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Evaluating the Service Profitability of Bank Customers

Highlights

Total Quality Management

Distance Influence Profitability

Discovering Thoughts, Inventing Future

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Does Distance Influence Profitability of Bank Customers?

By Eduardo Kalil Hanna

Centro Universitário da FEI, Brazil

Abstract- This study aims to identify whether customers who live further away from bank branches where they opened their checking accounts are as profitable as those who live closer. For this purpose, it were selected 30 bank branches of one of the largest retail banks in Brazil and it was used analysis of variance in order to compare customer mean profitability of these branches among primary, secondary and fringe trading areas for those customers who receive their salaries by the bank and also for those who don´t receive. Regardless of whether customers receive or not their salaries by the bank, those who live further from the branches where they opened their checking accounts are as profitable as those who live closer and, in some cases, they are more profitable. So, Banks must take into account all customers of a branch and not only those who live closer it in order to develop strategies for customer retention and for increasing profitability provided by customers.

Keywords: *bank customer profitability, trading area, peformance.*

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Keywords: bank customer profitability, trading area, peformance.

I. Introduction

In recent years, brazilian banking sector was characterized by several changes, and we can highlight the increased of competition among banksand the form of customer relationship with them. Increased of competition has basically occurred for two reasons: the first one, due to the possibility of portability among financial institutions ofall types of bank loansobtained by customers, according to the Central Bank of Brazil Resolution number 3,401/2006; the second one, due to fall in basic interest rate of the economy, Selic Rate, from 19.5% in January, 2002 to 11.65% [i] in December, 2013, which reduced bank spread. Such situations have forced banks to increase their volume of loans and deposits in order to remain profitable, as well as, to identify potential customers in order to increase profitability.

Regarding the form of customer relationship with banks, the possibilityof performing banking transactions remotely has decreased customer needs to go to bank branches, because they can pay their bills, check balance, in some cases invest money and obtainbank loan, and perform other transactions by alternative channels such as internet. According to table 1, the volume of transactions performed atalternative channels has been increasing and atbranches has been remaining constant, although the number of bank branches increased from 13,396[ii] in December, 2000 to 23,051[iii] in November, 2014, indicating that people have gone to branches less often.

Table1 : Transactions by Channels

Channel	2000[iv]	2013[v]	Evolution
ATM	6.6	9.2	39%
Internet Banking	0.7	16.4	2,2%
Cash Tellers (Branches)	4.0	4.0	0%

Source: Brazilian Banks´ Federation. Transactions in Millions. Not available mobile banking transactions.

So, it is possible that customers who live further away from branches are as profitable as those who live closer. This phenomenon doesn´t occur in general retail, because customers who live in primary trading area,ie, closer to stores,are more profitable than those who live further away (Berman and Evans, 2006; Levy and Weitz, 2008). Understanding this relationship is important for banks to develop strategies for their branches according to potential of profitability that each customer or customer segment can provide, not considering only those who live closer to branches.

Therefore, this study aims to identify whether customers who live further away from bank branches are as profitable as those who live closer. Thus, we selected 30 bank branches located in São Paulo city (Brazil) of one of the largest retail bank in Brazil and by analysis of variance, using Bon ferroni method, we compare customer mean profitability of these branches among primary, secondary and fringe trading areas for those

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customers who receive their salaries by the bank and also for those who don´t receive.

II. Review of Literature

a) Banking services channel

The location of bank branches is one of the key factors that people take into account to choose the bank which they will become customers. (Clemes et al., 2010; Devlin, 2002; Dick, 2007; Lee and Marlowe, 2003; Ta and Har, 2000). However, after becoming customers, they can perform their transactions (bill payments, check balance, invest money, request bank loans, etc.) at any branch or alternative channels in which they perform their own transactions without the help of an employee, through self-service technology (Meuter et al., 2000). These alternative channels are internet banking, ATM, mobile banking and call center (in some situation, in this last case, it is necessary a contact with an employee).

Alternative channels are generally used for standard banking transactions (cash transfer, bill payments, etc.) and are rarely used for product sales (Bielski, 2007)which are usually conducted atbranches. Branches are also responsible for performing customer standardized transactions through bank tellers, when customers wish. Many banking business can be performed on line, as requesting bank loans and investing money, but the propensity to use internet to invest will depend on investor´s level of knowledge about financial investments (Pellinen et al., 2011), otherwise they will prefer to be served at bank branches.

On the other hand, factors as security (Chong et al., 2010;Dimitriadis, 2010; Kesharwani and Bisht, 2012; Ozdemir et al., 2008; Wessels and Drennan, 2010) and psychological barriers, especially regarding the familiarity with technology, inhibit the use of internet (Laukkanen and Kiviniemi, 2010) and habituation to perform many transactions through other channels (Iallouna and Chemingui, 2013) in hibitsuse of mobile banking, but even so, the number of transactions at alternative channels has been increasing at a higherrate than transactions performed at branches, as explained atintroduction. On the other hand, a significant part of transactions performed at bank branches can be considered remote, because 40% of customers when perform them, it is at a different branch from which they opened their accounts.(Coughlan et al., 2010).

It mustbe also considered that because of convenience provided by alternative channels technology, it is one of the factors that influence customer satisfaction (Kaura, 2013), and it should provide a positive experience to increase word of mouth and the volume of deposits and bank loans(Klaus et al., 2013), because according to Aksoy (2014), variation in volume of deposits, one of the measures most commonly used to measure the performance of banks, is 55% explained by customer satisfaction.

b) Performance measures

Deville and Leleu (2008) suggestedrelativized measures to measure the performance of banks, in which expenses, number of check accounts, etc., should be divided by total of deposits, because according to the authors, they reflect the main activity of banking sector. On the other hand, despite being important to measure market share, deposits don´t either measure profitability, or consider costs.

So, Moeni et al. (2011) considering *Customer Life Value* - CLV definition (present value of projection profitability of future results), established a definition of performance for banking sector which consists in the present value of the sum of revenues to be generated by their customers, deducted costs, including those related to attraction, sales and services.

For this study, considering that it aims to compare customers profitability in relation to the distance they live from the branch where they opened their checking accounts, the best measure for profitability is the contribution margin provided by customers, because it considers revenue from all products and services, including interest rate payments, and bank expenses with customers.

c) Importance of location

A measure to check how store location is attractive to customers, it is its trading area, because according to Parente and Barki (2014, p. 330), “reflects the spatial dimension of the retail market demand [...] is defined as the geographic area containing most consumers of a store”, which extension will depend on store power to attract consumers.

In general retail,usually, the market potential and the socio-demographic characteristics of trading area are factors that influence performance, sales volume, customers segmentation strategy, internal characteristics of store environment (number of cash tellers, for example) and opening hours (Kumar and Karande, 2000). Camargo Jr. and Elias (2010) identified that the potential of each store also depends on its location, because it is one of trading area determining factors and according to its extension, stores can attract customers from different places whose consumer behavior can varies a lot.

Bank branch performance is also influenced by local characteristics and its trading area. According to Deville and Leleu (2008) there are differences in branch results according to geography area of operation, which requires different development of strategies, different incentives and different performance estimation for each branch or region. According to Applebaum (1966), trading area relates to the customers' geographical dispersion around a store, and travel time by car (or

another measure of time in relation to distance). It can be divided into three segments:

a. Primary area: the region closest to the store, in which most of its customers are concentrated. The percentage of customers may vary according to the type of trade and location, but it generally encompasses 60% of customers. According to Parenteand Barki (2014), the percentage ranges from 60to75%, however Levy and Weitz (2008) restrict this to 60-65%, and Berman and Evans (2006) extend it to 50-80%;

b. Secondary area: the region around the primary. This is of secondary importance in terms of sales, accounting for 15 to 25% of customers (Parente and Barki, 2014; Berman and Evans, 2006);

c. Fringe area: this contains the remaining customers, includes those who buy occasionally and it is considered a residual area.

