

Balanced Scorecard as an Important Information Basis for Assessing Performance: A Case Study

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Abstract:

The aim of the paper is to prove that the (BSC) model provides additional information in order to help managers to assess the company's current and likely future position by implementing balanced scorecard in Arab potash company (APC).

This study is especially of interest for manufacturing industries that are implementing management accounting practices, as it not only based upon financial indicators, also on non-financial aspects like customer indicators, internal business processes, and learning & growth. In this research paper researcher added another key for measurement which is: social responsibility indicator.

Finally, the results of this work can be regarded as an action plan for industrial companies that are concerned with performance and improvement of their activities. Also, the performance results can benefit the company studied, the academics, and the consultants.

Key words: Balanced Scorecard (BSC), financial perspective, internal business perspective, Customers perspective, learning & growth perspective, Social responsibility perspective, Arab Potash Company (APC).

المستخلص:

تهدف الورقة إلى إثبات أن نموذج (BSC) يوفر معلومات إضافية من أجل مساعدة المديرين على تقييم وضع الشركة الحالي والمستقبلي المحتمل من خلال تطبيق بطاقة الأداء المتوازنة في شركة البوتاس العربية (APC). هذه الدراسة ذات أهمية خاصة للصناعات التحويلية التي تنفذ ممارسات المحاسبة الإدارية ، لأنها لا تستند فقط إلى المؤشرات المالية ، بل أيضًا إلى الجوانب غير المالية مثل مؤشرات العملاء ، وعمليات الأعمال الداخلية ، والتعلم والنمو، في هذا البحث ، أضاف الباحث مفتاحًا آخر للقياس وهو: مؤشر المسؤولية الاجتماعية. أخيرًا ، يمكن اعتبار نتائج هذا العمل بمثابة خطة عمل للشركات الصناعية المهتمة بالأداء وتحسين أنشطتها. ويمكن أن تقيّد نتائج الأداء ، الشركة التي درستها والأكاديميين والاستشاريين. الكلمات الأساسية: بطاقة الأداء المتوازن (BSC) ، المنظور المالي ، منظور الأعمال الداخلية ، منظور العملاء ، منظور التعلم والنمو ، منظور المسؤولية الاجتماعية ، شركة البوتاس العربية (APC).

1. Introduction

Traditional performance management system has relied heavily upon financial measures with the purpose of increasing shareholders value. However, traditional financial oriented measurement for performance management does not reflect operational efficiency, ignore intangible assets and is short-term biased.

Due to changing the landscape of the business world, these deficiencies prompted researchers and practitioners to develop a new framework for the companies. (Pourmoradi et al, 2016).

Kaplan an Norton (1992) developed an innovative multi – dimensional corporate performance scorecards known as the balanced scorecards, it provide a framework for selecting multiple key performance indicators that supplement traditional financial measure with operating measure of customer satisfaction , internal business process and learning activities (anand et al,2005).

According to Phoebe (2015) the Balanced Scorecard (BSC) is a tool in performance management that makes it possible for a company to transform its goals and strategy into actual performance

measures. All the same, it holds more significance than just a measuring device. The balanced scorecard offers another perspective of the organization's general performance by incorporating measures in finance with the main performance indicators around organizational growth and development, customer perception, innovation and learning.

In other words, balanced scorecard acts as a remedy for the old system by accurately identifying the main weakness of the company. The initial purpose of the BSC model is to provide decision makers with data they need to identify and solve problems and to improve performance.

In this paper, researcher wanted to show how the balanced scorecard model can be provides additional information with respect to the performance of a company that allow managers to track progress in key area.

2. Study Problem

The literature states a strong relevance to appraising industrial Companies performance through the BSC model. However, the performance measurement used in the Arab potash company is still based on financial measures, and monthly or annual reports. Perhaps now is the time for the company management to consider adopting BSC model to measure the performance and it can be asked the following question:

Does the (BSC) application provide additional information in a consistent and summarized format, in order to help managers to assess the company's current and likely future position?

3. Study Objectives

The present paper is aimed to prove that the (BSC) model provides additional information in order to help managers to assess the company's current and likely future position.

4. Study Hypothesis

The (BSC) application does not provide additional information in a consistent and summarized format, in order to help managers to assess the company's current and likely future position.

5. Study Methodology

The researcher will use the primary and secondary data resources at this study as follows:

The secondary: is made up of the past literature regarding the subject.

The primary sources: will include the Arab potash company annual reports during the years 2016-2017.

