to different owners and its name changed three times within the period. Data is collected and deliberated as SI is engaged as the dependent variable, while ROA and ROE are indicated as the independent variable proxies in relation to the bank's FEP (Vu, Phan, & Le, 2018).

Based on Zraqat (2019), SR is voluntary disclosures based on their strategic alignments based on the understanding of the importance of such disclosures. In particular, this study used Jordanian commercial banks as the research sample based on their high internal control and the competition levels in comparison with other sectors in Jordan.

3.2. Paradigm equations

The model demonstrates SI as the endogenous variable in the multiple regression equation (based on IS and R&D indicators) based on Mollaahmetoğlu and Akçalı's (2019) study. R&D indicators are based on three main sub-variables, which are employee training, research costs, and technical and vocational costs, as these variables are constantly disclosed in the financial reports for the period from 2008 to 2018. Based on previous studies, bank's performance is measured by ROA and ROE and demonstrated in this study as the exogenous variables (Zyadat, 2017; Sueb & Machmud, 2020). Categorical variables are used in the regression model as dummy variables to indicate whether they are disclosed or not and in which manner: where 0 if an item is not disclosed, 1 is allocated to items disclosed in a narrative form, 2 in a numerical form, and 3 if disclosed in a monetary form. Table 1 states the definitions of the proxies of all the exogenous and endogenous variables.

SI regression for the periods 2008 and 2018 is as below:

$$SI_{2008} = \beta_0 + \beta_1(ROA) + \beta_2(ROE) + \varepsilon \quad (1)$$

$$SI_{2018} = \beta_0 + \beta_1(ROA) + \beta_2(ROE) + \varepsilon \quad (2)$$

where, SI is a dependent variable, β_0 is intercept, β_1 and β_2 are regression coefficients of the explanatory variables, and ε is an error term.

However, as the study intends to predict future bank's performance, the forecasting exponential formula is:

$$FROA_t = \alpha A_{t-1} + (1 - \alpha)F_{t-1} \quad (3)$$

$$FROE_t = \alpha A_{t-1} + (1 - \alpha)F_{t-1} \quad (4)$$

where, F_t is the forecast of (ROA, ROE) on behalf of year t , α is the smoothing constant, A_{t-1} is the preceding periods' actual (ROA, ROE), F_{t-1} is the preceding periods' forecast (ROA, ROE).

Table 1. Definitions and proxies of variables

<i>Variables</i>	<i>Operational definition</i>	<i>Reference</i>
Endogenous variables		
<i>Sustainable innovation (SI)</i>		Mollaahmetoğlu and Akçalı (2019)
<i>Intangible assets (IA)</i>	Assigned as 0 if an item is not disclosed, 1 to items disclosed in a narrative form, 2 in a numerical form, and 3 in a monetary form	
Research and development (R&D) costs including the following		
<i>Employee training</i>	Assigned as 0 if an item is not disclosed, 1 to items disclosed in a narrative form, 2 in a numerical form, and 3 in a monetary form	
<i>Research costs</i>	Assigned as 0 if an item is not disclosed, 1 to items disclosed in a narrative form, 2 in a numerical form, and 3 in a monetary form	
<i>Technical and vocational costs</i>	Assigned as 0 if an item is not disclosed, 1 to items disclosed in a narrative form, 2 in a numerical form, and 3 in a monetary form	
Exogenous variables (bank performance)		
<i>Return on assets (ROA) Net income/Total assets</i>	Assigned as 1 if above market average and 0 if below	Vu et al. (2018, p. 521)
<i>Return on equity (ROE) Net income/Total equity</i>	Assigned as 1 if above market average and 0 if below	Vu et al. (2018, p 521)

4. FINDINGS, RESULTS, AND DISCUSSION

After gathering data from Amman Stock Exchange from 15 Jordanian banks, as named in Table 2, from

the annual reports of periods ended 2008 and 2018, for the descriptive and multiple regression analyses, the results came as follows:

Table 2. Jordanian banks

<i>No.</i>	<i>Name of bank</i>	<i>No.</i>	<i>Name of bank</i>
1.	Bank al Etihad	9.	Housing Bank
2.	Capital Bank	10.	Jordan Islamic Bank
3.	Arab Bank	11.	Arab Banking Corporation (Societe General)
4.	Arab Jordan Investment Bank	12.	Jordan Commercial Bank
5.	Jordan Ahli Bank	13.	Islamic Arab Bank
6.	ABC Bank	14.	Invest Bank
7.	Bank of Jordan	15.	Jordan Kuwait Bank
8.	Cairo Amman Bank		

Source: Amman Stock Exchange.

