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The Application of Long Run Incremental Cost Model in the Jordanian Telecommunication Industry & its ability to Support the Financial Performance in these companies (Descriptive & Comparative Study: Jordanian Telecommunication Industry)

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Abstract

This Article aims to show the efficiency of application of LRIC (Long Run Incremental Cost) Model in the JTI (Jordanian Telecommunication Industry) at the financial level, especially in the scope financial performance, and the role of the Telecommunications Regulatory Commission (TRC) in the application of this model, and the extent of cooperation that has occurred between the companies and this Commission.

This paper tries to highlights the legislations and the legal versions issued by Telecommunications Regulatory Commission and governmental entities and the extent of commitment the Jordanian Telecommunication companies by these legislations & Legal terms.

The study found a full compliance of these legislation and the regulations which issued by the Telecommunications Regulatory Commission by Jordanian telecommunications companies under study, Zain & Orange Telecom company, , as well as contribute to raising the level of financial efficiency on the financial performance scope. And the researchers found that the Zain Company witnessed an increasing Growth in the item of: Customers, Revenue, EBITDA or EBIT and Net Income after apply the LRIC model. Also the Gross Revenue had a negative Growth between the years 2010, 2011 and 2012. And there is an increasing in the capital expenditures between 2011 and 2012.

Keywords': (LRIC) Long Run Incremental Cost, Telecommunications Regulatory Commission (TRC), Jordanian Telecommunication Industry (JTI), Jordan Mobile Telephone Services Company (Zain), Jordan Telecom Company (Orange).

1. Introduction

In the case of a firm providing different products or services, the incremental cost is the change resulting from an increase in the supply of a given product or service, including all of the direct and indirect costs that can be attributed to that change or increment, which means that the indivisibilities inherent in that increase must also be taken into consideration. The incremental cost includes a reasonable rate of return on the capital invested and is calculated over the long term, i.e. over a discrete period of time.

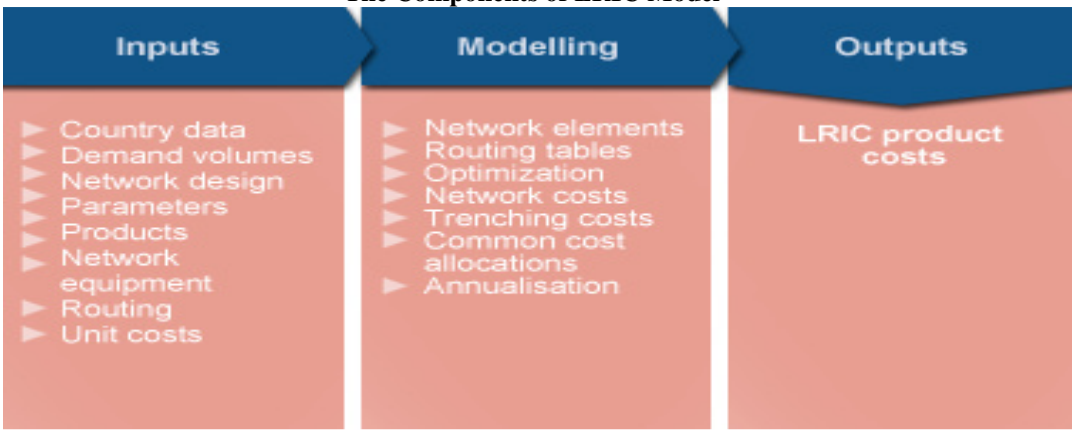
From the economic standpoint, any increase in production is in itself an increment; hence, the incremental cost implies a definition in regard to the size of the increment associated with the increase in cost. Mathematically speaking, the incremental cost may be defined as the difference between the total costs associated with the overall production of the service including the increment in question minus the total cost associated with the overall production without that increment.

The LRIC can therefore be defined in two ways that are complementary. On the one hand, it is the additional cost that a firm incurs over the long term in providing a particular service on the assumption that all of its other production activities remain unchanged. On the other hand, it is the total cost that the firm would avoid over the long term if it were to cease providing that particular service ("avoidable cost").

