INTERNATIONAL JOURNAL OF COMPARATIVE STUDIES IN INTERNATIONAL RELATIONS AND DEVELOPMENT VOL 3 NO 1, JULY 2014.ISSN PRINT: 2354-4298, ONLINE 2354-4201 http://www.internationalpolicybrief.org/journals/international-scientific-research-consortium-journals

# EFFECTS OF PROFITABILITY AND PROFIT MARGIN ON SUSTAINABILITY OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ORIENTED BUSINESSES IN NIGERIA: A CASE OF MTN KADUNA STATE.

<sup>1</sup>Abarshi, R. A, <sup>2</sup>Gakure, R. W PhD & <sup>3</sup>Orwa, G. Electrical and Electronics Engineering Department College of Engineering, Kaduna Polytechnic, Kaduna1 Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya<sup>2,3</sup>

## Abstract

The Study is on the effects of profitability and profit margin on sustainability of ICT oriented Businesses in Nigeria, using MTN Kaduna as case study. Given the current economic challenges facing many countries especially in developing economies, the notion of engendering greater profit margin and profitability levels, have become a prominent goal for many National Government as well as private practitioners. The relevance of profit margin and profitability to sustainable economic development has been highlighted by many researchers and it is now well-recognized that Business profitability and profit margin play a key role in the cultivation of sustainability strategies and in developing the abilities of existing ICT oriented business owners to growth their Businesses to greater levels of success. Thus, the study is based on two variables: profitability and profit margin and sustainability strategies and sustainable earnings of the ICT oriented businesses. The study consists of ten (10) MTN offices in Kaduna State, five (5) within Kaduna Metropolis and five (5) in other local government areas. The sample groups consists of managers and financial officers from the MTN offices located in Kaduna Central, Kachia, Kafanchia, Zaria city, Samaru and Saminaka. The time frame for the collection of data was from January to March 2014. The data was collected through structured questionnaire. The data gathered was analyzed using statistical package software SPSS version 14 and 4-likert scale System of Grade Point and Grade Mean to summarize data. The result was interpreted within the frame work of the research problem. Deductions show the factors responsible for optimization of profit by MTN in Kaduna and extraneous factor affecting profitability and profit margin of ICT-based businesses in the study area, further compounded by the current security insurgency in the study areas. More Government and private sector participation in ICT-based businesses will play an important role in improving the Nigerian economy.

Keywords: Profitability, Profit Margin, MTN, ICT, Business and Sustainability.

# Background to the Study

MTN is a Pan-African operator, which initially started in South Africa in 1994. In 2004, it serves 9.5 millions subscribers in 6 different countries of Sub-Saharan Africa (South Africa, Nigeria, Cameroon, Uganda, Rwanda and Swaziland) (MTN 2014).

MTN decision to invest in Nigeria was carefully thought through. MTN showed a real talent at being able to leverage their strengths and reducing the potentials risks inherent to an investment in Nigeria.

In 1999, military rule in Nigeria was terminated through democratic means and a transitional regime led by Olesegun Obasanjo was put in place, whose introduction of advanced mobile technologies such as GSM reduce drastically the difficulties in communication compare to former fixed line technology. Hence, at the end of 1999, the Nigerian government announced the decision to offer 3 GSM licenses for a fixed price of 250 Millions US\$ each.

Nigeria was (and still is today) a challenging environment for foreign companies willing to invest in what represent potentially the 2nd biggest market in Africa after South Africa. It is the most populated country in the continent (137 million people in 2003 and 140 million people in 2006), with 50% of the population below 18 years and 60% living below the poverty line. (MTN 2014). As a result, no European nor American operators decided to bid for the licenses. In 2001, the 3 licenses were granted to MTN (South Africa), Econet (Zimbabwe) and the Nigerian incumbent operator Nitel.

# Some Important Terms

# 1. Sustainability

Development economics in its modern form did not exist before the 1940's. The concern of development economics, as the term is now understood, is with countries or regions which are seen to be under or less developed relative to others, and which, it is commonly believed, should, if they are not to become ever poorer relative to the developed countries, be developed in some way. (Backhouse, Roger (1991).

Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- a. The concept of needs, in particular the essential needs of the world's poor, to which overriding prior should be given; and
- b. The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs. (World Commission on Environment and Development (WCED),1987).

Sustainability is used on a simple principle: everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. (United States Environmental Protection Agency (EPA),1992).

# 2. Profitability and Profit margin

The expedient aim of any business set up is to make profit and for sustainable continuity. Hence the role of profitability and profit margin in business cannot be over emphasized. Profit may be defined as the

excess of selling price over cost price. In this case, the total revenue realized from goods bought exceeds the total expenditure on goods. If reverse is the case, it is known as loss which indicates that the business concern did not make profit. Profit may also be termed as the reward a person gets for the risk he took in providing his capital in as business (Short, Mckelvie, Ketchen Jr. and Chandler, 2009).

Gross margin is the money left after subtracting the cost of the goods sold from the net sales and can be a naira value (gross profit) or a percentage value (Tarzijan, 2010). Net sales are the total value of sales for a given period less any discounts given to customers and commissions paid to sales representatives. Gross margin is not commonly used for service businesses as they usually don't have cost of goods (Tarzijan, 2010).

While, net margin is the profit before payment of any tax (tax is not included because tax rates and tax liabilities vary from business to business). Net margin is the gross margin less the business overhead expenses. The operating profit margin is the profit that a business earns strictly from its operating activities, and is usually calculated on a before-tax basis (Tarzijan, 2010).

The operating profit margin may be more important than net profit, since it reveals the financial viability of the core operations of a business before any extraneous financial or tax-related effects. It is particularly useful to track this item on a historical trend line to see if there are any long-term changes that management should be aware of. It can also be tracked in comparison to the average figure for the industry in which it is operated, and against key competitors, to see if the core business is competitive (Holian 2009, McGahan 2002, Rumelt 1991).

The expenses included in the calculation of the operating profit margin comprised of both variable and fixed expenses. This calculation does not necessarily result in a subtotal for a contribution margin (which is derived from revenues minus variable expenses), with fixed costs listed below the contribution margin. Instead, any presentation format can be used. The key point is that non-operating expenses are excluded from the calculation; instead, they are listed as a deduction from the operating profit margin to arrive at the net profit margin. The expenses not included in the calculation of the operating profit margin include: Income taxes, interest expense, interest income, gain or loss on asset sales and extraordinary loss events (Holian 2009, McGahan 2002, Rumelt 1991).

# **Objectives of the study**

It is based on this background that the study seeks to assess the effects of profit margin and profitability on Sustainability of ICT Oriented Businesses in Nigeria, using MTN Kaduna as case study, with the following objectives:

- 1. To assess the profitability and profit margin on the MTN sustainable earnings,
- 2. To determine the various factors that affects MTN profitability level and
- 3. To access the extraneous issues bothering profitability level of MTN with the following research questions:

- 1. What are profit margin and profitability of MTN of sustainable earning?
- 2. What factors affect MTN profitability in Business Environment?
- 3. How does other extraneous factor affect profitability and profit margin of MTN in Nigeria?

Telecommunication Operators and Nigeria Security Challenge

Due to Nigeria's present security challenge, telecoms operators, particularly MTN, others like Airtel, Globacom, Etisalat, Visafone, Multilinks etc' installation in some States of northern Nigeria, have been damage by unknown persons. The target on telecommunication facilities, especially the Base Transceiver Stations (BTS) in northern Nigerian cities of Bauchi, Gombe, Kano, Maiduguri, and Potiskum, has let to the damages of about 50 Base Stations in northern Nigeria., and has cost the Service Providers over 3.9 trillion of Naira, thereby leading to poverty as people are left without jobs. It is conspicuous that ICT-based businesses will lead to the economic development of study area, if fully given the enabling ground to flourish. (Sustainability Report 2004, MTN Group Limited).