III. Methodology

a) Data Extraction

From one of the largest bank in Brazil, we selected a sample, by judgment, of 30 bank branches located in São Paulo city, with the aim of composing a representative sample of branches according to their different sizes, regions and the socio-economic levels of their surroundings and being dispersed over all areas in the city. For each one of these branches, we obtained from the bank´s database system the following data about active individuals customers (those who are using the bank services).

a. Home address;

b. Contribution margin of two periods;

c. If the customer receive or doesn´t his salary by the bank

Table 2 : Characteristics of Branches:customer who don´t receive their salaries by the bank

Branch	Customers	Mean Contribution Margin (US$)	Variation Coefficient (%)	Primary Trading Area (Km)	Secondary Trading Area (Km)	Fringe Trading Area (Km)
1	580	19	419	10.6	23.8	2,369
2	3,328	63	235	3.3	11.1	2,195
3	1,669	55	182	5.2	19.8	1,474
4	2,036	77	275	2.7	16.4	2,311
5	2,611	69	344	8,7	25.5	2,368
6	1,711	82	351	5.8	24.1	2,370
7	1,433	74	269	9.0	27.1	1,493
8	2,589	60	302	1.5	12.3	2,320
9	2,155	51	213	2.6	12.5	2,461
10	1,676	76	289	4.3	19.0	2,371
11	765	116	242	7.9	22.9	1,460
12	1,775	61	351	2.6	17.3	421
13	1,130	52	284	1.6	16.0	2,095
14	1,271	48	295	14.5	25.9	2,240
15	2,594	69	320	2.6	7.7	2,196
16	1,062	96	259	6.7	19.7	888
17	1,384	56	244	1.6	10.7	2,298
18	1,347	68	234	0.9	21.7	2,694
19	1,439	64	230	7.6	21.9	2,368
20	2,674	63	233	2.4	9.0	2,831
21	1,396	86	325	9.5	22.7	2,365
22	1,446	43	258	1.5	7.2	2,275
23	1,743	44	243	2.0	6.7	1,346
24	1,720	61	214	1.7	10.4	2,698
25	618	80	383	2.7	18.3	492
26	1,517	57	241	2.0	9.5	1,386
27	2,143	55	234	10.1	25.3	1,454
28	712	62	305	9.4	22.6	2,371
29	2,976	42	253	2.9	16.1	2,360
30	876	58	369	2.6	11.2	1,700
Minimum	580	19	182	0.9	7.2	421
Maximum	3,328	116	419	14.5	27.1	2,831

Table 3 : Characteristics of Branches:customer who receive their salaries by the bank

Branch	Customers	Mean Contribution Margin (US$)	Variation Coefficient (%)	Primary Trading Area (Km)	Secondary Trading Area (Km)	Fringe Trading Area (Km)
1	203	115	202	12.4	26.5	386
2	2,110	132	186	3.3	11.1	1,451
3	1,036	104	144	6.5	19.2	541
4	1,360	121	158	3.7	14.4	534
5	1,213	101	200	14.8	27.6	357
6	1,010	154	208	4.3	23.4	2,319
7	1,048	150	344	9.6	26.8	543
8	1,259	111	167	1.9	10.4	455
9	2,557	119	160	2.9	7.9	2,460
10	740	129	196	2.7	15.0	2,135
11	288	246	180	2.1	19.0	484
12	996	157	209	2.3	10.5	1,912
13	756	127	173	2.4	14.9	2,325
14	432	87	172	13.5	24.2	494
15	1,741	121	145	2.5	9.3	564
16	360	164	213	8.1	20.0	2,228
17	1,172	89	158	1.8	10.2	470
18	557	147	179	0.6	17.7	3,304
19	1,044	163	181	8.8	21.2	2,368
20	1,832	105	159	2.3	9.0	2,455
21	454	176	189	8.7	25.2	2,213
22	985	85	147	2.0	7.6	880
23	1,458	108	190	2.1	8.4	2,365
24	1,035	119	157	1.5	9.2	213
25	330	113	169	4.4	16.9	2,121
26	1,254	115	191	1.8	7.1	182
27	1,238	108	200	12.4	26.3	2,316
28	309	128	205	8.3	18.6	983
29	4,517	134	174	2.1	12.5	1,040
30	571	91	196	2.2	7.1	2,361
Minimum	203	85	144	0.6	7.1	182
Maximum	4,517	246	344	14.8	27.6	3,304

b) Analysis Process

For every customer, through mapinfo software, we calculatedthe linear distance between customer´s home and the branch.Customers whose addresses could not be processed due to any data inconsistency, such as no number of residence, street not located by the software, and other inconsistencies, were discarded corresponding to 12% of total customers. Thus, for this study, 84,241 customers were considered.

Considering that for customers whoreceive their salaries by the bank, opening of checking account is mandatory, and in some cases, customers can´t even choose the branch in which he will open his account, we divided customers into two groups: those who receive their salaries by bank and those who don´t.

For each branch andforeach group of customers, we calculated the mean of contribution margin of two periods, the primary trading area,

corresponding to a radius that encompasses 50% of customers who live closer to the branch, the secondary trading area (around primary one) which encompasses 40% of customers and the fringe one, containing 10% of remaining customers(Hanna, 2011).

In order to identify whether there is any significant difference in profitability provided by customer amongthree trading areas, a comparison of meanprofitabilityamong these areas by branch and by customer group was performed at 5% significance level, using for this purpose, analysis of variance byBonferroni method, since the number of customers in each trading area is different. We performed 180 comparisons, because they were performed among three trading areas (primary – secondary, primary – fringe, secondary – fringe), for two groups of customers for each one of 30 branches.

IV. Data Analysis, Results and Discussion

For both groups of customers, the contribution margin varies a lot, because for those whodon´t receive their salaries by the bank, the variationcoefficient (standard deviation / mean) of the contribution margin resulted in 290%, and for those who receive,in 193%. Contribution margin is negative for 4% of total customers because of several factors, such as default. This variation of profitability can also be observed in relation to all customers of the same branch, varying from 182 to 419%, for customers who don´t receive their salaries by the bank, and from 144% to 344% for those who receive.

One factor that may explain this variation in contribution margin among customers is the high extent of trading area that enables branches to attract customers from different parts of the city with different socio-demographic profiles. Thus the income of customers of a branch varies a lot, and the higher the income, greaterthe possibility of investing higher values or obtaining higher values of bank loans, and this increases the profitability provided by customers.

The mean contribution margin provided by customerswho receive their salaries by the bank (M (33,865) = 123.52) is higher than for those who don´t receive (M (50,376) = 62.63), and the difference between these means is significant (t (84,239) = 41.95, $p < .01$).

Considering just customers who don´t receive their salaries by the bank, we compared customer mean contribution marginamong three trading areas by branch, using for this purpose analysis of variance by Bonferroni method,and we concluded that for 17 branches there aren´t significant differences at 5% significance level.

Table 4 : Means Comparison:Trading Area - customers who don´t receive their salaries by the bank

Branch	df Total	Between Groups		
		df	F	Sig
22	1,445	2	.244	.783
19	1,438	2	.278	.758
20	2,673	2	.609	.544
24	1,719	2	.729	.482
25	617	2	.891	.411
6	1,71	2	1.147	.318
18	1,346	2	1.246	.288
2	3,327	2	1.318	.268
10	1,675	2	1.512	.221
1	579	2	1.519	.221
23	1,742	2	1.540	.215
17	1,383	2	2.294	.101
14	1,270	2	2.510	.082
28	711	2	2.530	.081
13	1,129	2	2.591	.075
29	2,975	2	2.588	.075
30	875	2	2.879	.057
8	2,588	2	3.667	.026
16	1,061	2	4.157	.016
9	2,154	2	4.176	.015
26	1,516	2	4.536	.011
4	2,035	2	4.738	.009
12	1,774	2	5.334	.005
11	764	2	5.469	.004
5	2,61	2	6.525	.001
21	1,395	2	6.686	.001
7	1,432	2	8.498	.000
3	1,668	2	9.162	.000
27	2,142	2	10.577	.000
15	2,593	2	17.142	.000

So there are 13 branches with some significant difference in mean profitability by customer between at least two trading areas: as we can see at table 5, forfivebranches (4, 9, 11, 21 and 26)significant differences ($p < .05$) arebetween primary and secondary trading area, with no significant differences betweeneach one of these two areas and the fringe one.

Therefore, we canconclude that, proportionally, the fringearea is as important as the primary and secondary one and it can´t be considered a residual area. In addition, customer mean profitability in secondary area is higher than in primary one for branches 4 and 26,as evident from the negative sign resultant from difference betweenmean profitability by

customer of primary and secondary area. So, we can also conclude that for these twobranches, the secondary is not an area of less importance than the primary one.

For other four branches (3, 5, 7 and 27), significant differences are between the primary and secondary area, and between the primary and fringe one, with no significant differences between the secondary and fringe area. So, we can conclude again that fringe area isn´t a residual one, because it is, proportionally, as important as the secondary area which represents 40% of customers.

For branch 8,significant difference is between secondary and fringe area, and for branches 12 e 16, significant differences are between primary and fringe one. In these cases, we can´t also say that fringe area is residual, because, proportionally, in first case,it is as important as primary one, and in the second case it is as important as secondary one.For these three branches, we can´t also say thatthe secondary area is less important than primary one, because there isn´t significant difference of customer mean profitability between these two areas.

Finally, for branch 15 there are two significant differences: between primary and fringearea and between secondary and fringe one, however, mean profitability by customer is higher in fringe area, as evident from the negative sign resultant from difference between primary and fringe area and between secondary and fringe one.