6. Literature Review

There are many studies that have addressed the issue of the application (BSC) model, as the following:

Harpreet Singh study 2018 entitled "Devising a Balanced Scorecard to Measure HDFC Banks' Performance: A Case Study"

The present paper is aimed to examine the performance of HDFC bank by using balanced scorecard approach. This is done by constructing the Balanced Scorecard for the banks, and then evaluating the performance the banks through this BSC approach. It is found that being a part of the service sector, long-term strategic planning in a banks need to concentrate on such performance measurement system. However the implementing this technique becomes complicated due to the difficulties in measurement of intangible assets, existence of the interrelations among these indicators, different in significance assigned to various indicators within the organization and trouble in setting the linkage between the employees performance and reward mechanism.

Rashed Ul Hasan & Tai Mei Chyi study 2017, entitled "Practical Application of Balanced Scorecard – A Literature Review"

The purpose of this paper is to review the balanced scorecard (BSC) in regaining the practice relevance in different industries. This paper is a theoretical-conceptual-based study, particularly using the explicit method through searching and reviewing the case-based research papers and quality journals. Besides, the comparative content analysis of the Balanced Scorecards of different organizations in 4 industries is discussed. Four organizations from different industries have been brought into comparison regarding the results of implementing BSC as performance measures. The findings prove that BSC practicability in different industries is favorable. It provides a systemic view of the strategy to most of the organizations.

Soleyman Iranzadeh, Sadegheh Hosseinzadeh Nojehdeh & Nahideh Najafi Emami, study 2017, entitled "The Impact of the Implication of Balanced Scorecard Model (BSC) in Performance of the Post Company"

This research is practical in purpose and a descriptive inferential method has been used to collect data in addition to utilizing five-scale Likert questionnaire.

The results of testing the hypotheses indicate the effect of growth and learning of the employees of Post Company, as well as internal business processes, customer and financial aspects on the performance of the post company. Moreover, Friedman test probing the differences among groups shows that internal business processes and customer variables have the most significant impact upon the performance of the post company, while growth and learning and financial aspects have the least significant effect on the performance of the post company.

Raed Ibrahim Saad & Zahran Mohammad Ali Daraghma, study 2016, entitled "Using of the Balanced Scorecard for Performance Evaluation: Empirical Evidence from the Listed Corporations in the Palestine Exchange (PEX) "

This manuscript is aiming at testing the extent to which the listed Palestinian corporations in the Palestine Exchange (PEX) are using the four perspectives of the Balanced Scorecard (BSC) in evaluating the performance. In order to achieve the previous objective, this paper uses a questionnaire to investigate the opinions of the financial managers of the listed corporations in the PEX. The findings of this paper state the following points: (1) The financial managers rely on the financial and customer perspectives for evaluating the performance of the listed corporations in the PEX. (2) The Palestinian listed corporations do not rely on the learning and growth indicators for measuring the performance. (3) The Palestinian listed corporations do not rely on the business process indicators for measuring the performance. (4) This paper concludes that the listed corporations in Palestine do not rely on the BSC indicators for measuring the performance in a correct and complete way.

Shradha Gawankar, Sachin S. Kamble & Rakesh Raut study 2015, entitled "Performance Measurement Using Balance Score Card and its Applications: A Review"

This paper aims to propose the idea of briefly explaining the balance scorecard by highlighting its use, application in depth. The approach used in this paper is the combination of literature review on evolution of balance score card and its applications in various sectors/organizations/ areas. This paper identify that the balanced scorecard is a powerful but simple strategic tool and the simplicity of the scorecard is in its design. By encompassing four primary perspectives, the tool allows an organization to turn its attention to external concerns, such as the financial outcomes and its customers' expectations, and internal areas, which include its internal processes to meet external requirements and its integration of learning and growth, to successfully meet its strategic expectations.

6.1. What Distinguishes This Study?

The previous studies mainly focused on the effect of the balance scorecard on organizational performance. However, most of these studies are exploratory - conceptual-based through reviewing research papers or through utilizing questionnaire.

But the current study focused on the role of balanced scorecard in providing additional information with respect to the performance of a company in a consistent and summarized format, in order to help managers to assess the company's current and likely future position.

7. The Theoretical Framework: balanced scorecard model (BSC)

7.1. The Concept of balanced scorecard model (BSC)

Several definitions have been given for the (BSC) model. The examples are as follows:

The balanced scorecard tool provides a powerful framework for building and communicating strategy by allowing the business model to be visualized in a strategy map which forces managers to think about cause-and-effect relationships (Beatrice Ondogo et al., 2016:7).

The innovation of (BSC) is to evaluate an organization from for perspectives which are financial, customer, internal and learning perspective, BSC lets executives see whether they have improved in one are at the expense of another (Leon-Soriano et al., 2010).

