

**A Review of Subjective Measures of Small and Medium  
Enterprises (SMEs) Performance  
A Case of Pharmaceutical SMEs**

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**Abstract**

*In the current social and environmental challenges for SMEs, performance measurement systems need to be improved with multiple measures including objective as well as subjective measures. In the literature, performance measurement is largely focused but limited literature is available regarding subjective measures where objective measures are limited. The current study evaluates the importance of performance measurement and provides a critical literature review on the use of subjective performance measures. To further elaborate the use of subjective measures in the absence of objective measures, feedback was obtained from 60 pharmaceutical SMEs owners/managers via questionnaire and purposive sampling technique. The results of the current study revealed that due to difficulty in obtaining actual financial data and deficiency in the objective measures in SMEs', subjective performance measures are best to use for their performance measurement. The study recommends a more in-depth search to evaluate subjective performance measurement.*

**Keywords:** *Performance Measurement System, Subjective Measures, Objective Measures, SMEs*

**Introduction**

Small and Medium Enterprises (SMEs) play a significant positive role in the economic development of developed as well as developing countries. It has been reported that SMEs contribute to a high rate of establishment and estimates 40% contribution in the gross domestic product (GDP) in the national income and more than 60% in the total employment of emerging economies (Ndiaye, Razak, Nagayev, & Ng, 2018). Due to the high investments and increased number of employment opportunities, SMEs development is now considered the national agenda of every government (Mustapha & Sorooshian, 2019). Like other developing countries SMEs play an important role in the economic development of Pakistan and contribute 40% in the national GDP, 25% in the exports, 80% employment of non-agriculture workforce, and 35% in value-added manufacturing (Arshad & Arshad, 2019). It is further defined that dynamic SMEs

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provide a strong base for the sustainable development of the economy in developing countries (Ali, Mad Lazim, & Iteng, 2021).

On one side SMEs play an important role in economic development, while on the other side the failure ratio of SMEs increased at a great number. This is the problem both in the developed and developing countries. Regardless of the supportive programs and facilities from the government side, the failure rate is increasing day by day (Rahman, Yaacob, & Radzi, 2016). According to the literature, the failure rate of SMEs in Pakistan even reached 95% in the first five years of establishment (Qurashi, Khalique, Ramayah, Bontis, & Yaacob, 2020). Shahid, Maryam, and Benazir (2021), further confirmed the low growth figures of SMEs in Pakistan particularly in the Khyber Pakhtunkhwa (KP) province of Pakistan. Besides the various other factors and environmental challenges, performance measurement (PM) is an important issue that affects the owners/managers' decision-making process. In the current economic environment, business PM is a critical issue for both research scholars and business managers (Zulkiffli, 2014). Currently, more attention has been given to designing a new performance measurement system (PMS) (Vij & Bedi, 2016), furthermore, the interest of researchers increased in this area due to the cut-throat competition (Ogunsiji & Ladanu, 2017).

Until now numerous PMS have been developed and introduced like performance pyramid or Strategic Measurement and Reporting Techniques pyramid by Cross and Lynch (1988), the performance measurement matrix (PMI) by Keegan, Eiler, and Jones (1989), the Balanced Scorecard by Kaplan and Norton (1996), the macro process model by Brown (1996), performance prism by Neely, Adams, and Kennerley (2002), and closed-loop management system by Kaplan and Norton (2008). In most of them, not only financial measures were discussed, but non-financial measures also were used for performance measurement (Vij & Bedi, 2016).

Although various PMS have been introduced, however, regarding SMEs in Pakistan, limited literature was found where objective and subjective performance measures have been evaluated. According to Tom, Richrd, and Joseph (2021), firm performance is defined in several ways, such as by measuring the success or failure of the business in the achievement of targeted goals. Business performance is the overall picture of the firm success and the ability of the firm to satisfy its stakeholders. Whereas subjective and objective performance is measured through primary and secondary data (Vij & Bedi, 2016). However, there is a big challenge for researchers and practitioners as well as SMEs owners/managers to select appropriate measures between objective and subjective measures for performance measurement.