Table 5 : Branches with Difference in Customer Mean Profitability among Trading Area: customers who don´t receive their salaries by the bank

Branch	Difference Between Trading Areas	Mean Difference	Sig.
4	Primary - Secondary	-27.01	.019
9		12.29	.042
11		67.94	.005
21		54.36	.002
26		-22.09	.009
3	Primary - Secondary	17.29	.003
	Primary - Fringe	29.36	.002
5	Primary - Secondary	29.62	.008
	Primary - Fringe	44,00	.018
7	Primary - Secondary	38.32	.002
	Primary - Fringe	56.95	.005
27	Primary - Secondary	24.94	.000
	Primary - Fringe	26.33	.017
12	Primary - Fringe	56.23	.004
16		26.26	.036
8	Secondary - Fringe	32.45	.031
15	Primary - Fringe	-74.83	.000
	Secondary - Fringe	-88.69	.000

Thus, although in some situations there are differences in customer mean profitability among primary, secondary and fringe trading areas, we can´t say that mean decreases from primary tofringe area such as in general retail. But even if it decreases, for more than half of analyzed branches, 17, there aren´t significant differences in customer mean profitability among trading areas. Therefore we can conclude that profitability provided by customer is not related to the distance they live from the branch where they opened their checking accounts.

We can observe the same phenomenon for customers whoreceive their salaries by the bank, including the number of branches (13) with significant differences in customer mean profitability between at least two trading areas. In these 13 branches, as show in tables6 and 7, which are not necessarily the same when we considered only those customers who don´t receive their salaries by the bank, fringe area can´t also be considered a residual one and, in some cases, customer mean profitability in secondary area is higher than in primary one (branches 8 and 23); and in other

case this mean in fringe area is higher than in primary one (branch 23). There is also a specific case: branch 29 whose significant difference between means are among three trading areas; thefringe area has the highest mean profitability by customer and the primary one, the lowest, as evident from the negative sign resultant from difference between mean profitability by customer of: primary and secondary area, primary and fringe one and secondary and fringe area.

Table 6 : Means Comparison: Trading Area - customers who receive their salaries by the bank

Branch	df Total	Between Groups		
		df	F	P
11	287	2	.003	.997
4	1,359	2	.027	.974
18	556	2	.133	.876
6	984	2	.223	.800
17	1,171	2	.344	.709
22	453	2	.390	.677
1	1,043	2	.686	.505
19	202	2	.838	.433
20	570	2	.913	.402
24	1,034	2	1.048	.351
25	1,74	2	1.375	.254
3	329	2	1.747	.175
15	1,253	2	1.929	.146
16	1,009	2	2.054	.130
14	431	2	2.198	.112
26	1,035	2	2.326	.098
7	1,047	2	2.909	.055
13	2,556	2	3.450	.032
30	359	2	3.571	.029
9	1,831	2	3.703	.025
8	1,258	2	5.324	.005
21	739	2	6.236	.002
23	308	2	6.777	.001
2	995	2	7.644	.000
10	755	2	7.839	.000
28	2,109	2	8.734	.000
12	1,457	2	8.729	.000
27	1,237	2	9.651	.000
5	1,212	2	15.299	.000
29	4,516	2	31.355	.000

Table 7 : Branches with Difference in Customer Mean Profitability among Trading Area: customers who receive their salaries by the bank

Branch	Difference Between Trading Areas	Mean Diference	Sig
9	Primary - Secondary	20.75	.028
13		43.58	.029
21		115.38	.001
30		38.42	.047
2	Primary - Secondary	33.57	.009
	Primary - Fringe	59.66	.004
5	Primary - Secondary	65.97	.000
	Primary - Fringe	47.67	.047
10	Primary - Secondary	71.14	.001
	Primary - Fringe	78.26	.041
12	Primary - Secondary	85.34	.000
	Primary - Fringe	90.95	.034
23	Primary - Secondary	-35.45	.005
	Primary - Fringe	-50.11	.020
27	Primary - Secondary	50.79	.000
	Primary - Fringe	62.87	.009
28	Primary - Secondary	118.1	.000
	Primary - Fringe	134.55	.024
8	Primary - Secondary	-29.11	.026
	Secondary - Fringe	49.6	.021
29	Primary - Secondary	-40.24	.000
	Primary - Fringe	-83.5	.000
	Secondary - Fringe	-43.26	.001

V. Conclusion

The study aimed to identify whether profitability provided by a bank customer is related to distance he lives from the branch where he opened his checking account. As measure of customer profitability, we used contribution margin because it reflects revenues from all purchased products and services by customers, including payment of fees, of interest rate, etc., and considers all expenses with them.

Thus, we selected a sample of 30 bank branches located in São Paulocity (Brazil) and from these branches we selected all active individual customers, totaling 84,241. From the bank´s database system, we obtained the following data by customer: home address, contribution margin and whether the salary´s customer was or not received by the bank. Through map info software, we calculated the linear distance between customer´s home and the branch, enabling usto calculate primary, secondary and fringe trading area, considering customers who receive their salaries by the bank and those who don´t receive.

Customers were divided into groups: those who receive their salaries by the bank and those who don´t. Mean profitability provided by customers who receive their salaries by the bank is higher than those who don´t receive. For each group of customers and for branch, we compared mean profitability by trading area, using for this purpose analysis of variance, and we could conclude that for most cases there aren´t significant differences among three trading areas and when there was a significant difference, generally, fringe trading area couldn´t be considered a residual one, and in some cases, mean profitability by customer in this area was higher than in primary, as well as, in some cases, mean profitability in secondary area was higher than in primary one.

So, we could conclude that customers profitability is not related to the distance they live from the branch where they opened their checking accounts, therefore trading area theory doesn´t apply for banking sector, because according to this theory: customers who live closer to store (primary trading area) are more

profitable than those who live far away (in secondary or fringe trading area), fringe area is considered a residual one and secondary area is considered of less importance, compared to primary one.

Bank managers must take into account all customers and not just those who live closer to the branch or who go there frequently in developing customers retention and loyalty strategies. Branch employees should establish regular and personalized contacts with those customers who live further away or rarely go to the branch, since they are profitability or are potential to be so. Whenever possible, the evolution in the remote service or self-service technology should take these aspects into account.

The study was limited to São Paulo city and considered only individual customers. This same study could be replicated to other major cities of the country and cities abroad, also considering legal entities. Regarding variables, other could be considered as level of loyalty, types of purchased products and services, and so on.

References Références Referencias

1. Aksoy, L. A. (2014), "Linking satisfaction to share of deposits: an application of the wallet allocation rule", International Journal of Bank Marketing, Vol. 32, No. 1, pp. 28-42.
2. Applebaum, W. (1966), "Methods for determining store tradeareas, market penetration and potential sales", *Journal of Marketing Research*, Vol. 3, pp. 127-141.
3. Berman, B. and Evans, J. R. (2006),*Retail Management: a Strategic Approach*, Prentice Hall, Upper Saddle River, New Jersey, USA.
4. Bielski, L. (2007), "Beyond cash", *ABA Banking Journal*, Vol. 99, No. 11, pp. 33-42.
5. Brazilian Banks´ Federation (2010), "Banking Sector in Numbers", available at: http://www.febraban.-org.br/Acervo1.asp?id_texto=214&id_pagina= 85&/ (accessed 10 January 2011).
6. Brazilian Banks´ Federation (2013), "FEBRABAN Research about Banking Technology 2013", available at: <http://www.febraban.org.br/7Rof7S-Wg6qmyvwJcF wF7I0aSDf 9jyV/sitefebraban/-Pesquisa%20FEBRABAN-%20de%20Tecnologia%-20Banc%E1ria_2013.pdf>(accessed 30 December 2014).
7. Camargo Junior, A. S. and Elias, D. A. N. (2010), "Localização de pontos de vendas diferenciados: uma contribuição ao ensino de gestão de operações", *inSymposion of Management of Production, Logistics and International Operations,*in São Paulo, Brazil, 2010, avaliable at: http://www.simpoi.fgvsp.br/arquivo/2010/ - artigos/ E2010_T00332_PCN27513.pdf(accessed13 December 2012).
8. Central Bank of Brasil, "Branches Relation (file transfer)", available at: http://www.bcb.gov.br/-?RELAGPAB (accessed 30 December 2014).
9. Central Bank of Brazil,"Resolution No. 3.401, September 6th, 2006", available at: http://www.bcb.gov.br/pre/normativos/res/2006/pdf/ res_3401_v3_P.pdf (accessed 21 September 2013).
10. Central Bank of Brazil, "Selic Rate", available at: http://www.bcb.gov.br/?SELIC DIARIOS/ (accessed 30 December 2014).
11. Chong, A. Y., Ooi, K., Lin, B. and Tan, B. (2010), "Online banking adoption: an empirical analysis", *International Journal of Bank Marketing*", Vol. 2, No. 4, pp. 267-287.
12. Clemes, M. D.; Gan, C. and Zhang, D. (2010), "Customer switching behavior in the chinese retail banking industry", *International Journal of Bank Marketing*, Vol. 28, No. 7, pp. 519 – 546.
13. Coughlan, J.; Shale, E. andDyson, R. (2010), "Including the customer in efficiency analysis: evidence of a hybrid relational-transactional", *International Journal of Bank Marketing*, Vol. 8, No. 2 pp. 136-149.
14. Deville, A. and Leleu, H. (2008), "Impact of trade area environment on bank's comparative advantages", *Applied Economics*, Vol. 40, No. 17, pp. 2209-2219.
15. Devlin, J. F. (2002), "An analysis of choice criteria in the home loans market, *Journal of Bank Marketing*, Vol. 20, No. 5, pp. 212-226.
16. Dick, A. A. (2007), "Market size, service quality, and competition in banking", *Journal of Money, Credit and Banking*, Vol. 39, No. 1, pp. 49-82.
17. Dimitriadis, S. (2010), "Testing perceived relational benefits as satisfaction and behavioral outcomes drivers", *International Journal of Bank Marketing*, Vol. 28, No.4, pp. 297- 313.
18. Hanna, E. K. (2011).*Área de Influência de Agências Bancárias*. Master Thesis, Escola de Administração de Empresas de São Paulo da Fundação Getúlio Vargas, São Paulo, avaliableat: http://biblioteca-digital.fgv.br/-mwg-internal/de5fs23hu 73ds/progr-ess? id= Dsc Gm ZIsfK (accessed 13 December 2012).
19. Iallouna, H. B. and Chemingui, H. 2013, "Resistance, motivations, trust and intention to use mobile financial services", *International Journal of Bank Marketing*, Vol. 31, No. 7, pp. 574 – 592.
20. Kaura, V. (2013), "Antecedents of customer satisfaction: a study of indian public and private sector banks", *International Journal of Bank Marketing*, Vol. 31 No. 3, pp. 167-186.
21. Kesharwani, A. and Bisht, S. S. (2012), "The impact of trust and perceived risk on internet banking adoption in India: an extension of technology acceptance model", *International Journal of Bank Marketing*, Vol. 30, No. 4, pp. 303-322.