LRIC models are used to establish efficient costs in telecoms price regulation. Recommended by the European Commission as the preferred costing methodology for EU member states, LRIC models have been adopted not just in Europe but in countries across the world. Regulators incumbents and alternative operators enabling these organizations to understand the cost base of an efficient network operator. This is vital in today's highly competitive telecoms markets, where prices are under constant

pressure from National Regulatory Agencies, wholesale customers and end users shopping around for the best deal on offer.
Figure number (1) shows the Components of LRIC Model as agreed by the European Commission.

Figure (1)
The Components of LRIC Model



Bottom-up LRIC models are used to establish efficient costs in telecoms price regulation. Recommended by the European Commission as the preferred costing methodology for EU member states, LRIC models have been adopted not just in Europe but in countries across the world. Their use has spread from national regulators to incumbents and alternative operators, enabling these organizations to understand the cost base of an efficient network operator. This is vital in today's highly competitive telecoms markets, where prices are under constant pressure from National Regulatory Agencies, wholesale customers and end users shopping around for the best deal on offer.

2. Cost modeling

Cost modeling, i.e. the use of cost models, is a means of broadening the scope of regulatory policy so as to determine the most appropriate costs according to the principle of cost causality, as referred to earlier, for a given network. The aim is to establish a specific and systematic methodology with a set of basic allocation and calculation criteria and procedures for the determination of costs, also making use of up-to-date standard technical values (coefficients) for determining the theoretical costs of an efficient operator in a given market (country, local area, etc.).
Cost models help business owners and managers figure out the cost for certain activities and processes. Through the use of financial computations or cost accounting allocation, companies can take basic information relating to resources, such as raw materials and direct labor, and transform the data into useful costs for setting the price of goods and services. Companies can put together different cost models based on their needs, whether financial or operational.

Many different companies use cost models in their daily operations. Because the goal of for-profit firms is to maximize the economic value for owners and shareholders, finding ways to lower costs is a crucial step in achieving this goal. Another purpose for cost models is to create a repeatable process that allows owners and managers to apply the model to multiple situations. Through this business process, the company can develop a metric that becomes the standard expected rate of return for projects. This safeguards the company from losing money when engaging in new business opportunities that look profitable but really are not.

Cost models can thus be used within a range of possibilities, from a "methodology guide" type model, with specific steps for determining costs, to a "black box" type model requiring nothing more than the input of a number of basic data elements (traffic, connection points, etc.) for the network in question in order to establish a theoretical optimum engineering cost.
Generally speaking, cost models are of the "scorched node" type, accepting certain constraints on the existing network and allowing for the incorporation of each country's market realities, i.e. the price of assets, current labor costs, cost of capital, etc., in addition to the physical network traffic data. However, such models have an engineering basis inasmuch as they construct the network around optimum design criteria.

Cost models use the bottom-up and top-down approaches. In the case of the bottom-up model, an ideal or fictitious network is designed using traffic estimates based on statistical data, thereafter distributing the values of the assets used among the different services that call for them, whereas in the top-down model the existing network is the data source.

3. The Study Importance

The importance of this study Demonstrates directly through its address, where this study provides a compare and description of the legislations and the legal versions issued by Telecommunications Regulatory Commission and governmental entities and the extent of commitment the Jordanian Telecommunication companies by these legislations & Legal terms, especially in the two top telecommunication firms in Jordan; Zain & Orange.

4. The Study Problem

In light of high competition; both the consumer and Telecommunications Company's face a difficulty in determining the best price for a product or service from telecommunications companies, so this paper try to highlight the benefits which introduced by the LRIC Model for the consumers & the Companies, in other words the advantages and disadvantages by using this model.
So, the researcher tries to get the financial statements of these companies before application this model and after apply it then make a comparative between the two samples.

5. The study population & the study sample:

5.1. The study populations : Jordanian Telecommunications company are Represent the study population for this study, in Jordan there are three Telecommunications companies:

- Jordan Telecom Company ("Orange")
- Umniah Mobile Company ("Umniah")
- Jordan Mobile Telephone Services Company ("Zain")

5.1.1. The Jordanian Telecommunications Industry: The fixed Telecommunications sub-sector has been fully liberalized since 1/1/2005 and it is now fully opened for competition. A new GSM Mobile license has been granted to a Jordanian company "UMNIAH" in August 2004, bringing the number of mobile operators to four; Fast Link (GSM), MobileCom (GSM), Xpress (iDen), Umniah (GSM).
Government has approved the General Policy for Universal Service in the Telecommunication Sector (21/12/2004). In line with approved Universal Service Policy, has set the Universal Service Regulatory Framework, which includes the Instructions on Sharing of USO cost, and published it on its website on 24/4/2006.
The new Integrated Licensing and Regulatory regime represents adoption principles of unified licensing supported by a body of regulation. Two forms of licenses have been adopted:

- **Individual License**: Obtaining an individual license is required by all public telecom network operators or by operators providing public telecom services using scarce resources, which are defined as radio frequency spectrum, public rights of way and numbers. The fee for an individual license is 100,000 Jordanian Dinars ($ 140,000).
- **Class License**: Obtaining a class license is required by all public telecom service providers that do not use scarce resources or those providers whose use of such scarce resources is deemed by the TRC not to have a tangible effect on these resources. The fee for this type of license is 30,000 Jordanian Dinars ($ 43,000).
- Markets for Networks and Services:

On 27/6/2006, the Government of Jordan offered its entire remaining stakes in the incumbent (Jordan Telecom) for sale. The sale has not been fully successful. Government still owns 11.7%, a new GSM Mobile license was granted to a Jordanian company "UMNIAH" on 9/8/2004. A Trunked Radio

Dispatch License was granted to Jordanian company (New Generation Telecommunication Company – Xpress) on 6/4/2003 to provide Trunked Radio Dispatch Service (TRDS) using iDEN technology.

5.2. **The study sample:** the researcher select **randomly** two from three Jordanian Telecommunications Companies to achieve this comparative & analysis study and the result of this selected was:

- **Jordan Mobile Telephone Services Company ("Zain").**
- **Jordan Telecom Company ("Orange")**

6. Data Collection

The researcher finds that it must obtain the data needed for this study through two sources of data to conform to the main objective of the study, and these sources are:

6.1. **The primary sources:** To obtain the data needed from their main sources which data published from companies related to the study, whether the data published by the Amman Stock Exchange (ASE), or the data published to the public on the official website of these companies, which can be accessed via the Internet anytime It is by any user, including the annual financial statements and any clarification related to it , and these companies are:

6.1.1. **Jordan Telecom Company ("Orange").**

6.1.2. **Jordan Mobile Telephone Services Company ("Zain").**

6.2. **The Secondary Sources:** Means those sources of Researches, Articles, periodicals and books which published to the public and related to this study, whether in electronic (Soft copy) or in libraries (hard copy).

7. Analyzing Data & Financial Indices:

the researchers select two period for this study, because the application of LRIC model was begin since 2009 as known from TRC Telecommunications Regulatory Commission, so was selected the years 2006 & 2007 as a past period before using LRIC Model, and another period selects as the years: 2010, 2011 and 2012, these years after the applying of LRIC Model.

7.1. The Annual financial Reports from Zain Telecom Company **before** Applying LRIC model:
The figure below shows the financial Growth in Zain Company as the researchers get it from the published from this company:

Figure (2)
Financial Growth

Financial Growth	2007	2006	YOY Growth
Customers (000s)	1,858	1,961	-5%
Revenues (USD m)	477	485.4	-2%
EBITDA (USD m)	220.6	253.7	-13%
EBITDA margin	46%	-	-
Net Income (USD m)	119.2	135.1	-12%

From the figure above we can see that the year 2007 was not better than the year 2006 and it witnessed decreasing in the items: Customers, Revenue, EBITDA or EBIT and Net Income. All of these results before using the LRIC model.
The researchers believe that these results was normal because of the high competition environment in this sector, but it consider a bad index for this company because the YOY Growth was been Negative.

7.2. The Annual financial Reports from Zain Telecom Company **After** Applying LRIC model:
The figures below show the financial Growth in Zain Company as the researchers get it from the published from this company:

Figure (3)
Operational & Financial Performance

Operational & Financial Performance	2012	2011	2010	YOY Growth (12 vs 11)
Customers (000s)	3,489	2,751	2,488	27%
Revenues (USD m)	509.3	505.8	514.2	1%
EBITDA (USD m)	225.7	231.5	228.5	(3%)
EBITDA %	44%	46%	44%	-
Net Profit (USD m)	121.6	131.6	143.9	(8%)
ARPU	$12	$15	$16	-
Capex (USD m)	31.8	23.8	70.9	34%