## Sustainability of MTN in the Study Area

There have been some doubts to whether MTN can sustain it profit margin and performance. Since 2004, there have been some doubts to whether MTN as a result of the following reasons: First, the tax holidays given by the government ended in 2006, corporate tax rate is now 30%. Second, as the number of subscriber expands, the ARPU decreases. This is a well-known phenomenon in mature markets. It is mainly due to the fact that new subscribers will come from lower classes of the population.

(Sustainability Report 2004, MTN Group Limited).

Third, there was a lot of pressure in 2003 from subscribers to lower the prices of MTN products and services. So far, the operators managed to sustain a status quo and avoided entering a price war. But at the end of 2003, the threat of legal action from consumer groups and some highly publicized symbolic events (such as no calls day, where subscribers were encouraged not to use their phones as a sign of protest) forced MTN to lower their prices. As the market approached maturity, there were more and more pressure to reduce further those prices.

However, the potential market for mobile telephony in Nigeria has increased 10 million subscribers by 2006. MTN reduced its costs as infrastructure improved in the country. The cost of adding capacity to the network is then constantly decreasing.

So even if MTN may never experience margins such as the ones in 2003, the sheer size of the market still allow them to continue to collect significant profits for the next years to come. It is worthy to mention here that the three reasons stated above were experience by all states in the country and not only area.

#### Benefits of MTN's Investment to Nigeria

Information and Telecommunications Technology (ICT) are often seen as complementing each other to enable an increased level of social and economic development in emerging countries. Alcatel, for example, is running a lot of projects under the umbrella of "Bridging the Digital Divide". It partners up with small local ICT companies to provide customized applications that improved the standard of

living of rural and urban communities. The underlying idea is that part of the reason why people are dragged down into poverty can be removed by ICT technology: distance to markets, illiteracy, poor

# ICT Based Business Development Model

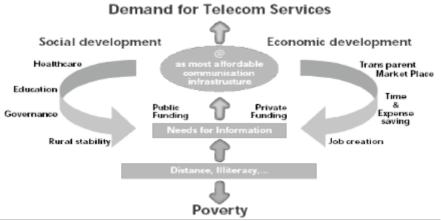


Figure 1: An ICT Based Development Model: New Virtuous Circles. Source: MTN Official web site(2014) .

But the best example of the successful working of such a virtuous circle seems not to come from an Alcatel project, but from the Ericsson-MTN cooperation in Nigeria. We'll briefly discuss the different development factors. We'll look at the general effects of a better telecommunications infrastructure on development and at the specific actions of the MTN Foundation, a group within MTN that pursues social development in Nigeria.

#### Economic Development: Job Creation

A typical value chain for the mobile telecommunications industry clearly illustrates the potential for direct and indirect job creation on many different levels. Where on the supplier side the job creation goes mainly to foreign (F) workers, more and more local (L) jobs appear when moving towards the end of the chain. MTN Nigeria reports an estimates the creation of 30,000 direct and indirect jobs from its continuous activities. The Nigerian Communications Commission (NCC) estimates the indirect jobs created from mobile communications to be between 10,000 and 200,000. (NCC Report February, 2014).

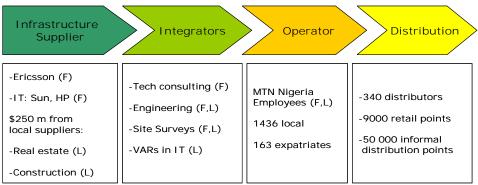


Figure 1: MTN Nigeria value chain Source: MTN Official web site (2014).

