

Balanced Scorecard (BSC) Usage and Financial Performance of Branches in Jordanian Banking Industry

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Abstract—The purpose of this paper is to contribute to the body of knowledge in the area of management accounting, particularly performance measurement systems within the BSC framework, by investigating empirically the extent of multiple performance measures usage and their effects on the financial performance of Jordanian banks in the branches level. Nevertheless, the result of this study shows that the non-financial measures usages, particularly, customer oriented indicators and product/ service oriented indicators, appears to be important as it enhances firm performance. Remarkably, the findings reveal that there is positive relationship between the usages of multiple performance measures via overall BSC measures and financial performance in the branches level.

Keywords—Performance measurements systems, Balanced Scorecard, Jordan.

I. INTRODUCTION

THESE days, firms are susceptible to employ specific performance indicators apt to their requirements and situation. Many of the firms include main performance indicators which include some combination of financial; market/customer; competitor; human resource; internal business process; and environmental indicators [1]. Frequently however, financial or accounting-based measures have always been the point up in performance measurement despite the certain drawbacks closely linked with such approach. Specifically, there are some limitations in usage of financial measures alone, such as their inherently backward-looking nature, their limited ability to measure operational performance and their tendency to focus on the short-term [2,3].

Therefore, strong dependence on financial measures alone in presenting the true picture of an organizational performance is in itself backward looking, especially as industries and firms are confronted with increasing expectations from a variety of stakeholders. Thus, an organization requires more from its performance measurement system than ever before [3]. Prior to that, a selection of performance measurement indicators has been identified. They should be Driven from strategies and provide a linkage between business unit actions and strategic plans; Hierarchical and integrated across

business functions; Supportive of the company's multidimensional environment (internal or external and cost-based or non cost-based); and Based on a thorough understanding of cost relationships and cost behavior [4,5].

In order to adapt to internal and external changes, the method of monitoring performance should be dynamic. As a response to these recommendations, multiple frameworks that adopt a multidimensional view of performance measurement have been developed, most notable of which has been the Balanced Scorecard (BSC) developed by [6,7]. The Balanced Scorecard deals with the need for multiple measures of performance and offers a strategic framework, which specifically encourages the use of both financial and non-financial measures along four perspectives - financial, learning and growth, customers, and internal business processes - to measure firm performance [8]. In both research and practice, the BSC has inward much attention, particularly as a strategic performance measurements system in many industries, including hospitality, health, manufacturing and banking [9,10,11,3]. According to [7,8] "the balanced scorecard translates an organization's mission and strategy into an extraordinary, comprehensive set of performance measures and provides the framework for strategic measurement and management".

Although a widespread of practitioner has interest in BSC in the manufacturing industry, yet, little empirical research has been conducted on the implementation or performance consequences of its concept [12] in service sector like banks and most of those studies taken place in developed countries only. Moreover, [13] also noted that the "performance effects of the balanced scorecard and other value driver techniques remain open issues". Consequently, this study attempts to contribute to the body of knowledge in the area of management accounting in general and performance measurement system specially, by focusing on issues relating to multiple performance measures within BSC framework. Foremost, the aim is to explore the scope of four perspectives of BSC usage among Jordanian banks in branches level. Second, an effort is made to explore the performance cost by investigating the effect of multiple performance measures usage on financial branches performance. The paper is organized as follows. First, a BSC brief literature review, in particular, is presented. In addition, hypothesis pertaining to the relationship between multiple performance measures usage and firm performance is then developed based on facts from the related literature. Second, description of research

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methodology, continued by a thorough discussion of the results, and finally concluded. The last section presents the limitations of the current study and fertile avenues for future research.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The framework provided by BSC encourages usage of both financial and non-financial measures of performance, allowing the organization to pinpoint its strategic objectives via balancing four perspectives - financial, learning and growth, customers, and internal business processes - to measure firm performance [6,8]. The balanced scorecard effectiveness is based on its ability to translate a firm's mission and strategy into a comprehensive set of performance measures [3]. Robert Kaplan of Harvard Business School introduced the balanced scorecard (BSC) framework, together with David Norton, of Renaissance Worldwide in 1992. Specifically, the BSC framework takes to identify the critical economic activities of a particular company that produce current and future cash flows and then builds a causal model of the course by which the company generates profits by focusing on both financial and non-financial indicators of firm performance.