Moreover, due to the SMEs owners and managers' unwillingness in publishing the financial data of the business, it is very difficult for research scholars and practitioners to examine the SMEs performance (Zulkifli, 2014). Similarly obtaining reliable data on objective measures for the complete sample of the firms is also difficult (Singh, Darwish, & Potočnik, 2016). Anwar (2018) has further defined that SMEs are not bound nor agree to publish their financial data as well as accounting information to the general public. According to the literature, researchers, practitioners, and SMEs managers/owners face various problems in SMEs performance measurement due to the difficulty in obtaining financial data and deficiency in objective measures. Thus, the objective of this research endeavor is to explore the importance and use of subjective performance measures where objective measures are limited. More specifically, in the current study, the following research questions (RQ) were addressed.

RQ No. 1        What measures were used to evaluate the SMEs performance?

RQ No. 2        What performance measures can be used to evaluate the SMEs performance in the absence of objective measures?

## **Literature Review**

### *SMEs Definition*

SMEs are defined in various countries based on the number of employees, the value of assets, sales value, and output. However, it varies from country to country and even within the country (Dar, Ahmed, & Raziq, 2017). According to the Small and Medium Enterprise Development Authority (SMEDA), in Pakistan, the businesses having up to 250 employees, up to 250 million paid-up capital and 250 million annual turnovers are considered SMEs (Khalique, Isa, & Nassir Shaari, 2011). It is further defined that the definition of SMEs must not be extended beyond 250 employees in the business. Additionally, Pakistan needs to define SMEs with a standard definition that benefits the economy of the country and is recognized around the globe (Dar et al., 2017). Based on the definitions available in the literature and provided by SMEDA, the number of employees was considered to define SMEs in the current study.

### *Importance of SMEs*

Nowadays SMEs are playing an important role as these are operating in all sectors of the economy (Haider, Asad, & Fatima, 2017). A huge number of people depend on SMEs, and most of the large enterprises start their journey as SMEs (Mahmudova & Kovacs, 2018). SMEs contribute in the five main areas like creating employment opportunities, the adaptation of new situations,

entrepreneurship encouragement, product differentiation, and supporting large enterprises, while among these five contributions, employment creation has more importance (Erdin & Ozkaya, 2020). The contribution of SMEs in high, low, and middle-income economies is 55%, 60%, and 70% respectively (Zafar & Mustafa, 2017). According to Shah and Syed (2018), SMEs play a significant role in the economic development of Pakistan and contribute 40% in GDP, 40% in export, and 80% in non-agricultural employment.

### *Performance Measurement*

The importance of a performance measurement system is well known in the decision-making process of the business (Taouab & Issor, 2019). According to the literature, PMS plays a significant role in the growth/success of SMEs and the changing of the business objectives into the desired results (Wasniewski, 2017). Academic researchers and business-related personnel largely focused on the design and implementation of the modern PMS (Yadav, Sushil, & Sagar, 2014). Numerous scholars have recognized the importance of PMS in organizational development and translating strategies into action (Micheli & Mura, 2017). PMS is the process where business analyzes their performance with the targeted goals, assess the success of the business, and take necessary actions for the improvement of business success/growth (Lau & Sholihin, 2005). Furthermore, it is widely accepted that a successful business needs a comprehensive PMS which covers all aspects of performance measurement (Asiaei & Bontis, 2019). According to prior literature, researchers used different measures to assess the performance of the firm with particular settings (Ali et al., 2021).

Large scale businesses commonly used PMS as compared to SMEs where still PMS yet not gained much attention. According to research literature, PMS used in large businesses is not effective for SMEs due to the small size, irregular structure of management, and financing procedure. Furthermore, SMEs also lack the required skills and abilities to adopt the complex PMS of large businesses (Sousa & Aspinwall, 2010). In the current situation, numerous SMEs use PMS in the decision-making process (Chalmeta, Palomero, & Matilla, 2012). However, it has been further discussed that SMEs cannot adopt large organizations PMS due to traditional challenges, required skills, documentation procedures, and unclear vision and mission statements (Olaitan & Flowerday, 2017).

According to Ullah, Farooq, and Ahmad (2012), at the time of discussing the business PMS, experts preferred those indicators which help the business to evaluate their past and current performance. While most of them are based on accounting measurements like return on investment (ROI), return on assets (ROA), growth rate, and market share. Previous performance measurement indicators mostly focused

on financial-based indicators (Hernaus, Bach, & Vuksic, 2012). Furthermore, the success of business managers is mostly judged with financial achievement, therefore they mostly focused on the financial gain of the business (Nastasiea & Mironeasa, 2019). Similarly, sales, profit, assets, and market share growth are considered business performance indicators (Hikmah, Ratnawati, & Darmanto, 2021).