According to Nervana Abdel Rahman, (2017:120) Balanced Scorecard (BSC) is a performance management tool that identifies quantifiable performance measures and targets and links them to a unified strategy. In order to do this, the BSC defines performance dimensions that are critical to strategy achievement. These dimensions are termed “perspectives” in the original literature. It involves four perspectives, which are: 1) the financial perspective; 2) the customer service perspective; 3) the internal business perspective; and 4) the growth and learning perspective.

Roman Kozel et al. (2017:439) described BSC as: The Balanced Scorecard is a suitable tool for improving the competitiveness of industrial companies.

Furthermore, Marin Georgiev (2017:32) stressed that the Balanced Scorecard (BSC) is a practical tool to help organizations implement their business strategy.

Kim-Fatt Khiew et al. (2017:614) argued that the balanced scorecard is no longer used as mere performance measurement tools, but more as strategic planning tools.

According to Sandstrom and Toivanen,(2002:86) the BSC is not just an effective measurement and management tool but it is also an effective tool to enhance communication between different departments within the business. The BSC ensures that the different departments will function as one unit.

From the various definitions presented above, it can be concluded that BSC is a flexible performance measurement model that can be used for translate the vision, mission and strategy of the company in determining the size of the performance, by using financial and non-financial strategic measures.

7.2. Balanced Scorecard Perspectives

Any strategy, to be effective, must contain descriptions of financial aspirations, markets served, processes to be conquered, and, of course, the people who will steadily and skillfully guide the company to success. Thus, when measuring our progress, it would make little sense to focus on just one aspect of the strategy; therefore, when developing a Balanced Scorecard, we consider these four: Customer, Internal Processes, Employee learning and Growth, and Financial (Paul R. Niven, 2006:13) (See Figure1).

Financial Perspective

Financial measures are a critical component of the Balanced Scorecard, especially so in the for profit world. The objectives and measures in this perspective tell us whether our strategy execution which is detailed through objectives and measures chosen in the other perspectives is leading to improved bottom line results.

The provision of the right and timely financial data to the right person in the organization helps much in the process of making the right decision in the right moment. Under this perspective the most common performance measures incorporated are: Return on Investment (ROI), Cash Flow, Net Operating Income, and Revenue Growth. The financial perspective looks at how the investors or the shareholders see the firm in terms of dividend payout ratio, improvement on the cost structure, profit after tax, return on capital employed (ROCE) and growth in the sales volume (Etim & Agara, 2011).

Customer Perspective

Customer perspective consists of measures relating to the most desired customer groups. This perspective focuses on market share, customer satisfaction, loyalty and acquisition. Especially customer values and profitability can be considered as key measures that enable an organization to create a clear vision of the customers whom it should target in terms of their needs and expectations from the company. In other terms, this dimension makes it possible to get the internal processes, services and products into line with the necessities of current and future markets (Zeynep & Özalp, 2016: 78).

Internal business processes perspective

The perspective, according to Kaplan & Norton, (2002) as quoted by C. Y. Tibbs & L. K. Langat (2016 :461).

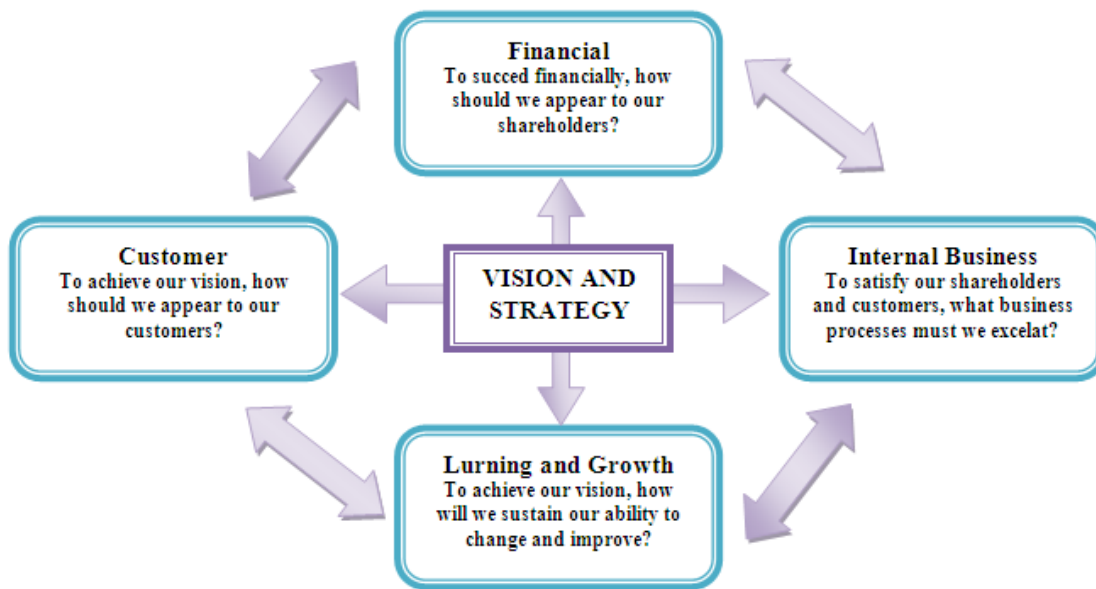
The business processes perspective is primarily an analysis of the organization's internal processes. Internal business processes are the mechanisms through which organizational performance