# Method and Materials

To achieve the Objectives of this study, a combination of Field Work, and the review of relevant Literatures were used for Data acquisition. The Data, on which this research is based on, were collected, through administered of Questionnaire, which served as the Primary Sources of Data, collected between January and March 2014. Stratified Sampling Techniques were used to select MTN Offices in Kaduna Central, Zaria-city, Kongo-Zaria, Samaru-Zaria, Kachia and Kafancha. A total Number of 65 Questionnaires were distributed to Respondents; in the selected state shown on table 1: The data collected and collated were represented and analyzed under the following headings:

Table 1:

Sample 1: Distribution of Respondents, according to M11N offices in the study area.										
S/NO.	MTN Office	Number of Copies of	Number of Returned	Percentage (%)						
		Question Administered	Copies of							
			Questionnaire							
1.	Kaduna Central	15	14	23.3						
2.	Zaria -city	10	9	15.0						
3.	Samaru -Zaria	10	10	16.7						
4.	Saminaka	10	10	16.7						
5.	Kachia	10	9	15.0						
6.	Kafancha	10	8	13.3						
	Total	65	60	100						

Sample 1: Distribution of Respondents, according to MTN offices in the study area.

A total of 65 copies of questionnaires were administered; only 60 were returned. The above shows that MTN Kaduna Central office accounts for 23.3%, MTN Zaria-city office 15.0%, MTN Kongo and Samaru offices 16.7% and 16.7%, MTN Kachia office 15.0% and MTN Kafancha office make up the 13.3% of the remaining percent of respondents which sum up to a total of 100%.

#### **Result and Discussion**

The Information gathered and collated from Respondents, were Computed, Analyzed statically and presented to reveal the responses from the use of inferential Statistics, applying Four Likert Scale System of Strongly Agree (SA), Agree (A) and Disagree (DA) and Strongly Disagree (SDA) and Grand Mean (x) to summarize the responses.

Formula for computation and analysis:

F/N\*100/1=,

Where F = stand for Frequency and Total Number of Returned Questionnaires.

%=Percentage

N=Number of Respondents.

Grade point: SA=4, A=3, DA=2 and SDA=1.

Table 2:

Sample 2: To what extent does Respondents understand the concept of profitability and profit margin in ICT based
businesses in Kaduna State

S/NO.	ITEM	SA	A	DA	SDA	NA	MEAN (X)	REMARK
1.	Respondents understood the Concept of effect of profitability, and profit margin for sustainable ICT based businesses in Kaduna.	39	16	3	2	60	3.53	Strongly Agreed
2.	Respondents know and understand the types and determination of profit: gross and net profit.	38	15	4	3	60	3.47	Agreed
3.	The type of ICT -oriented business that an entrepreneur embarked upon could have positive or negative effects on profit margin of the business.	41	12	6	1	60	3.55	Strongly Agreed
4.	There are impeding evidences of adverse effect of power supply on the realization of high profit margin for the sustainability of ICT -based outfits in Kaduna State.	43	10	3	4	60	3.53	Strongly Agreed
5.	The impact of factor affecting profit making on Telecom/ICT businesses has started having adverse and cascading effects on the sustainability of ICT -based businesses in the study area.	35	16	7	2	60	3.40	Disagreed
6.	Innovation on products and service would increase turn - over for sustenance of ICT - oriented businesses in Kaduna.	34	23	2	2	60	3.52	Strongly Agreed

Source: Researcher's Field Work (2014).

Cut-offPoint=2.50.

Grand mean= (X)

Where (X) = Summation of Number of Means.

N = Number of Variables.

Grand Mean= (X) = 21.00 = 3.50 N 6

Table 2, shows the responses of all the respondents on Items 1-6. The respondents agreed on the following Item numbers 1, 3, 4 and 6, as they were rated strongly. While items 2 and 5 were rated Agreed. The Grand Mean of Table 2 is 3.50. The table has shown that the respondents are well informed about the subject matter and its 'modus operandis'. The type of ICT-oriented business that an entrepreneur embarked upon has both positive and negative effects on profit margin of the business. This is the case of MTN Kaduna, where the type of ICT business positively affects it profit margin. Furthermore, there are impeding evidences of adverse effect of power supply on the realization of high profit margin of ICT-based outfits in the study area. The impact of factor affecting profit-making on Telecom/ICT businesses has started having adverse on the sustenance of ICT-based businesses in the study area. The innovations on products and services by MTN have increase turn-over on sales of products and services in Kaduna.