The balanced scorecard approach engages identifying the key components of functions, setting goals for them, and then discovering ways to quantify progress toward achieving those goals. As a whole, the measures provide a holistic view of what is occurring both inside and outside the organization or operational level, thus allowing each constituent of the organization measure how their activities contribute to the attainment of the organization's overall mission. This sort of structure of measures is driven by a strategy where success is clearly distinct and a method of achieving it is established. Management works out how to monitor progress and establishes the investment needed to make this self-sustaining [3,14,15].

According to [8] organizations can benefit with BSC as to clarify its corporate vision and strategy; communicate and link strategic objectives and measures to plan; set targets and align strategic initiatives; and to enhance strategic feedback and learning. This framework is based upon the premise that those properties of the financial accounting system such as conservatism, transaction emphasis, and dollar base unit of measurement, prevent it from measuring the key activities of the company adequately. Relatively, [6] imply enhancing the traditional financial measurement system with non-financial measures of customer relations, internal business procedures, and organization learning and expansion in order to specify what the organization expects to receive from and give to the various stakeholder groups in exchange for those groups' continued contribution toward the organization's pursuit of its objectives.

The BSC is clearly based on the growing acceptance of two related premises. The first is that future success involves providing superior value to customers, employees, and shareholders. The second is that attracting shareholder funds, employee talent, and customers are the three fundamentals of sustainable competitive advantage and superior returns to investors [16,17,18,19,14,15]. Within the BSC framework, four perspectives - financial, customer, processes and learning and growth - represent the views of four essential stakeholders in any business. All stakeholders have choices - shareholders can sell stock; customers can buy from another provider; and employees can work for another company. If value is created for each of these three essential stakeholder groups, the company will be more likely to produce superior return for investors for a longer period [20,21].

A company can disregard the expectations of one of its stakeholders and still succeed in the short run. However, in the end, the business cannot overlook any of its stakeholders [22,9,11]. This is because all three stakeholders are interrelated. The level of customer satisfaction and retention is highly influenced by the attitude and behavior of employees, while customer attitudes and behaviors influence shareholder satisfaction and retention. Finally, shareholders' satisfaction affects employees' satisfaction through bonuses, stock options, or further investment in employee growth and development [19,23,24,25]. Although the assortment of relevant performance measures will depend upon the specific situation facing each company, the BSC is perhaps most groundbreaking in stressing the necessity of both financial and non-financial indicators and putting them on a more or less equal footing [6,8, 26].

A. The BSC perspectives

Within the BSC framework, four categories of measures are identified in order to achieve balance amid the financial and the non-financial, between internal and external and between current performance and future performance [6]. Nevertheless, next the four categories of indicators are discussed;

Financial Oriented indicators, as reflected in financial measures, is the most traditional and still most commonly used measurement tool. Financial measures are valuable in conveying the readily measurable economic consequences of action already taken. Financial measures are typically focused on profitability-related measures (the basis on which shareholders, in turn, typically gauge the success of their investments), such as return on capital, return on equity, return on sales, etc., [6,26].

The Customer Oriented indicators typically comprises of several core or general measures derived from the desired thriving outcomes of a well-formulated and implemented strategy. These core measures may include overall indicators such as customer complaints, customer satisfaction, customers lost/won, sales from new products, and on-time delivery

[23,27]. Measures that are closely related to customers include results from customer surveys, sales from frequent customers, and customer profitability. The customer perspective is a core of any business strategy that describes the unique mix of product, price, service, relationship, and image that a company offers [28]. Customer perspective defines how a particular organisation differentiates itself from competitors to draw, retain, and strengthen relationships with targeted customers. Customer perspective is utmost valuable and crucial as it helps an organization connects its internal processes to improve and thrive for better outcomes with its customers [29]. Of the four BSC perspectives, the customer is at the core of any business and is crucial to long-term improvement of company performance [6,30]. [31] indicate the customer-based virtuous circle, whereby investment in employee training leads to improved service quality; resulting in higher customer satisfaction leading to increased customer loyalty, and in turn boosts revenues and margins.