expectations are achieved. This perspective focuses on the internal business results that lead to financial success and satisfied customers. Therefore, managers need to focus on those critical internal operations that enable them to satisfy customer needs.

Learning and growth perspective

Learning and growth perspective consists of employee skills, training and administration of routine processes. In other words this perspective focuses on internal skills and capabilities, in order to align them to the strategic goals of the organization.

Figure1. Balanced Scorecard Framework (Kaplan and Norton: 1996)



8. The benefit of the balanced scorecards

Some of the following benefits can be identified from using the BSC:

1. The most innovative aspect of the BSC is its capacity to generate strategic learning, providing a global vision of organizational performance and favoring the understanding of organizational objectives (Patrícia et al., 2017:188 - 192).
2. The BSC allows adopting strategic decisions more quickly thanks to the availability of better data.
3. The BSC is coordination, motivation and training instrument, since it involves learning good actions developed and errors, i.e., it allows developing a learning culture.
4. The BSC helps the process of measuring and analyzing key performance indicators in order to manage internal business processes. Such strategic management, leads to operational efficiency improvements so that businesses are empowered to achieve both their strategic and operational objectives (ANON: 2010).
5. The BSC provides an effective way of communicating priorities to all levels of the company.
6. BSC provides the managers a full view of the business, including operative measures to satisfy the clients, innovation level and activity for improving the organization, as well as financial measures. So they can focus the investments for future sustainability. (Hanson et al., 2008:395).
7. Helps managers focus on what is important in the long run (Dag and Tonny, 2014:85)
8. Helps managers prioritize and make decisions.
9. Facilitates discussions.
10. Rhetorical tool that can be used to justify organizational changes.
11. They minimize information overload by limited the number of measurement considered which are critical for the performance of the organization and the business (Marwa abdel razek, 2012:8).

9. CASE STUDY

9.1. The company

The Arab Potash Company (APC) was established on July 7th, 1956 in Hashemite Kingdome of Jordan as a Pan-Arab venture, APC operates under a concession from the Government of Jordan that grants it exclusive rights to extract, manufacture and market minerals from the Dead Sea until 2058. In addition to its potash operations, APC also invests in several downstream and complementary industries related to Dead Sea salts and minerals, including potassium nitrate, bromine and other derivatives. Arab Potash Company (APC) is one of the top ten potash producers worldwide by volume of production and the sole producer of potash in the Arab World.

The Arab Potash Company recognizes the importance of customer satisfaction as a basis for enhancing productivity and profitability. Maintaining quality is pivotal factor in achieving this objective through continual commitment of conformity and accreditation certificates by international registration bodies. The company started implementing the quality assurance management system since 1998 in order to enhance the performance of the production processes and support the high quality of the outputs in accordance with the technical specifications required in all stages of production. The quality assurance system is now being updated to comply with ISO 9001:2015.

The Arab Potash Company started implementing the environmental management system since 2001 and got certificate according to ISO 14001. EMS is now in update to the 2015 version, and as confirmation on the sustainable environment in all its operations also supports the efforts to use the available sources efficiently and to prevent pollution in compliance with legal requirements.

9.2. Company Strategy

Below is the strategic map for Arab Potash Company.