4.1. Descriptive statistics

The descriptive indicators of the variables are clarified based on values of minimum and maximum amounts, mean and standard deviation. Results exposed SI variables mean of 2.0667, 1.8000, 2.0000, 2.5333 for the period ending 2008 in relation to intangible assets, employee training, scientific research, and training support respectively. Result inquiry also indicated that the average ROA and ROE for the year ended 2008 are 0.4000 and 0.4000, respectively. For 2018, the mean of the dependent sub-variables are 2.4667, 2.5333, 0.7333, and 0.6667

respectively. Indicating an increase in both intangible assets and employee training disclosures, meanwhile, there is a high decrease in the level of disclosure in research and technical and vocational costs, which is due to the type of mandatory and voluntary disclosures change throughout the periods (Wasara & Ganda, 2019). On the other hand, ROA and ROE mean are 0.6667 and 0.3333, correspondingly for the year 2018. Even though ROA increased, however, ROE decreased due to the high levels of net income during the period and constancy of shareholders equity as stated in Table 3.

Table 3. Variable descriptive analysis

<i>Variables</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Standard deviation</i>
<i>ROA2008</i>	0.00	1.00	0.4000	0.50709
<i>ROE2008</i>	0.00	1.00	0.4000	0.50709
<i>INTANGIBLES2008</i>	1.00	3.00	2.0667	0.59362
<i>EMPEETRAIN2008</i>	0.00	3.00	1.8000	1.08233
<i>SCIENRESCH2008</i>	0.00	3.00	2.0000	1.06904
<i>TECHVOCOST2008</i>	1.00	3.00	2.5333	0.63994
<i>ROA2018</i>	0.00	1.00	0.6667	0.48795
<i>ROE2018</i>	0.00	1.00	0.3333	0.48795
<i>INTABGIBLES2018</i>	2.00	3.00	2.4667	0.51640
<i>EMPEETRAIN2018</i>	2.00	3.00	2.5333	0.51640
<i>SCIENRESCH2018</i>	0.00	2.00	0.7333	0.59362
<i>TECHVOCOST 2018</i>	0.00	2.00	0.6667	0.61721

4.2. Hypotheses testing results

Multi-regression analysis outcomes, as stated in Table 4, exemplify adjusted R^2 used to test the models' extrapolative aptitude. Adjusted R^2 outcomes indicate that the amalgamation of

the exogenous variables explains approximately 44% of the endogenous variables change for the year 2008; meanwhile, the adjusted R^2 is almost 23% for the year 2018. The F-model is 6.410 confirming the ability of the model to explain the alteration of the endogenous variable for the year 2008 at

a p-value ≤ 0.05 . However, the model is significant at a p-value ≤ 0.1 for the year 2018 by an F-model 3.061 (0.084).

The ROA in the model outcome analyses is significantly positive in relation to the endogenous variables ($\beta = 0.962$, t-value = 3.263, p-value = 0.007), revealing a significant association concerning the FEP and SI disclosure. Meanwhile, ROE is negatively insignificant, where $\beta = -0.038$, t-value = -0.131, p-value = 0.898. Even though the model is significant at a lower level for the year 2018, ROE is positively associated with SI indicators at p-value = 0.029, where $\beta = -0.500$, controverting the results in relation to ROA for the year 2008. Concluding, the model illustrates a positive significant association between the exogenous FEP indicators in general and ROA in specific for the year 2008 on the endogenous SI variables. Meanwhile, in 2018, FEP in general and ROE in specific has a positive significance on SI variable, all at $\alpha \leq 0.05$.

As SI is generally affected by the Jordanian banks through IA and R&D, it is vital that governments generate new mechanisms to promote R&D projects taking into consideration that the financial institutions cannot measure the innovation project risk in an exact manner (García-Quevedo, Segarra-Blasco, & Teruel, 2018). In such an intervening time, technological innovation plays an imperative part in stimulating the passion influencing stakeholders' and shareholders' decisions based on the FEP disclosures (Pan, Uddin, Han, & Pan, 2019), which was proved to affect small banks in a greater manner than the big ones (Scott, Van Reenen, & Zachariadis, 2017). Exploration is known as a key mediator that helps managers create sustainable innovativeness into enhanced FEP (Wang & Dass, 2017), meanwhile, innovation disseminate performance association is subjective for external SI relations (Edeh, Obodoechi, & Ramos-Hidalgo, 2020). Meanwhile, García-Quevedo et al. (2018) indicated that the relinquishment of an innovation development does not essentially indicate a failure. Nevertheless, the disclosure of such data enhances decision-making by providing useful implications to stakeholders and shareholders (Partalidou et al., 2020). Nizam et al. (2019) examined the impact of access to finance and environmental financing as a sustainability indicator on the financial performance of the banking sector globally and came out with a positive impact on financial performance, which is channeled through loans growth and management quality.