22. Klaus, P., Gorgoglione, M., Buonamassa, D., Panniello, U. and Nguyen, B. (2013). Are you providing the "right" customer experience? The case of Banca Popolare di Bari, *International Journal of Bank Marketing*, Vol. 31, No. 7, pp. 506-528.
23. Kumar, V. and Karande, K. (2000), "The effect of retail store environment on retailer performance", *Journal of Business Research*, Vol. 49, No. 2, p. 167-181.
24. Laukkanen, T. and Kiviniemi, V. (2010), "The role of information in mobile banking resistance", *International Journal of Bank Marketing*, Vol. 28, No. 5, pp. 372-388.
25. Lee, J. and Marlowe, J. (2003), "How consumers choose a financial institution: decision making criteria and heruristics", *International Journal of Bank Marketing*, Vol. 21, No.2, pp. 53-71.
26. Levy, M. And Weitz, B. A. (2008), *Retailing Management*, McGraw-Hill, Columbus, Ohio, USA.
27. Meuter, M. L.; Ostrom, A; L.; Hound tree, R. I. And Bitner, M. J. (2000),"Self-service technologies: understanding customer satisfaction with technology-based service encounters", *Journal of Marketing*, Vol. 64, No. 3, pp. 50-64.
28. Moeini, A., Behradmehr, N., Ahrari, M. and Shariat, S. K. (2011), "Banking services marketing based on customer valuation and GMDH neural network", *Journal of Money, Investment and Banking*, Vol. 21, pp. 106-115.
29. Ozdemir, S.; Trott, P. and Hoecht, A. (2008), "Segmenting internet banking adopter and non-adopters in the Turkish retail banking sector", *International Journal of Bank Marketing*, Vol. 26, No. 4, pp. 212 – 236.
30. Parente, J. And Barki, E. (2014),*Varejo no Brasil: Gestão e Estratégia*, Atlas, São Paulo, São Paulo, Brazil.
31. Pellinen.A., Törmäkangas, K., Uusitalo, O. and Raijas, A. (2011), "Measuring the financial capability of investors: A case of the customers of mutual funds in Finland", *International Journal of Bank Marketing*, Vol. 29, No. 2, pp. 107-133.
32. Ta, H. P and Har, K. Y. (2000), "A study of bank selection decisions in Singapore using the analytical hierarchy process", *Journal of Bank Marketing*, Vol. 18, No. 4, pp. 170-180.
33. Wessels, L and Drennan, J. (2010), "An investigation of consumer acceptance of m-banking", *International Journal of Bank Marketing*, Vol. 28, No. 7, pp. 547-568.

[i] Central Bank of Brazil, "Selic Rate", available at: http://www.bcb.gov.br/?SELICDIARIOS/ (accessed 30 December 2014).

[ii]Brazilian Banks´ Federation (2010), "Banking Sector in Numbers", available at: http://www.febraban.org.br/Acervo1.asp?id_texto=214&id_pagina=85&/ (accessed 10 January 2011).

[iii]Central Bank ofBrasil, "Branches Relation (file transfer)", available at: http://www.bcb.gov.br/?RELAGPAB (accessed 30 December 2014).

[iv] Source: Brazilian Banks´ Federation, available at: <http://www.febraban.org.br/ Acervo1.asp?id_texto =214&id_ pagina= 85&>(accessed 10 January 2011).

[v] Source: Brazilian Banks´ Federation, available at: <http://www.febraban.org.br/7Rof7SWg6qmyvwJcF wF7l0aSDf 9jyV/sitefebraban/Pesquisa%20FEBRABAN%20de%20Tecnologia%20 Banc%E1ria_2013.pdf> (accessed 30 December 2014).

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Internet Access, use and Monitoring Policies in Selected Organisations in Ibadan, Nigeria

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Abstract- The Internet has revolutionized, and continues to profoundly affect, the way one does business. Since the Internet has become a main source of communication both within and outside organizations, they are caught between providing Internet access to employees to perform job related activities and monitoring employees' use of Internet without infringing on their rights and privacy. This study therefore examined the extent of Internet access and use, pervasiveness of Internet monitoring, availability of Internet use policy and compliance to Internet use policy in the selected organisations.

The study adopted ex post facto survey design. Stratified random sampling was used to select 246 organisations comprising those in public, private, not for profit and non-governmental sectors. An adapted questionnaire from Alampay and Hechanova's 2008 study was used to collect data from the organisations. One hundred and eighty three (74.4%) copies of returned questionnaires were used for data analyses.

Keywords: internet monitoring; employee monitoring; ibadan; internet use policy.

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Strictly as per the compliance and regulations of:

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Adeoye Adetola Atinuke [α] & Adelowo Oluremi Titilope [σ]

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Findings revealed that two-third of the organisations provide Internet access to employees depending on their job category. However, some organisations monitor employee Internet use and also have Internet use policy. Majority of the organisations are concerned about the content accessed by their employees and therefore blocked some online content and applications particularly those related to pornography, gaming and social networking. Most organisations reported difficulties with employees' excessive chatting that is non-work related and accessing pornography at work. In addition, private organisations monitor employees' Internet use most.

The results suggest the need for more organizations to articulate their policies on Internet use, educate workers on Internet security and formulate mechanisms to ensure the integrity of employee monitoring. Thus, organisations need to invest on the formulation of Internet use policy that will protect both the organisations and employees.

Keywords: internet monitoring; employee monitoring; ibadan; internet use policy.

I. Introduction

The Internet has revolutionized, and continues to profoundly affect, the way one does business. It is now a critical (if not the main) tool and venue for conducting commerce. As a tool, it allows buyers and sellers nearly unlimited access to information, goods and services. As a venue, it does away with the limits of geography, the time zones and, in some cases, the need for a physical office. With its tremendous potential, it has become commonplace for businesses and consumers to utilize the Internet for a variety of transactions ranging from emails to actual online purchases (United Nations, 2007). The Internet has a range of capabilities that organizations are using to exchange information internally or to communicate externally with other organizations. The primary infrastructure for e-commerce, e-banking, e-business, e-learning and virtual library is provided by the Internet technology (Ureigho et al, 2006).

The Internet as a global village is a compendium of information, a library of fun, a shopping mall, health institute of a kind, a research institute, an archive, a musical studio and a pornographic shop amongst other things. The word Internet is derived from two words: "international" and "network". The Internet therefore can be defined as an international computer network of information available to the public through modem links (Bassey, 2003). It is an international network of networks that is a collection of hundreds of thousands of private and public networks all over the world. There are rich and varied learning experiences available on the Internet that would have been inconceivable just a short while ago (Anonymous, 2001). The vast information on the Internet that covers almost all areas of human endeavours has made the Internet the greatest achievement of the Century. The Internet is fast becoming a necessity for every economy (Alese and Owoyemi, 2004).