Product/ service Oriented indicators relate specifically to the operational processes of the business unit. Internal business process measures represent the perspective of the operations management within the BSC model. The business must be efficient and effective at what it does. The internal process perspective is based on the notion on achieving satisfaction from customers and earning a lucrative financial return. The internal process measures are typically based on the objective of most efficiently and effectively producing products or services that meet customer needs. For example, such measures may include order conversion rate, on-time delivery from suppliers, cost of non-conformance, and lead-time reduction[8].

Employee Oriented indicators represent the employees with the roles of the four pillars used to measure performance with the BSC framework. The innovation and learning perspective is all about developing the capabilities and processes needed for the future. For a business to succeed not only must it effectively carry out daily transactions, it has to constantly improve in terms of the value and cost of its offerings. This innovation process can be measured in a variety of ways. These may include the swiftness of every transaction, or the number of people involved in a particular transaction, etc. Yet again, the choice depends on what is critical for the success of each particular business [6]. [8] suggested that measures of employee capabilities, information systems capabilities, and employee motivation and empowerment as examples, as performance measures relating to learning and growth are the most difficult to select.

B. Relationship between BSC and Organizational Performance

The relationship between BSC and organizational performance can be referred through several other similar studies; [32] have found that there is relationship between BSC and performance. Moreover, [33] pointed out that there

is relation between growth perspective, learning, and financial, with result displaying innovative technique, new manufactured goods development time and customer oriented performance measures are associated to lower manufacturing costs, higher sales, and greater market share. More recently, the finding of [34] study show that there is a significant positive effect of Activity Based Costing System, when joint with BSC and organizational performance. Meanwhile, [35] confirmed the relationship between the internal performance measures and the implementation of BSC in banking industry.

However, the effects of BSC on organizational performance are closely examined using the BSC framework, shown in the study above. There are several studies which focuses on the relationship between the practice of multiple performance measurements systems and financial performance e.g.[36,37,18,38]. [37] uses time-to-market new products as a fundamental measure, and frequently leads to higher initial prices, with constant customer loyalty and a greater market share as well as noteworthy cost benefits. On the other hand, it is seen, a positive association between customer satisfaction measures and future accounting performance.

Meanwhile, [18] proved that the leading indicators of non-financial performance (customer purchase behavior and growth in the number of customers) and accounting performance (profit margins and return on sales) are measurable customer satisfaction. [39] in his report found that they would gain benefit more than the firms that rely exclusively on financial measures when firms implement a performance measurement system that contains both financial and non-financial measures. [38] also in his study show that future accounting and market-based returns can be linked to the use of non-financial measures. Although the previous studies show some positive relationship between the use of non-financial measures and performance, several other studies reveal the opposite results. In the year 2008, [40] found in the context of Malaysian manufacturing industry, that there is a relationship between the usage of multiple performance measurements and organizational. They discovered that there is positive relationship in the use of non-financial measures, particularly, internal business process and innovation and learning measures, and organizational performance.

Additionally, [41] supported that typically, customer satisfaction is positively related to contemporaneous accounting return on investment. [42] discovered that greater reliance on non-financial manufacturing measures had a greater positive consequence on perceived performance in flexible firms than in non-flexible firms. More recently, [43] found in a study that there is no specified association between the use of perceived performance and non-financial measures in plants that follow a customer-focused manufacturing strategy. In addition, [18] study recommend that the inability to link non-financial performance measures with economic performance does exist. Their study establish that the ability

of executives to relate customer satisfaction measures to accounting or stock price returns is only about 28 and 27 per cent respectively. [44] found modest evidence that the use of non-financial measures in JIT facility was connected with differences in manufacturing performance.

Considering the capability of financial indicators to measure performance, findings from [45] study specify that deemphasizing budget evaluative style is positively and significantly associated with strategic business unit effectiveness. Budget evaluative style is a control system design, which emphasizes on short-term profit measures, and thus is not adequate to reflect effectiveness and competitiveness. According to the discussions above, the following hypothesis was developed;

H1: There is positive relationship between BSC (Financial, Customer, Employee, and Product/ service Oriented indicators) and financial performance.