On the other side, Whetman (2018) indicated that SR in the US has a significant influence on profitability in the short run. Laskar (2019) stated that the association is positive and significant based on regression results for South Korean firms; though, in India, the influence of sustainability disclosure is negative. Organizations' financial environments stimulate the association amending organizations' innovation and their persistence through the current economic crises; and performing in an innovative manner will still give them the benefit of advanced prospects than others

to survive such crises (Cefis, Bartoloni, & Bonati, 2020). However, Zhu, Asimakopoulos, and Kim (2020) illustrate that the extension of the banking sector may affect its innovative activities disclosure in a negative manner instigating growth and sustainability. As Zrnić, Starčević, and Crnković (2020) indicated that there are weak representations of sustainability in corporate reports in general.

Table 4. Multiple regression results

	Unstandardized β	Standardized β	T (sig.)
Constant	1.731		9.652 (0.000***)
ROA2008	0.962	0.731	3.263 (0.007***)
ROE2008	-0.038	-0.029	-0.131 (0.898)
ROA2018	-0.250	-0.336	-1.237 (0.240)
ROE2018	0.500	0.671	2.474 (0.029**)
R2008	0.719		
Adj.R ² 2008	0.436		
F-model (sig.) 2008	6.410 (0.013**)		
Durbin-Watson	1.974		
R 2018	0.581		
Adj.R ² 2018	0.227		
F-model (sig.) 2018	3.061 (0.084*)		
Durbin-Watson	3.316		

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

**Correlation is significant at the 0.05 level (2-tailed).

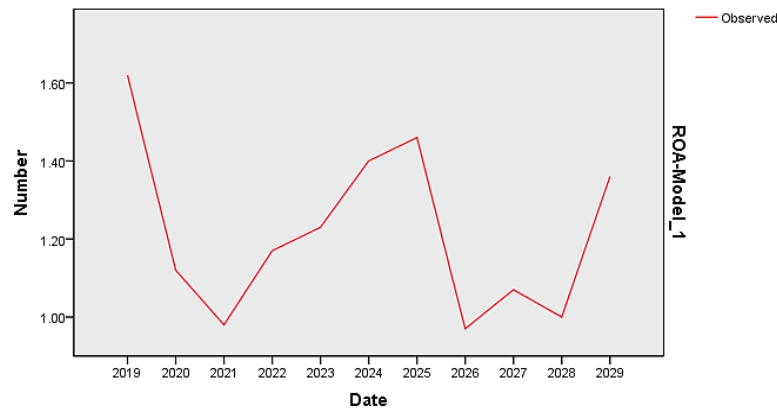
* Correlation is significant at the 0.10 level (2-tailed).

Jha and Rangarajan (2020) results stated that firms with higher or lower sustainable performance will perform likewise in terms of financial performance, which was also proved by Aifuwa (2020). As SI is a bustle to upsurge clearness, responsibility and accountability on disputes are not related to customary financial reporting disclosures (Sueb & Machmud, 2020). Many stakeholders envisage the disclosure of non-financial data as prominent to pellucidity, confirming an unblemished vision of sustainability (Carp, Păvăloaia, Afrăsinei, & Georgescu, 2019). It is important for the business to create SR as it mainly responds to the public or stakeholders' desires, as a strategy to increase FEP in the future (Clarissa & Rasmini, 2018).

4.3. Forecasting results

Data is collected from the period 2008 and 2018 for both ROA and ROE, in order to prepare the forecasting analysis from the period from 2019 to 2029. As it is clear from Figures 1 and 2, banks' FEP for both ROA and ROE is expected to decrease for the coming year, as it has been declining in a steep manner from 2019 until now and will continue its decrease for 2021. However, it is expected that the banks' FEP based on market averages will increase again in 2025, though it will not reach its highest peak in 2019 for both ratios. After that market performance, averages based on the ratios will start decreasing for the years 2026 and 2028 and then reverse their direction once again upwards for the year 2029.