Since the Internet has become a main source of communication both within and outside organizations, companies ask their employees to use the Internet extensively for communication as well as for business activities. The Internet is cost-effective and is faster than other communication media, making it easy for employers to coordinate their global activities of customers and suppliers (Lehr and Lichtenberg, 2000). Realizing this, the Internet has found a place as a backbone of communication infrastructure in many organizations and has made possible the flattening of corporate structure for communication and dissemination of information. This has certainly benefited companies by increasing productivity and creating avenues to explore new market opportunities (Anonymous, 2001). Today, many companies let their employees work from home because it is more

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economical and more productive. For many global business firms, reduction in the cost of disseminating information and improvement in the speed of qualitative decision-making has been possible only due to use of the Internet. Many observations agreed that the Internet has not only boosted the productivity in the organizations but has also created a sense of empowerment among workers (Stratopoulos and Dehning, 2000).

There is no denying that the use of Internet in organizations has made employees more efficient and has improved communication channels. Undoubtedly it also affected organizations' employees and their workplaces in job design, conditions of work and other (numerous) ways. As noted by Barley 1996:

> *"Future prosperity is likely to hinge on the use of scientific and technical knowledge, the management of information and the provision of services. The future will depend more on brains than brawn"*

However, the Internet has also opened up new areas of concern such as its effect on workers' productivity (Anonymous, 2001). Stories of workers who abuse the Internet for their self-gain or at times malign the image of the organization are finding a place in the headlines of many news journals. Employees spend time surfing the net, communicating with their friends, relatives and counterparts during working hours, (Ferris, 2000) checking their stock prices, shopping for travel bargains and exchanging personal e-mail via the Internet while at work - even though their companies prohibit these activities (Marsan, 2000).

According to IBM Global Business Security Index (IBM, 2004), 28,327 new viruses were discovered in 2004 and this increased the number of known viruses to 112,438. Traditionally, viruses and other malicious software (malware) are hidden in e-mail attachments and malicious codes are also embedded in joint photographic experts group (jpeg) and bitmap pictures, so when employees visit websites with hacked or intentionally prepared images, their computer system get infected and thus affects their productivity(Telenor, 2004). Employees' misuse of the Internet can be an avenue for virus attacks on organisations system which will slow down performance and might eventually destroy the affected system. Although there are several means of detecting, containing and deleting malware, they still cannot protect the computer systems before they are exposed to the threat (Deisz, 2005).

The purpose of this study is to investigate the extent to which organisations in Ibadan monitor their employees Internet use and how Internet facilities are regulated. It also aims to know if there are organizational ICT policies in place to guide Internet use and whether such policies are made known to the employees. This study will assess the extent of problem that is encountered in the misuse of the Internet by the employees in the organizations and the disciplinary actions being imposed. It is intended to look at practices and attitudes among organisations in Ibadan regarding access to the Internet and monitoring of its use in the workplace.

What do employees use the Internet for in the organisations? Reports indicate that about 55 million people in the United States access the World Wide Web ("the Web") from their workplace on a daily basis (Horrigan, 2002). A Department of Commerce study indicates that Web usage in the workplace has a growth rate of approximately 54% per year (U.S. Department of Commerce, 2002). While such growth has the potential to increase worker productivity, it is not without significant problems (Lim et al., 2002; Simmers, 2002). The American Management Association indicates that more than 50% of all workplace-related Web activities are personal in nature (Greengard, 2000). Another study indicates that, on average, employees spend 8.3 hours a week surfing the Web for non-work-related activities (Websense, 2002). These activities include online entertainment, reading news, making travel arrangements, online purchases, and searching for jobs. Such activities translate into billions of dollars a year in revenue lost due to lost productivity (Mills et al., 2001). More so, personal web usage has caused organizations to face a host of other detrimental issues (Siau & Nah, 2002). There is an increased burden on company servers as bandwidth and system storage gets clogged with non-work-related files (Mills et al., 2001). Organizations also face heightened security risks from viruses and other malicious programs inadvertently downloaded by employees as they use the web for personal reasons (Sloane, 2002).

In another survey conducted in 2006 by Telemate.Net Software, Inc., a provider of Internet usage management and e-Business intelligence solutions, the survey covered 700 companies from a diverse cross-section of industries in America. Survey respondents included executives, senior Information Technology (IT) professionals, IT and human resource managers. Findings indicated that 83% of companies were concerned with inappropriate employee usage of the Internet and the resulting legal liabilities and/or negative publicity. Over 70% indicated that employee Internet abuse results in real costs to their companies in the way of additional network upgrades, lost productivity and slow network response. The concern about Internet abuse and the associated legal liabilities, negative publicity and excessive costs was consistent across industries, company size and job titles of the respondents (Business Wire, 2000).

In a survey of public companies carried out in South Africa (Dancaster, 2001), findings reveal that: 69% experience loafing on the Internet; 70% experience accessing, downloading or sending through e-mail of discriminatory or sexually offensive jokes or pictures;

65% experience clogged bandwidth or degraded system performance through abuse of the Internet system; 6% experience the violation of copyright laws or the posting of information in the name of the company that defames other companies or individuals; 60% have disciplined employees for Internet and email abuse; and 77% have reserved the right to monitor online traffic at any time. These results imply that there is a need to monitor employees' use of the Internet so as to prevent the organisations and reduce loss in productivity.

While most of the studies have been carried out in the highly developed countries (United States and United Kingdom), only the South African survey by Dancaster represents an emerging or developing countries' situation on monitoring employees Internet use. Several studies have been carried out on the use of Internet in many professional areas in Nigeria like; banking, health, insurance, education, legal practices and lots of more, these surveys have emphasised that the Internet is improving and increasing productivity(Adebayo, 2006; Awoleye, et al, 2008; Omolase, et al, 2010; Longe and Chimeke, 2008; Madueme, 2010; Olatokun and Adeboyejo, 2008). Although all these studies have shed some light on the impact and benefits of the Internet, none of them focused on the misuse of Internet in the workplace which is why this study seeks to know how employees use the Internet provided by their organisations and how such use is monitored. Also, this study will be a guide to future researches in this area of Internet use in organisations.

a) Internet Use in the Nigeria workplace

Nigeria, although a Less Developed Country (LDC), is one of the largest economies in the Sub-Sahara region of Africa (Feldman, 1992) and many major multinational corporations and their affiliates conduct business there (Jason, 1997; Thompson, 1994). In Nigeria the Gross Domestic Product (GDP): purchasing power parity is $110.5 billion (1999 est.), the per capita purchasing power parity is $970 (1999 est.) and in 1999 the number of Internet Service Providers (ISPs) is 5 (CIA 2000 World Factbook).

The Internet usage trend is Nigeria has changed in a short period of time, In December 2000, Nigeria had 450,000 connected fixed lines, no connected digital mobile line, 1 national career, 18 operating Internet Service Providers, 9 active licensed fixed-line operators, and 1 licensed mobile line operator (Ndukwe, 2005). In the same period, Nigeria had 200,000 Internet users (Internet World Statistics, 2005), even though many experts disagree with the figures. In March 2004, the figures grew to become 888,854 connected fixed lines, 3.8 million connected digital mobile lines, 2 national careers, 35 operating Internet Service Providers, 30 active licensed fixed-line operators, and 4 licensed mobile line operators. In December 2004, Nigeria had 1.5 million Internet users, a penetration rate of 1.3% and constituted about 5.6% of the total number of African Internet users. Africa itself only boasts of 1.5% of global Internet users even though it has 14% of the world's inhabitants. Summarily, Nigeria's ICT space has improved significantly from 400,000 lines in 1996 to over 71.9 million lines in October 2009(Nigerian Communications Commission figures 2010), and 43,985,000 Internet users in 2010(World Internet Users). In Nigeria, researchers have not really studied the organizational use of the Internet and so there is little to show about how employees use the Internet and even their computers.

According to a study carried out by Simmers and Anandarajan (2004) on Web Usage in the workplace in Nigeria, Malaysia and the United States, a total of 237 questionnaires were administered in 19 organisations(Manufacturing=4%, Services=41%, Wholesale, retail trade=5%, Finance, Insurance, Real Estate=30%, Education=2%, Government=4%, Self-employed=0% and Other=14%) in Nigeria. The study revealed that 224 (94.5%) employees have access to the Internet in their organisations, 28.3% block access to certain web pages, 60.1% has clearly stated policies on Internet usage, 59.6% has additional passwords for web access and 29.0% strictly enforces its Internet policies. Furthermore, the study revealed that Nigerians most likely access business and financial pages (mean=3.79), sports and news(mean=3.73), general interest (mean=3.84), arts and entertainment (mean=3.08), travels and leisure(mean=2.96) and competitor's webpage(mean=3.24) from workplaces. Also the study shows the employees attitude towards personal web searching at work (mean=3.77) which interpret that most of the employees enjoy personal web usage during work hours or at workplaces.