However, considering only financial-based indicators are not sufficient. Financial indicators are continuously changed with economic situations, report short-term goals, and do not explain full performance (Ghosh & Wu, 2012). Research scholars argued that profit is not always an absolute indicator for SMEs performance measurement (Zulkiffli, 2014). Despite, notable work to develop and improve financial-based indicators for improving the business performance, still it is difficult for SMEs to improve their performance (Mustapha & Sorooshian, 2019). It is further discussed that PMS depends on the way that how it covers different areas of performance like financial, nonfinancial, internal, and external (Schiehl & Morissette, 2000).

According to researchers, using only financial measures cannot cover all the objectives of the SME owners and managers to evaluate business performance. Chi and Ziebart (2017), further discussed in their study that most SMEs were not interested in growth and financial gain measurement. Different nonfinancial measures were also used to evaluate the success/growth of SMEs. Similarly, Lassoued, Attia, and Sassi (2017) also preferred nonfinancial measures due to the prominent indicators and deficiency in the financial measure in long-term planning. SMEs owners and managers take most of their decisions based on non-financial measures like innovations, product quality, production, and customer satisfaction, which are directly related to the financial performance of the business (Dimovski, Ratcliffe, & Keneley, 2017). Rashid, Ismail, Rahman, and Afthanorhan (2018), argued that SMEs cannot entirely depend on objective measures for performance measurement.

According to previous literature, SMEs scholars moved to subjective measures for evaluating business performance, due to the difficulty in acquiring financial data (Zulkiffli, 2014). Various research studies used subjective measures for business performance evaluation and argued the need for subjective measures as a substitute for objective measures. Dess and Robinson (1984), Dawes (1999), Wall et al. (2004), Kim (2006), and Zulkiffli (2014) are well-known pioneer researchers who distinguished subjective and objective measures with the help of indicators, measurement standards, and scales. However, several scholars also used different other terms for discussing objective and subjective performance. Adinezhadeh, Jaffar, Shukor, and Rahman (2018) distinguished it with quantitative and

qualitative measures, while Yazid et al. (2017) distinguished it in hard and soft measures and Lau and Sholihin (2005) into financial and non-financial measures.

**Table 1**  
*Difference between Subjective and Objective Measures*

Aspects (Differentiation)	Subjective Measures	Objective Measures
Indicators	Focus on the overall performance of the business.	Focus only on actual financial indicators of the business.
Measurement Standards	Respondents are enquired to rate the performance relative to their competitors.	Respondents provide actual financial data of the business.
Scale anchors	Scales are used for data collection.	Scales are not used for data collection.

Source: Zulkiffli (2014)

For business performance measurement, objective and subjective measures are normally used (Santos & Brito, 2012). In PMS subjectivity is known as an important part and supported in the analytical and empirical literature (Cheng & Coyte, 2014). Due to the positive relationship between objective and subjective measures of performance measurement, users often depend on subjective measures (Selvam, Gayathri, Vasanth, Lingaraja, & Marxiaoli, 2016). The use of subjectivity in performance measurement helps to overcome the shortcomings of objective measures (Fehrenbacher, Schulz, & Rotaru, 2018). It is further discussed that subjective measurement overcomes the issues in financial/objective performance measurement in a variety of industries and is useful for comparing multi-industry performance (Rashid et al., 2018).

Zeff, Van, Baker, and Gibbons (2013), has further discussed that subjective measurement is more valuable due to the easy utilization of relevant information for the assessment of employees' as well as business performance which cannot be objectively utilized (Dai, Kuang, & Tang, 2018). According to Woods (2012), subjective measures are used to add new information in performance measurement which is difficult to add objectively. Ahn, Hyun, Matejka, and Oh (2020), found a direct/positive relationship between the subjective and objective performance when performance falls below the objective targets. Beliaeva, Shirokova, Wales, and Gafforova (2020), have further discussed that subjective measures are widely used in SMEs performance measurement due to the SME's unwillingness to the disclosure of financial data.

## Methodology

In the current study, a thorough review of literature was conducted to explore different performance measures in SMEs. Related research literature from Journal papers, articles, and books has been reviewed for concluding deeper knowledge regarding objective and subjective performance measures in SMEs. Furthermore, a self-administered questionnaire was used to collect reliable and accurate data. A 5-point Likert scale was used in the questionnaire where from very poor to very good be included. The questions were constructed with the help of existing literature and finalized after the two academic experts from management and business administration and three SMEs managers' expert opinions regarding the clarity, relevancy, and coverage.