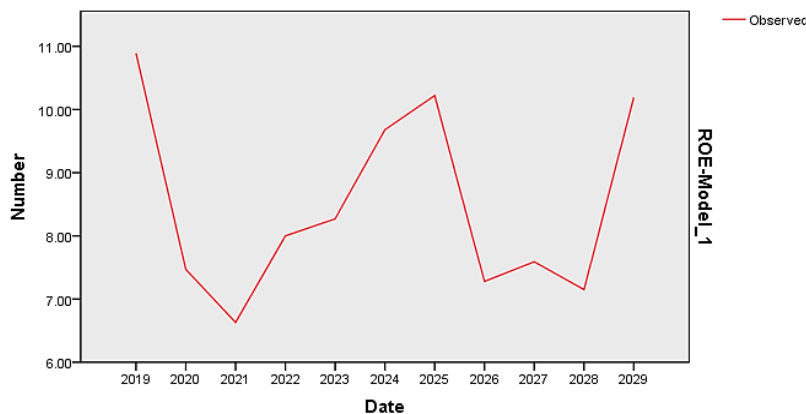
Figure 1. Forecasting model: ROA (2019–2029)



Most importantly, this study attempts to conclude a bridge interrelation between the literature gap via applying the variables and their indicators to help the developing economies continue their entrepreneurship growth in the future. In relation to Indian enterprises, Garg's (2015) study displays that SR practices and disclosures improved over time. However, sustainability disclosures are obligatory for

numerous departments to track, measure, plans and implement corporate activities in the future (Sueb & Machmud, 2020). Nevertheless, the authors hope that this study will provide a contemporary relevant perspective on how banks' FEP affects the sustainable financial disclosures related to innovation in future report disclosure based on the forecasting results of this study.

Figure 2. Forecasting model: ROE (2019–2029)



5. CONCLUSION

This study debates the role of FEP and how it may affect the disclosure of the SI indicators. The endurance results of this study indicate that Jordanian banks' FEP affects the disclosure of the SI indicators through IA and R&D, where endurance significantly depends on the financial variables considered, that is also indicated as a result in Cefis et al.'s (2020) study. Such results may help management in Jordan and elsewhere to induct the innovation proficiency toward leading into more efficient innovation outcomes and serving better performance as also mentioned by Rajapathirana and Hui (2018), and not affecting the stakeholders' and shareholders' decisions (Zyadat, 2017; Ali, Hameedi, & Almagtome, 2019). FEP and SI disclosures intend to increase the essential interest of entrepreneurship, which is the well-being of stakeholders based on potential opportunities in a competitive market and at the same time enhance business performance (Singh & Misra, 2021).

Therefore, studies should focus on the idea that not only financial admittance is decisive in avoiding the failure of innovative projects, but it also directly affects technical knowledge and market conditions, all related to financial and non-financial information.

The greatest weakness of this study is its reliance mainly on two different eras of collecting data, but relevancy is based on the comparability purpose of these different time periods. Nevertheless, sustainability and financial performance are variables previously overlooked, yet this study actually is based on the idea of whether the financial performance affects the sustainability disclosures or not over time, as it was found as the main issue missing in the reports and disclosures. Zyadat's (2017) and Ali et al.'s (2019) studies indicated that SR did not affect the economic decisions of investors, which may be the result of the very significant reduction in the rates of SR disclosures in businesses, which may elucidate this inquiry outcomes.

However, Fitriasari (2020) stated that digital transformation occurs as soon as new digital skills emerge and tools are implemented. An accurate digitalization strategy is required to achieve any organization's objectives. Therefore, it is suggested restraining the relationship between sustainability disclosure and its effectiveness on the stakeholders regarding any changes in the business (Yassin, 2017; Wasara & Ganda, 2019). Meanwhile, Huissan (2015) and Phan et al. (2020b) studied the influence of environmental and social factors of sustainability claiming that they remain pertinent regarding FEP. Furthermore, organizations may add to the test how greater performance may affect the social pillars of corporate social responsibility (Srouji, Abed, & Hamdallah, 2019; Govindan, Kilic, Uyar, & Karaman, 2021) based on the newly SI intentions and necessities due to changeable indispensable desires

based on market and stakeholders stimulus. Touboul and Kozan (2020) stated that stakeholders' evaluation of sustainability is biased by a lack of commensurability, as the construct of sustainability performance is not measured by a common standard.

All these variables can be tested in the future in addition to adding new aspects, related and determined to COVID-19 and the pandemic that enclosed the world in 2020 and still is. Such factors and their influences may help indicate new outcomes, which will possibly conclude or already may have exaggerated the banking sector FEP in addition to SI, creativity, and using technology. At the same time, new elements and their indices may correspondingly influence and affect the entrepreneurship growth of emerging markets and developing economies in general.

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