Table 3:

Sample 3: Factors that have	positively affected	the Pro	ofitabilit	y Level	l of MT	N Busi	nesses in Ka	duna State
-								

S/NO.	ITEM	SA 4	A 3	DA 2	SDA 1	NA	MEAN (X)	REMARK
7.	The buying price of MTN products and services is fairly low by customers/clients ensured high profit generation by the MTN outfit in the study area.	32	22	2	4	60	3.37	Agreed
8.	The strategy on the path of MTN to keep the selling price of their products and services higher than the cost of goods ensured profit attainment.	43	12	3	2	60	3.60	Strongly Agreed
9.	The pioneer -ship status of MTN in Nigeria helpe d the outfit to maximized profit in spite of competiveness from other existing GSM Service Providers in Nigeria.	45	13	2	0	60	3.72	Strongly Agreed
10.	The gain consciousness of MTN determines the prices it assigned or fixed for its products and services in order to guaranteed turn -over.	49	45	19	2	60	3.23	Agreed
11.	The forces of demand and supply affect the profit margin of GSM Service Providers in Nigeria.	44	10	4	2	60	3.60	Strongly Agreed
12.	The multi - media and newsprint advert isement and sales promotions nation - wide, affects MTN rate of turn - over in the study area.	42	16	1	1	60	3.63	Strongly Agreed
13.	The commitment towards the deliverance of corporate and social responsibility service in communities in the study area ensure sales and large market for MTN goods and services.	35	20	3	2	60	3.47	Agreed

Source: Researchers' Field Work (2014).

Cut-offPoint=2.50.

Grand mean= (X)

Where (X) = Summation of Number of Means. N = Number of Variables.

Grand Mean= (X) = 24.62 = 3.52N 7

From the analysis of data in Table 3, this was confirmed by responses of Items 7, 8, 9, 10, 11, 12 and 13 with Mean of 3.37, 3.60, 3.72, 3.23, 3.60, 3.63 and 3.47 were rated as 'Strongly Agreed' and 'Agreed'. The Grand Mean for table 3 is 3.52. It was agreed that the buying price of MTN products and services are fairly low by customers/clients ensured high profit generation by the MTN outfit in the study area. The strategy on the path of MTN to keep the selling price of their products and services higher than the cost of goods ensured profit attainment by the Corporation. The strategy on the path of MTN to keep the selling the than the cost of goods ensured profit assurance. The pioneer-ship status of MTN in Nigeria helped the outfit to maximized profit in spite of competiveness from other existing GSM Service Providers in Nigeria. The gain consciousness of MTN determines the prices it assigned or fixed for its products and services in order to guaranteed turn-over on their products and services. Furthermore, the forces of demand and supply affect the profit margin of GSM

Service Providers in Nigeria based on it market situation. The multi-media and newsprint advertisement and sales promotions nation-wide, has affected MTN rate of turn-over in markets in the study area. The commitment towards the deliverance of corporate and social responsibility service by MTN in communities in the study area has ensures high sales of it products, also large market for MTN goods and services and sustainability of the ICT business in Nigeria.

S/NO.	ITEM	SA	A	DA	SDA	NA	MEAN (X)	REMARK
14.	Government participation in the delivering of ICT centers and establishment of ICT -based businesses in Kaduna.	5	7	23	25	60	1.48	St rongly Disagreed
15.	Private Sector has participated in establishment of ICT -based outfits and has being involved in sustainable development of the ICT technologies in Kaduna State.	34	19	5	2	60	3.42	Agreed
16.	Consistent power supply to Teleco mmunication/ICT business environment can be a solution to the eradication of poverty status of Kaduna State.	44	12	2	2	60	3.63	Strongly Agreed
17.	The current security insurgency in most parts of northern Nigeria has started having catastrophic ef fect on Telecommunication business outfits' turn - over and profit margin.	45	12	2	1	60	3.63	Strongly Agreed
18.	ICT Technologies have the potentials to continue to improve Nigerian economy, through profit plough back for Re - Investment and to increa ses Income of the Kaduna State Populace.	43	11	4	2	60	3.59	Strongly Agreed

Table 4: Sample 4: Extraneous Issues that affect profitability level of MTN outfits in Kaduna State.