Figure (4)
Financial: P&L

Financials: P&L (USD m)	2012	2011	2010	CAGR
Gross Revenues	509.3	505.8	514.2	(0.5%)
Cost of Sales	140.2	141.7	150.2	(3%)
Gross Margin	369.1	364.1	364.0	1%
Opex	143.3	132.5	135.4	3%
EBITDA	225.7	231.5	228.5	(1%)
Net Profit/(Loss)	121.6	131.6	143.9	(8%)

Figure (5)
Capital Breakdown (USD m)

Capex Breakdown (USD m)	2012	2011
Capex	31.8	23.8
Network	34.6	17.2
IT	-	-
Others	(2.8)	6.6

From the last figures above, we can see that the Zain Company witnessed an increasing Growth in the item of: Customers, Revenue, EBITDA or EBIT and Net Income as shown in the figure No (3). Also as shown in the figure No (4) the Gross Revenue had a negative Growth between the years 2010, 2011 and 2012. And there is an increasing in the capital expenditures between 2011 and 2012 its clear that Zain Company has a high capital expenditure after apply the LRIC model.
So after analyses the financial statement and the Annual reports for this company we find that after apply the LRIC model there are many items were better, but also there are many other items were not good, and may that position not because of LRIC model, so the researcher recommend to take longer than period in the next study, may this action explain this result.

7.3. The Annual financial Reports from Orange Telecom Company **before** Applying LRIC model:
The figure below shows the financial Growth in Zain Company as the researchers get it from the published from this company:

Figure (6)
Abbreviated balance sheet & abbreviated Income statement, Orange Company

Abbreviated Balance Sheet					
JOD Million	2005	2006	2007	2008	2009
Assets	548.6	596.7	664.6	676.1	692.2
Liabilities	148.9	195.0	253.1	260.2	272.9
Shareholders' Equity	399.7	401.7	411.5	415.9	419.3
Abbreviated Income Statement					
JOD Million	2005	2006	2007	2008	2009
Revenue	352.2	362.9	397.9	401.4	400.1
Gross Profit	236.6	239.6	262.8	264.6	266.3
Operating Profit	99.5	113.0	116.5	124.4	127.8
Net Profit	86.4	87.0	94.5	100.3	104.0

From the figure (6) above that show the abbreviated balance sheet & abbreviated Income statement for Orange Company we can see that there a positive Growth in the Equity, Liabilities and Assets for this company. Also the items: Revenue, Gross Profit, Operating Profit and net Profit have a positive Growth between years 2005 to 2009.

We can summary the paragraph above that there a positive Growth in the Orange Telecom Company before apply the LRIC model and this Growth was been the maximum rate in 2009 it's the same year was begin apply this Model.

7.4. The Annual financial Reports from Orange Telecom Company **After** Applying LRIC model:

The figures below show the financial Growth in Zain Company as the researchers get it from the published from this company:

Figure (7)