III. METHODOLOGY

A. Sample

The banking industry is this study's focus and this banking sector was chosen in particular as it plays an integral role in the Jordanian economy by being the first and the largest industry in the service sector, in terms of its total GDP (2008). The unit of analysis for this study is the branches and the respondents taken are the branch managers who have been working in the industry for three or more years. The population taken into account for the study is the entire banking industry under the Jordanian banks, which in total are 480 branches. 120 branches were randomly chosen. However, the adoption of BSC is not a prerequisite for these targeted branches. The branches do not necessarily adopt and use the fully BSC framework as a tool for performance measurement system. As the usage of performance measures is common in any organization, it is expected that there are firms possibly using some elements of BSC measures either knowingly or unknowingly, customizing it according to their needs [40]. Therefore, in the questionnaire, branches were asked about their usage of performance measures, which are commonly used by many firms.

This survey valued inputs from branch managers; therefore, they were contacted by telephone requesting their participation in the survey. After obtaining consent, questionnaires were later hand-delivered to the branch managers, and collected. The overall usable response is 80 questionnaires. Table 1 shows the profile of the responding branches by the number of ATM in the branch, average sales over the last 3 years, total number of employees, customer complain survey and if the branches keep the customer records or not. Additionally, the questionnaires were translated into Arabic by a bilingual native Arabic

management accounting professors.

B. Measurement of variables

Independent variable- BSC, BSC was measured by four sections which are: Financial Oriented Indicators, Customer Oriented indicators, Employee Oriented indicators, and Product/ service Oriented indicators. Every each section included five measures along the lines of the BSC framework see Table II. Respondents (branches managers) were asked to indicate the extent level of usage of measures in each measure area, using five Likert scale 1 "Not used at all" to 5 "To a greater extent".

The questionnaire was developed based on the previous works by [40,7,8]. The Cronbach alpha value for the each BSC perspectives and overall scale is as shown in Table III, indicating satisfactory internal reliability of the scale.

Dependent variable: branches financial performance. The measurement of branches performance was developed based on previous related works [46].

TABLE I
THE PROFILE OF THE RESPONDING BRANCHES

	Frequency	%
The number of ATM in the branch		
Less than 5	39	48.8
5 – 10	35	43.7
More than 10	6	7.5
Average sales over the last 3 years:		
Less than 250 000 JD	13	16.25
250 000-500 000 JD	32	40.0
500 001- 1000 000 JD	21	26.3
More than 1000 000 JD	14	17.5
Total number of employees:		
Less than 10	12	18.0
10-15	17	40.9
15-20	29	
Above 20	22	22.9
Customer complain survey;		
Yes	66	82.5
No	14	17.5
keeps the customer records		
Yes	71	88.75
No	9	11.25

Note: JD (Jordanian Dinar) refers to Jordanian currency,
1 JD = \$ 1.2 = 61

TABLE II
THE USAGE FREQUENCY OF PERFORMANCE MEASURES

	1	2	3	4	5
Branch profit		1	26	37	16
Product Profitability		6	18	44	12
Return on Net Assets		2	31	23	24
Return on Assets		2	24	41	13
Branch Operating costs		5	23	37	15
Customer Satisfaction			14	58	8
Customer Acquisition			67	13	
Customer Retention		1	15	54	10
Customer Complaints			19	58	3
Customer loyalty			13	57	10
Staff turnover		2	39	35	4
Employee Training and Development		9	29	40	2
Employee Productivity		9	47	20	4
Absenteeism promotion		4	28	46	2
Employee satisfaction		8	27	40	5
Profit by product / service			15	43	22
Number of transaction			12	47	21
Cost per product / service		1	8	44	27
New product / service	23	31	25	1	
Profit by product / service	20	30	30		

Branches managers will respond to each of the seven items of performance on a five-point Likert scale anchored at both ends. On the scale, 1 indicated, “not at all satisfied” and 5 indicated, “highly satisfied”. The Cronbach alpha value for the overall performance scale is as shown in Table III, indicating satisfactory internal reliability of the scale.

IV. RESULTS

A. Descriptive statistics and correlation matrix

The foremost focus of this study is, to determine the extent of usage of multiple performance measures within BSC framework. Table 2 offers the usage frequency of all 20 performance measures as contained in the questionnaire on the scale ranging from 1 (minimum extent) to 5 (greater extent). the extent of usage in financial measures such as Branch profit, Product Profitability, and Branch Operating costs among responding branches range mostly from “To some extent” to a greater extent” indicates high usage of financial measures.