Figure2: Strategy map for Arab Potash Company

STRATEGIC OBJECTIVE	STRATEGIC MEASURES
FINANCIAL PERSPECTIVE Increase revenue Maximize asset utilization Improve shareholder value Cost reduction	- Return on equity (ROE) - Return on asset (ROA) - Net profit margin - Net profit growth - Sales growth - Earnings per share (EPS) - Cost per ton
CUSTOMER PERSPECTIVE Customers retention & loyalties Customers acquisition Increasing the market share Reducing marketing expense While increasing effectiveness	- Top ten Customers percentage of sales - Market share - Cost per ton sold from selling & distribution expenses
INTERNAL BUSINESS PERSPECTIVE Productivity increase Optimize inventory management Reducing maintenance costs while increasing efficiency	- Productivity growth per hour worked - Productivity growth per employed - Inventory turnover ratio - Cost per ton from maintenance costs
LEARNING & GROWTH PERSPECTIVE Risk reduction Retain and improve employee skill set Increase motivation, empowerment and alignment	- Lost time injury frequency rates - Employees turnover rate - Training Courses rate - Evolution of pay rate
SOCIAL PERSPECTIVE Corporate Social Responsibility (CSR)	- budget size

Source: Author

9.3. Analysis of BSC Performance Measures and Metrics

To measure the performance of a company, the first thing to do is to look for the Key Performance Indicators to be used under each perspective in order to establish if BSC provides additional information with respect to the performance of (APC).

♣ Financial Perspective

Under financial perspective, the following measures/metrics were considered:

1. Return on Equity (ROE)

Return on equity reveals how much profit a company earned in comparison to the total amount of shareholder equity found on the balance sheet. A business that has a high return on equity is more likely to be one that is capable of generating cash internally.

Table I: The Return on Equity for (APC)

Details	2016	2017
Net profit after tax (JD “000)	62244	89843
shareholders' Equity (JD “000)	805065	807885
ROE	7.73%	11.12%

Source: Author

Note: Return on Equity formula = Net profit after tax / shareholders' Equity

This measure has steadily improved during the year 2017. It has increased from 7.73% in 2016 to 11.12% at the end of fiscal 2017

2. Return on Asset (ROA)

ROA gives an idea as to how efficient management is at using its assets to generate earnings. The higher (ROA) number, the better, because the company is earning more money on less investment.

Table 2: The Return Asset for (APC)

Details	2016	2017
Net profit after tax (JD “000)	62244	89843
Total Asset (JD “000)	916836	937307
ROA	6.78%	9.59%

Source: Author

Note: Return on Asset formula = Net profit after tax / Total Asset

Also, this measure has steadily improved during the year 2017. It has increased from 6.78% in 2016 to nearly 10% at the end of fiscal 2017. As a result that company is good condition during the year 2017.

3. Net Profit Margin:

Net profit margin is one of the most important indicators of a business's financial health.

Table 3: Net Profit Margin for (APC)

Details	2016	2017
Profit after tax (JD “000)	62244	89843
Total Revenues (JD “000)	369651	423277
Net profit margin	16.8%	21.2%

Source: Author

Note: Net profit margin = Profit after tax / Total Revenues * 100

Net profit margin shows us how much profit a company makes for every JD1 it generates in revenues. The Company realized a consolidated net profit margin of JOD 106.2 million before income tax for 2017. After tax the net profit margin amounted to JOD 89.8 million, compared with JOD 62.2 million for 2016.

4. Growth rates

Growth rates are utilized by analysts, investors and a company's management to assess a firm's growth periodically and make predictions about future performance. Most often, growth rates are calculated for a firm's earnings and sales.

Table 4: Growth rates for (APC)

Details	2016	2017
Net profit (JD “000)	62244	89843
Sales (JD “000)	369651	423277
Net profit growth	-52.5%	44.3%
Sales growth rate	-29.93%	14.51%

Source: Author

Notes: 1. Net profit for 2015 is 131133 & sales 527527

2. Growth rate = present – past / past *100

APC realized relatively high growth (14.51% sales growth and 44.3% net profit growth) for the year 2017. While in 2016 it saw adverse changes for both revenues and profits.

5. Earnings per Share (EPS).

Earnings per share (EPS) are defined as an entity's net profit for a particular period divided by the number of ordinary shares.

Table 5: Earnings per Share for (APC)

Details	2016	2017
Profit after tax (JD “000)	62244	89843
Paid in capital (JD “000)	83318	83318
Earnings Per Share	0.747	1.078

Source: Author

APC so much improvement from the last year where earning per share ratio has increased from 0.747 in 2016 to 1.078 in 2017 .

6. Cost reduction

Cost reduction is the process used by companies to reduce their costs and increase their profits.

Table 6: Cost per Ton for (APC)

Details	2016	2017
Production Cost (JD “000)	295494	308810
Potash Production (Million Tons)	2.00	2.32
Cost Per Ton	147.75	133.11

Source: Author

APC succeeded in optimizing and lowering its production costs per ton in 2017, which decreased by 10% compare than previous year.