Internet usage is still in its infancy in Nigeria. Many authors have written about Internet connectivity in Nigeria. According to Adeya and Oyeyinka (2002) the level of access and connectivity is far below that of developed countries. Nigeria as a whole has only two percent of the Internet connectivity in the developed world. This is improving as a result of many universities and other institutions achieving direct access either through telecommunication or VSAT (wireless). As access grows, Nigerian researchers, scholars, and the general public have the opportunity to undertake research, teaching, learning, and other activities via the Internet.

b) Previous Studies on Monitoring Internet use in workplace

A 2007 survey by the American Management Association and the e-Policy Institute found that two-thirds of employers monitor their employees' web site visits in order to prevent inappropriate surfing. And 65% use software to block connections to web sites deemed

off limits for employees. This is a 27% increase since 2001 when the survey was first conducted. Employers are concerned about employees visiting adult sites with sexual content, as well as games, social networking, entertainment, shopping and auctions, sports, an external blogs. Of the 43% of companies that monitor e-mail, nearly three-fourths use technology to automatically monitor e-mail. And 28% of employers have fired workers for e-mail misuse. Close to half of employers track content, keystrokes, and time spent at the keyboard. And 12% monitor blogs to see what is being written about the company. Another 10% monitor social networking sites.

In a similar survey carried out in Malaysia by Yulihasri et al in 2006 on use of Internet in Malaysian workplace, the employees agreed that it is acceptable to use Internet for personal searches(mean= 3.82), surf Internet while at work(mean= 3.82) and even access sexually explicit websites if they are alone in their offices(mean= 3.77). It was also noted that Internet usage policies and careful usage did not get high level of agreement because their standard deviation are large (1.013 and 0.926) which shows that the employees are ignorant about acceptable use policies in the organizations or they just do not care.

According to a survey by Alampay and Hechanova (2010) on monitoring Internet use in workplaces in Philippines, a total of 112 organizations was surveyed and it reveals that 65% of the organizations surveyed gave Internet access to all its employees which show that the Internet have become more integrated into organizations and people's work. Even though access is provided, 58% block some sites and that larger organization restricts Internet access. Most organizations (57%) monitor and review their Internet connections while 38% do not. The study also reveals that a little than half of the organizations surveyed have clear written organizational policies on Internet use, email use and use of instant messaging and what appears to be lagging is the articulation and implementation of Internet use policies which is the reason why Philippines organizations are encountering negative consequences including security breaches and diminished productivity. Though in some cases misuse of Internet has lead to discipline and even dismissals.

In the survey by Simmers and Anandarajan (2004) on Web Usage in the workplace in Nigeria, Malaysia and the United States, a total of 237 questionnaires were administered in 19 organisations(Manufacturing=4%, Services=41%, Wholesale, retail trade=5%, Finance, Insurance, Real Estate=30%, Education=2%, Government=4%, Self-employed=0% and Other=14%) in Nigeria. The study revealed that 224 (94.5%) employees have access to the Internet in their organisations. Also reveals that 28.3% of the companies blocked certain web pages, 59.6% uses additional passwords for web access, 60.1% have clearly stated Internet use policies and only 29% strictly enforces its Internet policy.

II. Methodology

a) *Policy Compliance and Discipline*

Table 4.1 presents the results of the analysis of the pattern of policy compliance and disscipline across the organisations. the results shows the organisations that have complined and disciplend an employee on Internet misuse.

Table 4.1 : Policy Compliance and Discipline

Variables	Yes(%)	No(%)
Has your organization ever disciplined an employee on misuse of office Internet facilities?	31.1	68.9
Has your organization ever disciplined for misuses of company email?	28.4	71.6

From table 4.1 the result shows that 31.1% of the organizations have ever disciplined an employee on misuse of office Internet facilities and 68.9% has not disciplined any employee. It also shows that 28.4% have ever disciplined an employee for misuse of company email and 71.6% has not disciplined an employee on misuse.

Table 4.2 presents the result of the analysis of the forms of disciplinary actions that the organizations have taken against the employee that misuse the Internet facilities.

Table 4.2 : Type of discipline

Variables	Dismissal (%)	Formal Warning (%)	Informal Warning (%)	Other form of discipline (%)	No response (%)
What form of discipline was taken on misuse of office Internet facilities	1.6	25.1	2.7	1.6	68.9
What form of discipline was taken on misuse of company email	1.6	25.1	1.6	0	71.6

From table 4.2 the result shows that only 1.6% of the organizations that was surveyed have dismissed employee on misuse of office Internet facilities and company email. It also revealed that 25.1% have formally warned their employees on misuse of office Internet facilities and company email. While 2.7% and 1.6% have informally warned their employee on misuse of office Internet facilities and company email respectively. And 1.6% has used other forms of discipline.

III. Test for Association Between Variables using Cross Tabulation

a) Internet Access and use

Table 4.3 and presents the result of the cross tabulation analysis between organisation type and who has access to Internet in the organisations.

Table 4.3 : Access by type of organization

Type of organization	Who has access to Internet in the organization						Total	
	All		Only management		Depending on job			
	Frequency	%	Frequency	%	Frequency	%		
Government	8	4.4	5	2.7	17	9.3	30	16.4
Private	22	12.1	25	13.7	82	44.8	129	70.5
For profit	2	1.1	1	0.5	12	6.6	15	8.2
NGO	5	2.7	1	0.5	3	1.6	9	4.8
Total	37	20.3	32	17.4	114	62.3	183	100

Chi Square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.808[a]	6	.094

From table 4.3 the results shows that 20.3% provide Internet access to all employees out of which the private organisations have the largest percentage of 12.1%. It also shows that 17.4% provide Internet access to only management staff with the private organisations with the highest percentage of 13.7%. Furthermore, the table shows that 62.3% provide Internet access to employee depending on their job description with 44.8% from the private organisations. The Pearson chi-square value is 0.094 which shows that there is no significant association between type of organization and who has access to Internet in the organisation.

Tables 4.4 and presents the results of the cross tabulation analysis between who has Internet access and Industry type. This table will show the association between the type of industry and who has Internet access across the organisations.

From table 4.4 the result shows that there is an association between who has access to Internet in the organisations and industry type with the Pearson chi-square value of 0.000. Majority provided access to employees depending on their job(n= 114) description, the more discriminating, in terms of providing access, were public administration/ government(n=7) organisations.

Table 4.4 : Access by Industry type

Industry type	All		Only mgt/supervisor		Depending on job		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Business/professional service	9	4.9	3	1.6	15	8.1	27	14.6
Research	5	2.7	1	0.5	8	4.4	14	7.6
Wholesale/Retail	2	1.1	3	1.6	1	0.5	6	3.2
Public admin/govt	2	1.1	2	1.1	3	1.6	7	3.8
Financial Services	4	2.3	3	1.6	55	30.1	62	34.0
Manufacturing	1	0.5	7	3.9	9	4.9	17	9.4
Infor/Comm/Media	8	4.4	2	1.1	7	3.9	17	9.4
Education/ School	1	0.5	2	1.1	7	3.9	10	5.5
Others	5	2.7	9	4.9	9	4.9	23	12.5

Industry type	All		Only mgt/supervisor		Depending on job		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
Business/professional service	9	4.9	3	1.6	15	8.1	27	14.6
Research	5	2.7	1	0.5	8	4.4	14	7.6
Wholesale/Retail	2	1.1	3	1.6	1	0.5	6	3.2
Public admin/govt	2	1.1	2	1.1	3	1.6	7	3.8
Financial Services	4	2.3	3	1.6	55	30.1	62	34.0
Manufacturing	1	0.5	7	3.9	9	4.9	17	9.4
Infor/Comm/Media	8	4.4	2	1.1	7	3.9	17	9.4
Education/ School	1	0.5	2	1.1	7	3.9	10	5.5
Others	5	2.7	9	4.9	9	4.9	23	12.5
Total	37	20.3	32	17.4	114	62.3	183	100

Chi Square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	55.262[a]	16	.000

Results showed that the more information intensive organisations (Information, Communication and Media) tend to provide access to everyone. Financial services industry (n=55) provides Internet access to employees depending on their job because their business depend on the Internet for successful and quick transactions.

Table 4.5 presents the result of the cross tabulation analysis between industry type and nature of Internet restrictions across the organisations. This is to test the association between the two variables.

Table 4.5 shows that there is a significant association between industry type and some applications are blocked because the Pearson Chi-square value is 0.000, it also shows that 55.7% of the organizations blocked some application with the financial services having the highest (32.2%, n= 59). It also reveals that there is association between industry type and all form of restrictions except other types of restrictions (chi-square sig value=0.263) described by the respondents.