Referring to the higher end of the scale, it is typical that customer measures such as Customer loyalty, Customer Satisfaction, and Customer Complaints usages are highly formed. It is seen that Customer Complaints is the most widely used customer measure. Nevertheless, the level of usage of Employee oriented indicators was found categorized

from a level of “minimum extent” to a “larger extent”. The ranking of Product/ service oriented indicators, the Profit by product / service, Number of transaction, and, Cost per product / service were from “To some extent” to “greater extent”, whereas the remaining two measures under product/service oriented indicators were ranked from “Not at all” to “To some extent”

However, Table III shows that responding branches place a major weight on the usage of financial measures (mean =3.81), followed by customer measures (3.77), Employee Oriented indicators (3.45) Product/ service Oriented (3.32), and overall BSC (3.59). There are similarities between the results shown here and the results reported from a survey by the consulting firm Towers Perrin in the US [47]. From the table also we can see that all the Cronbach alpha coefficients exceeded the lower limit of acceptability, which is usually considered to be 0.70 [47].

Table 4 presents a correlation matrix for all variables. Several BSC dimensions seems to be significantly correlated with each other, suggesting that multi-co linearity is likely. However, after performing tolerance and variation inflation factor (VIF) tests, tolerance values were more than (1-R²), also VIF values were less than 5.00 [48]. Thus, it shows that there are no problem for regression analysis. These correlations also indicate the cause-and-effect relationship between the BSC indicators as recommended by literature [6,7,8].

B. Hypothesis testing

In order to test the effect of the usage of four dimensions of BSC measures on firm performance, the following multiple regression was run:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + e$$

Where Y = Financial branch performance; X1 = financial indicators; X2 = customer indicators; X3 = Employee indicators; X4 = Product/ service indicators; $X_5 = \sum X_{1,2,3,4}$; e = error; a = the constant; and b1, b2, b3 and b4 = the regression coefficients for the four dimensions of the BSC measures.

TABLE III
DESCRIPTIVE STATISTICS FOR ALL VARIABLES

	Min	Max	Mean	St.Dv	α
BSC:					
Financial Oriented indicators	2.60	5.00	3.81	.55	.72
Customer Oriented indicators	2.80	4.80	3.77	.42	.87
Employee Oriented indicators	2.60	4.60	3.45	.49	.75
Product/ service Oriented indicators	2.20	4.20	3.32	.45	.70
Overall BSC	2.9	4.30	3.59	.29	.76
Performance	2.67	5.00	3.82	.52	.80

The results presented in Table V indicate that the coefficients b2 (Customer Oriented indicators) and b4 (Product/ service Oriented indicators) are both positive and

significant ($b_2 = 0.768$, $t = 11.24$; $p = 0.000$; $b_4 = 0.181$, $t = 3.09$, $p = 0.003$). The whole model is significant ($F = 25.483$; $p = 0.000$) and $R^2 = 0.313$, this mean the whole model explains 31.3 per cent of the financial performance difference.

These results support the study's proposition that improved financial branches performance is positively associated with greater Customer oriented indicators measures and innovation and Product/ service Oriented indicators.

TABLE IV
CORRELATION MATRIX

	1	2	3	4	5	6
Financial Oriented indicators (1)	1					
Customer Oriented indicators (2)	.004	1				
Employee Oriented indicators (3)	-.148	.670**	1			
Product/ service Oriented indicators(4)	-.222*	.371**	.487**	1		
BSC overall (5)	.325**	.778**	.760**	.627**	1	
Financial Performance(6)	-.014	.882**	.668**	.493**	.770**	1

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

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

However, the results reveal that both the usage of Employee oriented indicators and Financial oriented indicators do not contribute significantly towards financial branches performance. Thus, the study's propositions that greater financial oriented indicators and Employee oriented indicators are associated with increasing financial branches performance is not supported with these results. The result offered in Table V partially support the hypothesis proposed earlier. The analysis conducted thus far focuses on four perspectives of the BSC measures individually.