♣ Customer Perspective Score Assignment

Under Customer perspective, the following measures/metrics were considered:

1. Top ten customers percentage of sales

Table 7: Top ten customers Percentage of Sales

Details	2016	2017
Top Ten Total (Ton)	1589440	1903232
Year Sales Total (Ton)	2030202	2360244
Top Ten % of Sales	78%	81%

Source: Author

APC Sales increased by 16% over the previous year. The top ten customers accounted for approximately 81% of the total sales in 2017 and 78% of total sales in 2016.

2. Market share

A company's market share is its portion of total sales in relation to the market or industry that it operates within. Investors and analysts monitor increases and decreases in market share carefully, because this can be a sign of the relative competitiveness of the company's products.

Table 8: The Market share (for sales)

Details	2016	2017
Company sales (Million Tons)	2.30	2.36
Global market sales (Million Tons)	62	64.8
Market share (for sales)	3.23%	3.64%
Growth rate	- 15%	12.69%

Source: Author

Note: Market share for 2015 is 3.8%

The Company's market share was 3.64% of total global market sales compared with 3.23% in 2016; Company shipped more than 2.36 million tons worldwide.

3. Reduce Customer Acquisition Cost (CAC)

Customer Acquisition Cost generally refers to sales and marketing costs that are incurred in the process of acquiring a customer. And, reducing this cost is an ongoing mission for any business that wants to survive and continue generating revenues.

Table 9: Cost of ton sold from Selling & Distribution Expenses

Details	2016	2017
Selling & Distribution Expenses	17979000	19351000
Year Sales Total (Ton)	2030202	2360244
Cost Per Ton	8.86	8.19

Source: Author

APC succeeded in optimizing and lowering the selling & distribution expenses in 2017, which decreased by 7.56% per ton compare than last year.

♣ INTERNAL BUSINESS PERSPECTIVE

1. Labor productivity

Labor productivity is the ratio of the output of goods and services to the labor hours devoted to the production of that output.

Table 10: Labor productivity

Details	2016	2017
Production (Million Tons)	2.00	2.32
Number of employees	2249	2144
Labor hours (Million)	2	1
Ton/ Employee	889	1082
Ton/Hour	1	2.32
Productivity growth per employed (%)	-11.18%	21.71%
Productivity growth per hour worked (%)	69%	132%

Source: Author

Note: labor productivity per hour for 2015 is 0.59 & per employee is 1001

APC so much improvement in 2017, where productivity per employee has increased by 21.71%, while working hours decreased over the previous year. Also, productivity per hour worked has increased by 132%.

2. Inventory turnover ratio

Inventory turnover is the number of times a company sells and replaces its stock of goods during a period. Inventory turnover provides insight as to how the company managing costs and how effective their sales efforts have been.

Table 11: The inventory turnover ratio

Details	2016	2017
Cost of goods sold (JD “000)	304016	318522
Average inventory (JD “000)	26190	16202
Inventory turnover ratio	11.60	19.66

Source: Author

Note: inventory turnover ratio = cost of goods sold / average inventory for the same

period

In this analysis we understand that the inventory turnover ratio through the year 2017 in (APC) is increasing because the increasing rate of sales is higher than average inventory.

3. Reducing Maintenance Costs

Another critical component to saving money is to create a cost savings culture at all levels of the Company.

Table 12: Cost per ton from maintenance costs

Details	2016	2017
Maintenance Costs (JD “000)	36986	27925
Potash Production (Million Tons)	2.00	2.32
Cost per ton from maintenance costs	18.49	12.04

Source: Author

Note: Reduction ratio = $12.04 - 18.49 / 18.49 * 100 = - 34.9\%$

Arab potash company succeeded in lowering the share of maintenance costs in the cost for manufacturing the products in 2017, which decreased by 34.9% per ton compare than last year.

♣ LEARNING & GROWTH PERSPECTIVE

1. The annual lost time injury frequency rates

Employee safety should hold tremendous importance for every company. Every employee has the right to work in a safe and healthy environment.

Table 13: LTI Frequency Rate

Details	2016	2017
LTI Frequency Rate	0.71	0.66

Source: Annual Reports of the Company

Note: Frequency of accidents of work injuries ending with lost working days equals the number of work injuries per every 200,000 hours worked.

APC succeeded in lowering work accidents, through using the annual lost time injury frequency rates of accidents frequency as a benchmark in 2017; the rate was 0.66 accidents per 200 thousand work hours for person compared to 0.71 in 2016.

2. Employee turnover rate

The term employee turnover rate refers to the percentage of employees who leave an organization during a certain period of time.