Financial Ratio for Orange Company 2011 & 2012

financial ratio analysis

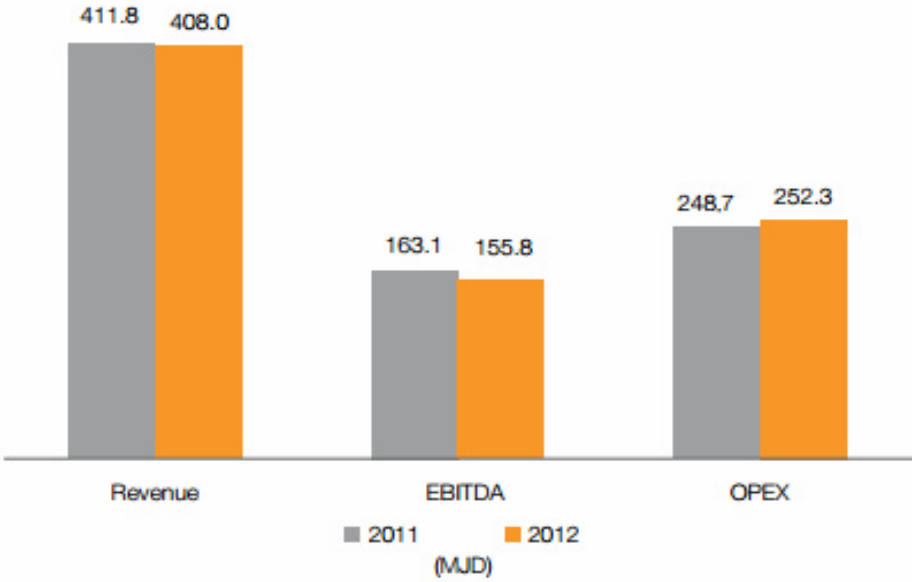
	2012	2011	change %
Profitability ratios			
Return on Total Assets	12.7%	13.6%	(6.4)%
Return on Total Equity	20.8%	22.1%	(5.8)%
Liquidity ratios			
Current Ratio	1.59	1.54	3.6%
Cash Ratio	1.12	1.11	1.4%
Leverage ratios			
Total Liabilities to Equity Ratio	62.6%	64.7%	(3.2)%
Interest – Bearing Debt ratio*	1.6%	1.8%	(7.4)%
Total Debt ratio**	38.5%	39.3%	(2.0)%
Assets Coverage ratio***	78.2%	79.5%	(1.6)%
Assets management ratio			
Total Assets Turnover ratio	62.6%	62.5%	0.2%
Fixed Assets Turnover ratio	204.0%	194.2%	5.0%
Total Capital Turnover ratio	101.6%	100.7%	0.9%
Growth ratios			
Dividends per Share (JD)	0.332	0.359	(7.5)%
Dividends Payout Ratio	99.3%	100.2%	(0.9)%
Dividends Yield Ratio	6.2%	6.5%	(4.4)%
Valuation ratios			
Book value per Share	1.58	1.61	(1.7)%
Market to Book Value ratio	3.36	3.44	(2.5)%
Price – Earning ratio	15.95	15.40	3.6%

* Total Debt (Total Debt + Total Equity)

** Total Liabilities/Total Assets (Capital)

From the figure above we can see that the many of financial Ratios have a negative Growth between 2011 & 2012, especially ROA, ROE and TDR. And this is the bad index during the period that begin apply the LRIC model.

Figure (8)
Earnings before Interest, Tax, Depreciation and Amortization



From the figure (8) above, we can see the negative Growth in the Revenue & EBITDA, for the year 2012 its clear that been better in the year 2011, also there is bad index to know that the capital expenditures was been more than what was been in 2011, which means it increase in 2012 and that happen with decrease in Revenue. So we can say, the operations results before Apply the LRIC model was better than after application it in Orange Company Telecom.

8. Conclusion

This Article aims to show the efficiency of application of LRIC (Long Run Incremental Cost) Model in the JTI (Jordanian Telecommunication Industry) at the financial level, especially in the scope financial performance, and the role of the Telecommunications Regulatory Commission (TRC) in the application of this model, and the extent of cooperation that has occurred between the companies and this Commission.
We found through review the financial statements for Orange & Zain Company's many results may be useful for the next studies and next researchers in the same area, so we can conclude it as follow:

8.1. For **Jordan Telecom Company ("Orange"):**
The researchers found that the Growth in the financial position and the financial ratios in this company were positive for the years before 2009, especially in the year 2008. It's a best fiscal years before apply the LRIC Model (we mentioned that it begin in 2009 under regulation the TRC).

8.2. For **Jordan Telecom Company ("Orange"):**
Also the researchers found that there is bad Growth happen after apply The LRIC model especially in the items ROA, ROE and TDR. So we can take an initial result here that the application of LRIC model wasn't positive for this company.

8.3. **For Jordan Mobile Telephone Services Company ("Zain").**
From the analyses above we can see that the year 2007 was not better than the year 2006 and it witnessed decreasing in the items: Customers, Revenue, EBITDA or EBIT and Net Income. All of these results before using the LRIC model.
The researchers believe that these results was normal because of the high competition environment in this sector, but it consider a bad index for this company because the YOY Growth was been Negative. But we have remembered here that had not begun to use the LRIC model.

8.4. **For Jordan Mobile Telephone Services Company ("Zain").**

The researchers found that the Zain Company witnessed an increasing Growth in the item of: Customers, Revenue, EBITDA or EBIT and Net Income after apply the LRIC model. Also the Gross Revenue had a negative Growth between the years 2010, 2011 and 2012. And there is an increasing in the capital expenditures between 2011 and 2012. So we can conclude a result here that the apply LRIC model was had two faces for this company and its clear from the indices' above. It's positive for some items and negative for other items.

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