Table 4.5 : Industry type and blocked applications

INDUSTRY	Application blocked		Blocked can be accessed after work		Some computers have access		Accessible on job		Accessed with permission		Other types of restriction	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Business/professional service	4	2.2	3	1.6	4	2.2	1	0.5	5	2.7	0	0
Research	6	3.3	3	1.6	2	1.1	0	0	6	3.3	1	0.55
Wholesale/Retail	1	0.5	0	0	2	1.1	1	0.5	0	0	0	0
Public admin/govt	6	3.3	1	0.5	5	2.7	0	0	2	1.1	0	0
Financial Services	59	32.2	51	27.9	8	4.4	1	0.5	4	2.2	0	0
Manufacturing	9	4.9	3	1.6	5	2.7	4	2.2	4	2.2	0	0
Infor/Comm/Media	6	3.3	3	1.6	9	4.9	3	1.6	4	2.2	1	0.55
Education/ School	4	2.2	0	0	5	2.7	2	1.1	1	0.5	0	0
Others	7	3.8	2	1.1	5	2.7	0	0	1	0.5	0	0
Total	102	55.7	66	36.1	55	30.1	12	6.6	27	14.8	2	1.1

chi-square test

Pearson Chi-Square	Application blocked	Blocked can be accessed after work	Some computers have access	Accessible on job	Accessed with permission	Other types of restriction
Value	74.497[a]	88.906[a]	29.053[a]	21.273[a]	18.836[a]	10.028[a]
df	8	8	8	8	8	8
Asymp. Sig. (2-sided)	.000	0.000	0.000	0.006	0.016	0.263

b) Internet Monitoring and Usage

The test for association was between one of the demographic variables which is the type of industry and questions "who monitors Internet connection in the organization?", "what do you monitor?", "which of the following are restricted?" and "has your organization experienced any problem with regard to employee Internet use?" Table 4.6(see appendix) presents the result of the cross tabulation analysis between industry type and what is monitored in the organisation.

From table 4.6, the result shows that 60.1% monitor content accessed on the Internet by their employees with the highest of 32.2% from the financial services industry and the least of 0% from the wholesale and retail industry. It also shows that only 1.6% monitor personal blogs of employee. Table 4.6 shows that content accessed on the Internet by employees have a significance association with industry type with a Pearson chi-square value of 0.000 which is significance. Table 4.7(see appendix) presents the result of the cross tabulation analysis between industry type and what is restricted on the organisations Internet facilities and the Pearson chi-square test between the two variables.

Results showed that 74.7% of the organisations surveyed block pornography sites, 59% blocked online gaming sites, 46.4% block social networking sites, 55.2% blocked downloading sites, 38.8% blocked yahoo messenger, 37.2% blocked Skype, 33.9% blocked online mail services sites, 36.1% blocked blog sites and 11.5% agreed to blocking other sites like competititor's sites, entertainment sites, online shopping sites, and many more. It also reveals that the financial services industry blocked almost all the sites except for News site that has the least percentage of 2.2% which is also the same with other industries. The Pearson chi-square value also shows that there is an association between the industry type and all sites except News sites which has the significance value of 0.740 which is above the threshold value of 0.05. Thus it shows that there is no association between the type of industry and the news sites.

IV. Discussion of Findings

a) Organisations Profile

The results of the study shows that private organisation with small employee size are the most users of the Internet for their business transactions, just a few of the government owned organisation have Internet access. It also reveals that the majority were private organisations with the predominant type of industry is the financial services. This is so because these industries rely on the Internet as the backbone for successful business transactions nationwide. This findings differs from a similar study carried out in the Philippines by Hechanova and Alampay (2010) that reported that the predominant organisation type that have Internet access was retail and trade and that the large size organisations were the most users of Internet.

b) Internet Access and Use

The results of the study shows that the organizations surveyed have Internet access and mostly make use of the Local Area Network and Wireless Fidelity connections which shows that providing access to the Internet is becoming the norm among organisations in Ibadan. Moreso, over half of the organisations provide access to employees depending on their job description; and a few said it is available to all employees which deviates from what Alampay and Hechanova(2010) described in a similar study in the Philippines that the higher percentage of access was granted to all employees. It also shows that more than half of the organisations that have Internet access restrict their employees' access to the Internet and only few give employees complete access. This finding also agrees with the survey of 670 companies by carrier site Vault.com which examined Internet monitoring, the results indicate that 41% of organizations restrict or monitor Internet use (Net Monitoring Survey, 2000). The reason that could be adduced for providing access to Internet was for easy communication between offices (financial services and information, communication and media) and aids research findings (research institutes, education/school and information, communication and media). Respondents also perceived that access to the Internet would lead to higher productivity among employees. This agrees with the findings of Alampay and Hechanova(2010) that the popular reason for providing Internet access to employees was for research and making communication easier.

c) Internet Monitoring and usage

Although Internet access is provided, a little below half of the organisations monitor websites

connections of all employees and for selected job categories while a larger percentage does not restrict usage of the Internet. Also, a little below half of the organisations have written policy on Internet use and some uses a dedicated MIS staff and automated software to monitor Internet. In addition, majority of organisations that block some applications also agreed to the fact that some of the blocked sites can be accessed after work hours are private organisations and mostly the financial services industry.

However a few of the organisations reported that some applications can be accessed if permission is requested to justify why the websites are to be accessed. These restrictions are necessary so as to aid employees' concentration at work and would reduce traffic congestion on organisations servers. This finding agrees with the AMA survey of 2005 which showed that employers are increasingly concerned about inappropriate Web surfing, and 65 percent of employers use software to block connections to some web sites, a 27 percent increase over an earlier 2001 survey (AMA, 2005). But according to Alge (2001), employers should allow employees personal Internet time; exercising excessive control impedes ideas and innovation. The Internet is a productivity tool in that it makes communication quicker and more efficient. As a learning tool, it gives employees access to new knowledge, which makes them better in their jobs. Employees become both more effective and efficient. This increases their self-esteem, which improves customer service and interpersonal relationships (Singh, 2004). Therefore, it is not only discriminatory to allow only some employee's access to the Internet, but it is also being selfish. The results also revealed that the smaller organizations really monitor their employees' Internet use. This might be due to the fact that most of them are privately owned and are extensions of other offices with several branches and outlets across the country and it is the management's decision to put all office Internet use in the right order.

What organizations block and how they do so also varies. A lot of the organisations are bothered about the content accessed by employees through the Internet, although some of them check time spent and just a few monitor employees' personal blogs. Blocking of pornography sites is common but it has not however dissuaded people from trying to access such content as evident from the results of the study. Almost all the organisations block pornography and online gaming sites as this two sites can reduce employees' productivity level and also lead to lack of concentration and time wastage which is precious to the organisation. This agrees to the findings with the study of Deisz (2005) on Norwegian organisations that reported that 73 % of Norway active adult users accessed the Web at least once from work, 41% access the Web a majority of the time at work, and 15% go online exclusively at work. Some organisations block some social networking sites like facebook, twitter and the likes, as they also distract employees' from the job. Some organizations agreed that they block employees from downloading music, pictures and video as these sites clogs up the bandwidth and makes the Internet connection slow and also to protect their computer systems from viruses attached to the downloaded materials. Online mail services were blocked by most of the financial services industry as most communication is meant to be within the organisations and other branches across the nation and every employee has company email for communication and business transactions. Whitepapers (web@work, 2004), (Davies, 2001) and (SecuComp, 2005) all concluded that cyber-slacking (surfing the web at work) is a major problem in most companies and that 37% of American workers surf the Internet constantly at the job, and that more than a half of them often use the Internet for private purposes at work. Also Dancaster (2001) reported that 64 percent of employees use the Internet at work for personal interests; and 37 percent say they "surf the Web constantly" while on the job. Caroll(2007) also reported that 60 percent of online purchases occur during normal work hours, as does 70 percent of porn traffic. Social networking sites are also becoming a particularly tenacious distraction. But almost all the organisations do not block news sites this might be due to the fact that everybody needs to know what is happening around them and in the world generally.

Some communication applications' sites like Yahoo messenger and Skype were blocked by a little less than half of the organisations that were surveyed. Instant messaging was seen as a more problematic application especially in the financial services industry, as fewer organizations restricted the use of yahoo messenger, Skype and blogs. Some IT managers indicated that their organisations allowed internally developed instant messaging devices that could allow their employees communicate with themselves. This further illustrates the recognized importance of these applications, while also highlighting the security risks involved with using similar online-based services. As Villeneuve (2008) has claimed, trusting online services with personal communications may sometimes be misplaced. Majority of the organisations said employees' excessive chatting that is non-work related is a big problem they faced. Accessing pornography sites was not an uncommon problem too and likewise downloading of music, video and pictures, computer virus due to heavy downloads and playing online games as almost half of the respondents experience this problems. Alampay and Hechonava (2010) reported the same findings in their study.

d) Email Use and Computer Surveillance

Most of the organisations do not review or store employees email messages. Only a few agreed to do this for all employees and for selected job categories while a little above half do not. The organisations that do review company issued emails mostly do it routinely and only few do occasionally or when specified. It further shows that a little above half of the organisations review all employees' computer files, a few review for selected job categories and less than half do not review their employees' computer files. More so, few of those that store and review employees' computer files do it routinely and regularly. This finding disagrees with the American Management Association (AMA) study in 2005 that said that 3.63% employer's store and review employees' computer files. This implies that although some organisations store and review employees' computer files yet not all of them informed their employees' on organisations policy of monitoring files. The results also show that the private owned organisations were in the majority of those that store and review employees' computer files. In fact, the results also revealed that just a few of the organisations are bothered about what employees use their computer systems and emails for. This might be because most of them do not have enough resources in form of revenue and human capital for putting this process in place. It can also be due to the fact that most of the organizations' management staff does not have fore knowledge of the side effect of computer and Internet abuse.