Table 14: Employee turnover rate

Details	2016	2017
Employee turnover rate	5.9%	12.8%

Source: Annual reports of the company

Note: The employee turnover rate = Number of employees who left / Average of employees *100

Employee turnover rate has increased from 5.9% in 2016 to 12.8% in 2017; this represents the largest increase in turnover rate over the last five years.

3. Training Courses for APC Employees

Proper training will help employees feel good about working for the company.

Table 15: Training Courses for APC Employees

Activities	No. of Participants	
	2016	2017
Internal Training	89	897
Training in Jordan	22	117
Training Abroad	7	19
Local Community Training	-	158
Other Activities	167	729
Total number of trainees	285	1920
Total number of employees	2249	2144

Ratio	12.67%	89.55%
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Source: Author based on the annual Reports of the Company

The number of trainees has increased from 12.67% in 2016 to 89.55% in 2017.

4. Evolution of pay rates

Table 16: Evolution of pay rates

Details	2016	2017
Salaries and other benefits (JD "000)	70898	74009
Total number of employees	2249	2144
Evolution of pay rate	3.4%	4.4%

Source: Author

Note: Evolution of pay rates = $\frac{\text{Current year salaries} - \text{Previous year salaries}}{\text{Previous year salaries}} * 100$

Salaries and other benefits increased 4.4% in 2017 compare than last year.

♣ SOCIAL PERSPECTIVE

1. Corporate Social Responsibility (CSR)

APC had to reduce its budget for social responsibility and investment in local community development in 2017, compared to previous year. APC has provided through its CSR programs in the period from 2016-2017 an average of nearly JOD 7984079 annually for social responsibility programs, distributed as follows:

Table 17: APC Corporate Social Responsibility (CSR)

Details	2016	2017
Education	2323760	2307600
Social Development	1184220	1699667
Official Bodies	1092692	780882
Water & Environment	68400	111243
Health	2521744	1484060
Sports	432915	929906
Houses of Worship	176348	203400
Culture	244215	254300
Trade Unions	73806	79000
Total	8118100	7850058

Source: Annual Reports of the Company

9.4. Implement of Balanced Scorecard

Existing Key Performance Indicators from the case study was used as a reference for researcher to implement of Balanced Scorecard, can be seen in table 18.

Table 18: Balanced Scorecard for Arab Potash Company

Indicators	Weight	Target	Achieved	Result
FINANCIAL PERSPECTIVE				
(ROE)	7%	11.32%	11.12%	6.87%
(ROA)	8%	9%	9.59%	8.52%
Net profit margin	7%	20%	21.2%	7.42%
Net profit growth	7%	38%	44.3%	8.16%
Sales growth	7%	12%	14.51%	8.46%
(EPS)	7%	1.02	1.08	7.41%
Cost per ton (♣)	7%	134	133.11	6.95%
Performance of financial perspective	50%			53.79%
CUSTOMER PERSPECTIVE				
Top ten Customers percentage of sales	7%	85%	81%	6.67%
Market share (for sales)	7%	4%	3.64%	6.37%
Cost per ton sold from selling & distribution expenses (♣)	6%	8	8.19	5.86%

Performance of Customer perspective	20%			18.90%
INTERNAL BUSINESS PERSPECTIVE				
Productivity growth per hour worked	4%	130%	132%	4.06%
Productivity growth per employed	4%	22%	21.71%	3.94%
Inventory turnover ratio	3%	15	19.66	3.93%
Cost per ton from maintenance costs(♣)	4%	13	12.04	4.31%
Performance of internal business perspective	15%			16.24%
LEARNING & GROWTH PERSPECTIVE				
Lost time injury frequency rates (♣)	3%	0.2	0.66	0.91%
Employee turnover rate (♣)	3%	4%	12.8%	0.93%
Training Courses rate	2%	85%	89.55%	2.10%
Evolution of pay rate	2%	4%	4.4%	2.2%
Performance of learning & growth perspective	10%			6.14%
SOCIAL PERSPECTIVE				
Budget size	5%	9 Million	7850058	4.36%
Performance of social perspective	5%			4.36%
Total Performance	100%			99.43%

Source: Author

Note: Result = Achieved / Target * Weight

(♣) Result = Target / Achieved * Weight

9.5. Analysis of results

In general the analysis reveals that the APC performance measured by the BSC was good in 2017. With respect to performance on individual perspectives can be summarized as below:

1. Financial perspective:

Observed from table (18) that the scores achieved on the financial perspective was highest (53.79%). This finding coincides with the company's concentration on the financial performance as a measure of performance. This gives company, as well as the investment community confidence that future investments will provide a nice return for the company.