The population for the current study was Pharmaceutical SMEs in Pakistan, while the target population was Pharmaceutical SMEs operating in Khyber Pakhtunkhwa. According to the Pakistan Pharmaceutical Manufacturing Association (PPMA), 759 pharmaceutical SMEs are operating in Pakistan. Whereas, out of 759 pharmaceutical firms 114 SMEs are operating in Khyber Pakhtunkhwa (PPMA, 2017). The purposive sampling technique was used due to the time, cost, and accessibility issues. SMEs managers and owners were selected with strict criteria i.e. (1) the respondent must be the owner or manager of the business, and (2) the respondent must have a minimum of ten years of experience. Based on the criteria 60 respondents from pharmaceutical SMEs were finally selected for data collection. Descriptive statistics (count, percent, and frequency) were used in the study to examine the most rated measure between objective and subjective measures among the 60 respondents of the study.

## Results and Discussion

### *Summary of Literature*

As discussed in the literature review, various views were discussed about the subjective and objective performance measures. Numerous researchers preferred objective measures; similarly, there was also a large number of researchers who preferred subjective measures. However, several researchers also define the importance of both measures. In the following table (Table 2) 9 research studies have been listed that discuss the subjective and objective measures. Four studies, Fehrenbacher (2019), Dai et al. (2018), Vij and Bedi (2016), and Singh et al. (2016) concluded that both subjective and objective measures can be used to measure the business performance. Three studies, Ahn et al. (2020), Zulkiffli (2014), and Zulkiffli and Perera (2011) describe that subjective measures are accurate to measure the business performance where objective measures are limited. While

two studies Selvam et al. (2016) and Santos and Brito (2012) presented a subjective performance measurement model to measure the business performance.

**Table 2**  
*Summary of the Literature*

<b>Authors</b>	<b>Conclusion</b>
Ahn et al. (2020)	The study finds that subjective and objective measures are positively correlated; however subjective measures discourage the failure of the business.
Fehrenbacher (2019)	Recognizing the consequences and potential influence of both measures (subjective and Objective) to evaluate the performance is key for businesses to design PMS.
Dai et al. (2018)	According to the finding of the study, it is not perceived that objective measures to be more important as compared to subjective measures. Neither subjective measures compared to objective measures.
Vij and Bedi (2016)	The study concludes that both subjective measures and objective measures are accurate to measure business performance.
Singh et al. (2016)	According to the finding of the study, researchers have adopted both measures i.e. subjective and objective for performance measurement.
Selvam et al. (2016)	The study proposed a subjective measurement model for researchers and practitioners for the performance of the firm.
Zulkifli (2014)	It is demonstrated that subjective performance measures are accurate in the absence of objective data.
Santos and Brito (2012)	A performance measurement model has been presented in the study, to understand the impact of strategies on performance.
Zulkifli and Perera (2011)	Their results revealed that subjective measures are an appropriate alternative to objective measures

Source: Literature Review



### Results

To recognize the importance of subjective measures where the objective measures are limited, feedback was obtained from 60 respondents. The respondents were asked to mark the measures on a scale of 1. Very poor, 2. Poor, 3. Undecided, 4. Good and 5. Very good. Descriptive statistics were used to gain insight into the data, and to find which measure rated most among the study respondents.

### Background Information of the Respondents

In the following tables, the demographic / background information of the respondents was presented. According to table 3 majority of the respondents were male (93.33%, n=56) following the 6.67% (n=4) female respondents. The table further describes that most of them work as a manager (73.33%, n=44) in the business. According to the table in SMEs especially in pharmaceutical firms, the number of females was limited as compared to males. Furthermore, in the collected data most of the respondents are working as a manager in these firms.

**Table 3**  
*Background Information of Respondents*

Description	Number	Percentage	Cumulative percentage
Gender			
Male	56	93.33%	93.33%
Female	4	6.67%	100%
Position			
Owner	8	13.33%	13.33%
Manager	44	73.33%	86.66%
Both (Owner + Manager)	8	13.33%	100%

Source: Author own

Table 4 highlights the age, education, and experience of the respondents. According to data collected from 60 respondents, the table below indicates that 48% (n=29) were of the age of up to 50 years following the 45% (n=27) of the age of up to 40 years. The table further highlights the education level of the respondents according to which 85% (n=51) have a postgraduate qualification. Similarly, 53.33% (n=32) respondents have up to 15 years of experience following 40% (n=24) of 10 years of experience.