On the other hand, an additional model was conducted to test the effect of BSC as a whole on the financial branches performance. Overall BSC measures usage is represented by an average of the four indicators means. The results can be seen in Table VI. The model is considerable ($F = 28.29$; $p = 0.000$), and is able to explain 0.392 per cent of the variance in financial branches performance. These results show that overall BSC measures usage has positive effect on firm performance and the effect is stronger ($Beta = 0.77$, t -value =

TABLE V
REGRESSION ANALYSIS: INDIVIDUAL BSC MEASURES AND FINANCIAL PERFORMANCE

Variables	Beta	t-value	p-value
Financial Oriented indicators	.034	.652	Not Significant.
Customer Oriented indicators	.768	11.24	.000
Employee Oriented indicators	.071	.979	Not Significant.
Product/ service Oriented indicators	.181	3.09	.003
$R^2 = .313$	$F = 25.483$	Sig. $F = 0.000$	

10.62) when each perspective is considered individually.

V. DISCUSSION AND CONCLUSION

The effect of the usage of the BSC has been examined in this study, in particularly measures on financial branches performance. The results fully support the notions that there are link between financial branches performance and the overall BSC measures usage. Although this study found support for the positive impact of overall BSC usage on financial performance, results of this study are rather diverse when taking the four perspectives of BSC measures individually. An interpretation of the results is that branches with greater usage of Customer Oriented indicators and Product/ service Oriented indicators will experience enhancement in financial performance. However, the usage of Financial and Employee oriented indicators was found to have no significant impact on financial branches performance. The significant result is going on line with the previous studies, for example; [37] they found that new product development and time-to-market new products are linked to enhance in performance (like; higher sales, greater market share, and lower manufacturing costs). Moreover, [40] found significant relationship between the Internal business process measures (Product/ service Oriented) indicators and organizational performance, [36] confirmed that there is a positive relationship between customer satisfaction indicators and accounting performance. On the other hand, the insignificant result are supported by the previous studies like [34,40]. [34] study show no significant relationship between the four BSC perspectives and performance. Also, [40] found that there is

TABLE VI
REGRESSION ANALYSIS: OVERALL BSC MEASURES AND FINANCIAL PERFORMANCE

Variables	Beta	t-value	p-value
BSC overall	.77	10.64	0.000
$R^2 = .392$	$F = 28.296$	Sig. $F = 0.000$	

no significant relationship between financial measurements and organizational performance.

The result of the current study also shows that many branches in Jordan still focus heavily on the use of financial measures as compared to non-financial measures. However, the use of non-financial measures is gaining momentum mainly in the use of customer indicators. The findings suggest that the use of BSC measures in the form of Customer Oriented indicators Product/ service Oriented indicators proved to have a significant impact on financial performance. Moreover, the result shows that financial indicators alone are not sufficient to give a clear picture of branches performance. It is also shown that, when braches use a performance measurement system that comprises all four perspectives of BSC measures, their performance is much better than when they rely exclusively on an individual indicators.

As a comprehensive measure of performance, it is apparent that BSC reproduces the needs of effective management and

gives a guide for enhancement. One key practical implication of this study is on the design of control and measurement systems where the designers of control and performance measurement systems require highlighting the use of multiple performance measures that are essential to the success of branches. The use of multiple performance measures could let some trade-offs because benefits from their usage cannot be obtained across all the measures all the time.

VI. LIMITATION AND FUTURE RESEARCH

The preliminary standing of this study is imperative to stress upon and therefore, several limitations should be taken into consideration for future studies. However, most of these limitations in the sample, whereby only Jordanian banks were taken into account, where the population is restricted to only the conventional banks, excluding Islamic and International banks. As a result, the sample was relatively small and not comprehensive as much as necessary. In addition, selected sample was limited only to banking industry. This would provide a potential source of bias to generalization. In order to get superior understanding of the BSC concepts and its function, future research should focus in examination of larger sample size and application of BSC concepts in performance measures further than banking. Nevertheless, one must take heed of the need that the original architecture of the BSC be modified in order to suit and adjust to the mission and vision of the organization. Upcoming researches could include the Islamic banks to provide supplementary details to understand the relationship between BSC and Financial performance in banking industry.

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