Source: Researchers' Field Work (2014).

Grand Mean= (X) N

Where (X) = Summation of Number of Means. N = Number of Variables.

Grand Mean= 
$$(X) = 15.75 = 3.15.$$
  
N 5

From the table 4, Item 14, 15, 16, 17 and 18 with Mean of 1.48, 3.42, 3.63, 3.63 and 3.59 of the responses, rate as, 'Strongly Disagreed', 'Agreed', and 'Strongly Agreed', with Grand Mean (x) of 3.15, analysis indicates, that the federal and state government has not fully involved in the delivering of ICT-based dividend adequate to the communities in the study area. Private Sector particularly those in Telecommunication/ICT Service provision, like GSM Operators, Multimedia Companies, Internet and Electronic Vendors are all contributing immensely to the development of ICT-based businesses in the study area. Consistent power supply will have positive impact on Telecommunication/ICT business sector of northern Nigeria.

#### Conclusion

The prime objective of this paper is to bring to the burner the effects of profitability and profit margin on Telecommunication/ICT-based business sector; MTN in Kaduna State. The MTN Kaduna case study clearly shows that companies can be successful in optimizing resources, minimizing costs and maximizing profits through innovation, accessibility, qualitative products and swift service delivering. However, the break-even and sustainability of profit margin has led to the over-exploitation of it customers and clients, based on it teeming and patronizing customers. It also illustrates the positive impact a reliable telecommunications infrastructure can have on the social and economic development of a country. It is pertinent to say that ICT business outfits will actually take desired place and help lift Nigerians out of poverty.

#### Recommendations

- 1. MTN should sustain there MTN foundation programme since it has empowered thousands of youth not only in the study area.
- 2. The MTN group should expand the scope of its research and development unit to include innovative input from within the African region.

#### References

Backhouse, Roger (1991). "A History of Modern Economic Analysis". Oxford, UK: Basil Blackwell.

- Brito, L. A. L., & Vasconcelos, F. C. (2004) 'How much does Country Matter?' Proceedings of the National Meeting of Graduate Programs in Business Administration, University of São Paulo, vol. 27. http://www.eaesp.fgvsp.br/AppData/GVPesquisa/P00308\_1.pdf
- Caloghirou, Y., Protogerou, A., Spanos, Y. E., & Papagiannakis, L. (2004) 'Industry- Versus Firmspecific Effects on Performance: Contrasting SMEs and Large-sized Firms.' European Management Journal, Vol. 22 (2), pp. 231-243.
- Chang, S. J., & Hong, J. (2002) 'How much does the business group matter in Korea?' Strategic Management Journal, 23(3), pp. 263-274.
- Claver, E., Molina, J. & Tari, J. (2002) 'Firm and industry effects on profitability: A Spanish empirical analysis.' European Management Journal, Vol. 20(3), pp. 321–328.
- Eriksen, B., & Knudsen, T. (2003) 'Industry and firm interaction: Implication for profitability.' Journal of Business Research, Vol. 56(3), pp. 191-199.
- Furman, J. (2000) 'Does industry matter differently in different places? Evidence from four OECD countries' (MIT-Sloan working paper, #4121) Retrieved September 11, 2003. http://people.bu.edu/furman/Industry%20matters.pdf
- Galbreath, J., & Galvin, P. (2008) 'Firm Factors, Industry Structure and Performance Variation: New Empirical Evidence to a Classic Debate.' Journal of Business Research, Vol. 61(2), pp. 109-117.
- Hawawini, G., Subramanian, V., & Verdin, P. (2003) 'Is performance driven by industry-or f i r m specific factors? A new look at the evidence.' Strategic Management Journal, Vol. 24(1). pp. 1-16.