**Table 4**  
*Age, Education, and Experience*

Description	Number	Percentage	Cumulative percentage
<b>Age</b>			
Up to 40 Years	27	45%	45%
Up to 50 Years	29	48.33%	93.33%
More than 50 Years	4	6.67%	100%
<b>Education</b>			
Graduate	9	15%	15%
Postgraduate	51	85%	85%
<b>Experience</b>			
10 Years	24	40%	40%
Up to 15 Years	32	53.33%	93.33%
More than 15 Years	4	6.67%	100%

Source: Author own

*Response of the Respondents*

As discussed in the literature section different measures were used in businesses for measuring the performance and these are commonly known as objective and subjective measures. Whether subjective or objective, these adopted according to the business requirements. Referred to the study objective, the respondents were asked to mark the subjective measures and objective measures with a given Likert scale (5 point).

**Table 5**  
*Subjective Measures and Objective Measures*

Measure		Very Poor	Poor	Undecided	Good	Very Good
Subjective Measures	Number	4	8	4	36	8
	Percentage	6.7%	13.3%	6.7%	60%	13.3%
Objective Measures	Number	11	25	5	13	6
	Percentage	18.3%	41.7%	8.3%	21.7%	10%

Source: Author own

The results of Table 5 indicate that 60% (n=36) mark good to subjective measures. While 13.3% (n=8) of the respondents mark very

good to subjective measures. On the other hand, 41.7% (n=25) respondents mark poor to objective measures, and 18.3% (n=11) mark very poor to objective measures. However, 21.7% (n=13) mark good and 10% (n=6) mark very good to objective measures. To sum up, the results of the table indicate that the majority of the respondents preferred subjective measures due to the difficulty in obtaining financial data and deficiency in the objective measures.

### **Discussion**

The purpose of the current study is not to debate that subjective measures are more accurate than objective measures. According to existing literature, both measures are accurate and fit to measure business performance. However, it depends on the requirement of the business whether to use subjective measures or objective measures, or a combination of both. A detailed review is presented in the study to explain and describe the importance of subjective performance measures and to state that subjective measures are accurate to measure the business performance where the objective measures are limited. The results of the study further confirmed that subjective measures are mostly preferred due to the difficulty in acquiring objective data and deficiency in the available information.

### **Conclusion**

On investigating the available literature on PMS in SMEs, it is found that how various SMEs used performance measures to evaluate their performance. Furthermore, how firms measure their performance in the absence of financial data or objective measures. Most of the time, it becomes difficult for researchers to accurately measure SMEs performance with collected data through questionnaires or surveys, due to the errors and confidential nature of the data as well as accounting procedures. Therefore numerous studies like Ahn et al. (2020), Fehrenbacher (2019), and Zulkiffli and Perera (2011) suggest subjective performance measures as an appropriate alternative to objective measures. Furthermore, data have been collected from 60 respondents of pharmaceutical firms to further describe the use of objective and subjective measures. According to the collected data majority of the respondents preferred subjective measures due to the difficulty in acquiring objective (financial) data.

Based on the literature review and discussion of the study it is concluded that subjective performance measures can overcome the weaknesses in the objective measures. Furthermore, subjective measures are more useful where objective/financial data is limited. The results of the study further revealed that subjective measures have more importance in the performance measurement of firms specifically SMEs. However, the debate about the equivalency of subjective and objective measures is still there. Therefore the current

study recommends more detailed and empirical work on this area in the future. Summing up, the SMEs need more attention to developing subjective performance measures to overcome the problems in the objective performance measures.

Like other research studies, there are also some limitations in the current study. Such as, in the present study, data has been collected from a small sample size. Therefore, in future studies large sample size could be used to further elaborate the use of subjective measures. Second, a single-item scale was used in the survey employed in the current study. In future studies, multi items scale was suggested for further investigating the issue. However, despite these limitations, the current study positively contributes to the research literature on the importance of subjective measures. Helpful to the SMEs managers/owners and practitioners in the decision-making process, and provide future research suggestions to researchers.

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