APC realized relatively high growth (14.51% sales growth, 1.08 EPS and 44.3% net profit growth). The high demand on potash was the main reason behind the increase in the company's profitability from its core operations. On another side, APC's strategy of relying on natural gas to secure its energy needs instead of using other high cost energy sources participated in reducing the production costs. In addition, APC's effective employment of manpower in dredging salt instead of outsourcing the task to external contractors also achieved significant savings in the Company's production costs and increasing the company's gross margins. There is also an increase in return on assets this is due to efficient utilization of assets by company. Also, the sale of APC's share in Jordan Magnesium Company increased the company's non-recurring income and its profitability.

2. Customer perspective:

APC has shown good performance in customer satisfaction, the overseas offices played an important role in maintaining market share, information, and expanding specialty customers and logistics services.

The top ten customers for APC amounted to 81% of the total sales compared to 78% in 2016. Also the Company's market share was 3.64% of total global market sales compared 3.23% in 2016. Where company's sales grew an aggregated annual rate of 12.69% of total global market sales, this increase is in line with the estimated growth in global potash deliveries. On another side, APC succeeded in optimizing and lowering the selling & distribution expenses in 2017, which decreased by 7.56% per ton compare than last year. This indicates that the company is able to retain its customers over a period of time.

3. Internal business perspective:

APC has also demonstrated good performance in all the Key Performance Indicators under internal business process perspective.

In 2017 productivity per employee rose by 21.71%, while working hours decreased over the previous year, where output increases coincided with declines in hours worked. Also, productivity per hour worked rose by 132%. The high labour productivity growth recorded in the 2017 was partly attributable to the exclusion of the low skilled from employment, In addition, APC's effective employment of manpower. This indicates that the company is able to produce more production over time, not by requiring a proportional increase of labor time. On another side, APC succeeded in lowering the share of maintenance costs in the cost for manufacturing the products in 2017, which decreased by 34.9% per ton compare than last year.

Finally Arab Potash Company has done an excellent job of turning over its inventory.

4. Learning & growth perspective:

The Learning & growth perspective does not reveal significant improvements, the employee turnover rate has increased from 5.9% in 2016 to 12.8% in 2017, and as a result the number of trainees has increased 89.55%. This indicates that the top management realized the importance of investing in training and development for the sake of improving employee performance. There was also poor performance in respect of lowering work accidents.

Therefore, the company should realize that higher wages lead to lower turnover, reducing the costs of hiring and training new workers.

5. Social perspective:

Arab Potash Company has shown good performance in local community development. APC paid around JD 8 million to support development projects in education, health, water & environment, fighting poverty, sports activities, religious affairs, and literary activities.

10. Conclusions and Recommendations

10.1. Conclusion

Through a case study, we found the following:

1. The performance measurement used in the Arab potash company is still based on only financial measures, and monthly or annual reports, however, it seems that its strategic plans directed towards the activities aimed at improving the internal processes, as well as activities related to customers and satisfying their needs.
2. The study revealed that the balanced scorecard model indeed provides additional information for all company levels (complements financial measures with non-financial ones), to assess the performance of a company. This indicates that using the balanced scorecard to assess performance of APC will give a more holistic view than using just the financials.
3. The balanced scorecard model aims to provide managers with a set of financial and non-financial information by combining in a single performance measurement report and specifying the key success factors and their interrelation.
In this sense, BSC can be considered a useful framework for the measurement of the Arab Potash Company performance, thanks to:
 - a. A list of the performance indicators in different perspectives that reflect the critical performance areas.
 - b. The continuous information updating as input of performance indicators.
4. BSC model based on current and forecasted information can reveal whether patterns of past will persist in current or future periods, Therefore it should be acknowledged that the BSC model is a useful tool for better management of the business and it can play a significant role in a company's success.
5. An additional perspective can be created to take social and environmental aspect into account in order to manage and control sustainability related issues and to evaluate the sustainable performance of company.

10.2. Recommendations

1. The necessity of applying the (BSC) model because it provides additional information to assess the performance and it can play a significant role in a firm's success.

2. Applying the BSC model is a must to keep up with using advanced Managerial Accounting methods.
3. The need to train workers in Arab Potash Company to apply the procedures of the BSC model.
4. Arab Potash Company should realize the importance of the social and environmental aspect because it has an influence on a company's image, competitiveness which will affect its future economic survival.
5. Research efforts should be devoted to improve the BSC model by adding social and environmental perspective to make the companies accountable for its social responsibility towards the community.

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