- Hawawini, G., Subramanian V. & Verdin P. (2005) 'Is performance driven by industry- or firm-specific factors? A reply to McNamara, Aime and Vaaler' Strategic Management Journal, Vol. 26(11), pp. 1083–1086.
- Holian, M., Ali R., (2009) 'Firm and Industry Effects in Accounting versus Economic Profit Data' Applied Economics Letters http://www.sjsu.edu/faculty/matthew.holian/fixed\_effects.pdf
- Li, S., Greenwood R. (2004) 'The effect of within-industry diversification on firm performance: Synergy creation, multi-market contact and market structuration' Strategic Management Journal, Vol. 25, pp. 1131-1153.
- Majumdar, S. K. (1997) 'The impact of size and age on firm-level Performance: Some evidence from India.' Review of Industrial Organization, Vol. 12, pp. 231-241.
- McGahan, A. M. & Porter, M. E. (1997) 'How much does industry matter, really?' Strategic Management Journal, Vol. 18 (special issue), pp. 15-30.
- McGahan, A. M. & Porter M. E. (2002) 'What do we know about variance in accounting profitability?' Management Science, Vol. 48(7), pp. 834-851.
- McNamara G., Aime F. & Vaaler P., (2005) "Is performance driven by industry- or firm-specific factors: A response to Hawawini, Subramanian and Verdin" Strategic Management Journal, Vol. 26(11), pp. 1075-1081.
- Olu, O. (2010). "The Relationship Between Service Quality and Customer Satisfaction in the Telecommunication Industry: Evidence From Nigeria". Department of Business Administration Osun State University P. M. B. 2008, Okuku Osun State, Nigeria. BRAND. Broad Research in Accounting, Negotiation, and Distribution ISSN 2067-8177, Volume 1, Issue 1, 2010.
- Powell, T. C. (1996). 'How much does Industry Matter: An Alternative Empirical Test', Strategic Management Journal, Vol. 17(4), pp. 323–334.
- Roquebert, J. A., Phillips, R. L., & Westfall, P. A. (1996) 'Markets vs. Management: What Drives Profitability?' Strategic Management Journal, vol. 17, pp. 653-664.
- Holian, M., Ali R., (2009) 'Firm and Industry Effects in Accounting versus Economic Profit D a t a ' Applied Economics Letters http://www.sjsu.edu/faculty/matthew.holian/fixed\_effects.pdf
- Li, S., Greenwood R. (2004) 'The effect of within-industry diversification on firm performance: Synergy creation, multi-market contact and market structuration' Strategic Management Journal, Vol. 25, pp. 1131-1153.
- Rumelt, R. P. (1991). 'How much does Industry Matter?' Strategic Management Journal, Vol. 12, pp. 167-185.
- Schmalensee, R. (1985). "Do Markets Differ Much?" American Economic Review, 75(3), 341-351. http://dspace.mit.edu/bitstream/ handle/1721.1/ 2071/SWP-1531-2689036.pdf?sequence=1
- Short, J. C., McKelvie, A., Ketchen jr., D. J. & Chandler, G. J. (2009) 'Firm and Industry Effects on Firm Performance: A Generalization and Extension for New Ventures' Strategic Entrepreneurship Journal, Vol. 3, pp. 47-65.
- United States Environmental Protection Agency (EPA), (1992).

- Tarziján, J., Ramírez, C., (2010). 'Firm, Industry and Corporation Effects Revisited: A Mixed Multi-Level Analysis for Chilean Companies.' Applied Economics Letters. http://www.eauc.cl/publicaciones/wp-content/uploads/2010/10/paper complappliede conoletter2010.pdf
- Victer, R., McGahan, A. (2006) 'The Effect of Industry and Location on Firm Profitability in the Global Market: Empirical Evidence that Firm Performance depends on the interaction between Industry Affiliation and Country Identity' DRUID SUMMER CONFERENCE, 2006.
- World Commission on Environment and Development (WCED). Our common future. Oxford: Oxford University Press, 1987 p. 43.
- http://www.alcatel.com/sustainable/fracture/fracture1.htmSustainability Report 2004, MTN Group Limited