e) Policy on personal use of ICTs

Findings shows that the development of clear and written organizational policies for using ICT facilities is in place in a little less than half of the organisations. Only few reported having email use and Internet use policies. Many private organisations, specifically financial services and information, communication and media already have policies in place and their policies are in compliance to industry regulations, although some are imposed by their head offices. Some of the information, communication and media services organisations are government owned and non-governmental organisations are the least advanced in developing policies for ICT-use. A few agreed on informing employees of organisation's policy on monitoring email messages and more than half did not inform their employees of the policy. This shows that just a few of the organisations actually informed their employees that there are policies governing the use of Internet. These findings agree in part with a similar study by Young and Case (2004) in America, the results indicate that 48% of the organizations had instituted an Internet Use Policy and 52% did not. Internet use policy is not fully utilized in the organisations and this may be because there are no policy developers or the management is ignorant of the use of policy for restricting and monitoring employee Internet use and the management is scared of breaching employees' privacy. Most employees believe they are entitled to a little of privacy when at work and they should be able to do anything in their private place but there should be balance between privacy and productivity. As noted by Signh 2004:

> *"An Internet policy is no different from any other organizational policy. Internet policies or Internet usage policies are designed to regulate the day-to-day usage of Internet facilities. Internet policies are designed to protect the rights of the employer and the employees, with regard to the use of Internet facilities. In many instances, policies are developed to ensure fairness and equity in the employer–employee relationship*."

The organisations that put policies in place said this act has helped to increase productivity but some argued that their employees would not be free at work and thus it may reduce their self-esteem and morale.

f) Policy Compliance and Discipline

A little above half of the organisations agreed to ever disciplining their employees on breaching company policy on ICT use. About half of those that agreed to ever disciplining their employees on breaching these policies were on misuse of office Internet and misuse of company email. Majority were issued formal warnings and few led to dismissals. The incidence of discipline is higher in small organisations than in the medium and large organisations showing that most of the organisations that reported having Internet use policy are implementing them and their employees are aware of the dangers of not complying. However, only few organisations with Internet or email use policy shows that many organisations are not aware of the importance of policies and have not experienced any legal issues on Internet misuse by their employees. This finding contrasts a finding of the American Management Association (AMA) in 2005, which reported that approximately 38% of 2,100 major U .S companies check their employee's e-mail and 54% monitor Internet connections (Yulihasri, et al, 2006). Of these organizations, 17% have fired employees, 26% have issued formal reprimands, and 20% have given informal warnings. The predominant industry that have complied and disciplined employees for inappropriate Internet and email use were the financial services and the information/communication/media industry, this is because they are branches to larger organisations. This may be due to the fact that the larger organizations are more likely to already have clear guidelines and policies, and may also have the dedicated resources in place for monitoring their information and communication systems.

V. Summary

The study investigated how employees' use of Internet is monitored in organisations in Ibadan, Oyo state, Nigeria. The study focused on Internet access and use, Internet usage and monitoring, employee email use, computer surveillance, policy on personal use of ICTs in the organisations and implementation of policies. It also examined how Internet is restricted and common Internet misuse problems. Relevant literature was reviewed on employee monitoring, Internet misuse in workplace and electronic monitoring. The literature reviewed also includes policy making and Internet use, computer monitoring and privacy issues. Similar research literatures on this study were also reviewed. The survey design approach was adopted. A structured questionnaire was used to collect data from 246 organisations in Ibadan out of which 183 were used for the analysis. Descriptive statistics was used to analyze the data using frequencies, pie chart and cross tabulation to test the association between the variables.

Findings showed that the small size organisations tend to use Internet for their day to day businesses. Also the private organisations provide Internet access than those in the government sector, for-profit and non-government organisations and the financial services industry dominates among the private organisations. Most government organisations in Ibadan do not provide Internet access to their employees. Furthermore, findings also revealed that most of the organisations make use of the Local area Network and Wireless fidelity to set up their Internet connections. It also showed that most organisation grant Internet access to employees based on job description (selected employees) with some restrictions. Some sites are blocked and some can be accessed with permission while some after working hours.

Findings equally showed that just a few of both the private and government organisations have Internet use policy and also informed their employees about the policy. Majority of employers are concerned about what is accessed by their employees and most of them use a dedicated MIS staff and automated software for the monitoring exercise; and the monitoring is mostly done routinely. It also showed that almost all the organisations block pornography sites and few blocked news sites; and excessive chatting that is non-work related and accessing pornography is the most problematic experience on Internet misuse by employees.

This study established that a little above half of the private and government organisations monitor employees' computer files, Internet and email messages routinely and also informed their employees about the policy governing such monitoring. Also, most of these private organisations that monitor employees' files and email messages are the financial services industry and they do so because of the integrity and nature of their business and most of the organisations that have Internet access do not have policy on Internet use.

The study revealed that the small organizations which are mostly private organizations had disciplined their employee on misuse of office Internet and company email. It further revealed that just one organization has dismissed an employee on misuse of the company's email and Internet, thus implementation of policy and compliance to policy is yet to find the right foot in the organizations.

VI. Recommendations

The study established that there is a need to put in greater effort to policy documentation and dissemination, employee education on Internet use and in establishing systems that will maximize the benefits of Internet technology while minimizing its risks.

More so, the organisations must balance employee productivity with privacy. If it is an organization's policy to store, review and monitor employee Internet use then such information should be protected. It also requires developing organizational capabilities to secure such information from outside intrusion and pressure. The researcher recommends that organisations should sensitize their employees on the content of Internet use policy so that they can be aware of the consequences if breached. Also, organisations should employ a good policy developer that would consider the employees privacy with respect to productivity so that the restrictions and guidelines will not affect employer-employee relationship, employee efficiency and organisation's productivity.

The limitations of this study are primarily a function of sample size and inadequate time. Even though responses were relatively equally distributed among organization size and industry type, a larger sample size would increase the robustness of results. Ultimately, results will assist organizations in improving employee Internet management, limiting risk, and maximizing employee productivity.

VII. Conclusion

Based on the findings of the this study, it can be concluded that most of the organisation surveyed in Ibadan have Internet access, use Local area network connection and are mostly private organisations. It also revealed that most employers grant Internet access to employees depending on their job descriptions and restricts their connections by using blocking software and a dedicated MIS staff. Content accessed on the Internet by employees is the major concern of the employers has pornography sites, online gaming sites and social networking sites were blocked by most of the organisations. In addition, most organisations that review and store employees email messages and computer files do it routinely. It can be concluded that

most organisation that have Internet, restricts employees use and monitor what they actually do on the Internet.

However, just a few of the organisations have written Internet use policy, which shows that the articulation and implementation of clear written policy is still lagging. The study also shows that only few of the organisation that have Internet use policy have complied and disciplined its employees on Internet misuse.

The commonly encountered problems in the organisations were excessive chatting that is non-work related and accessing pornography sites at work.

a) Suggestions for further studies

The following recommendations are made for further studies:

1. This study basically considered the use of Internet in organisations in Ibadan. More studies are needed to explain the pattern of Internet adoption by organisation as there are different adoption stages to technology.
2. This study is an organisational study that focused on employers alone, future study can focus on both employees and employers so that the perception of both side can be known.
3. More so, this study was not anchored on any empirical theories, future studies can look into empirical theories to understand the antecedents of Internet abuse, so that more variables can be used to gather data.
4. Lastly, it is recommended that further study on the impact of Internet use on employees' productivity should be carried out.

References Références Referencias

1. Adams, H., Scheuing, S.M. & Feeley. S.A. (2000) E-mail Monitoring in the Workplace: The Good, the Bad and the Ugly, *Defense Counsel Journal*, 67:1, pp. 10-14
2. Adebayo, A. O. (2007). An Investigation of the Use of ICT in the Nigerian Construction Industry. Retrieved January 24, 2011 from *http://www.itcon.org/2007/18*
3. Alese, B. & Owoyemi, S.(2004) Factor Analytic Approach to Internet Usage in South Western Nigeria. *Journal of Information Technology Impact*, Vol. 4, No. 3, pp. 171-188
4. Ali, A. & Denga, D. I. (1989).*An introduction to research methods in statistics in education and social sciences*. Calabar, Nigeria: Rapid Education publisher, pp. 25-36.
5. Alge, B. J. (2001). Can corporate security, privacy coexist? Retrieved June 30, 2011 from www.newsw-ise.com/articles/2001/5/privacy2.pur.html
6. Awoleye, O.M., Siyanbola, W.O., & Oladipo, F.O. (2008). Adoption Assessment of Internet Usage amongst Undergraduates in Nigeria Universities- A Case Study Approach. *Journal of Technology Management and Innovation (JOTMI Research Group)* Santiago Chile. Vol. 3(001) pp. 84-89
7. American Library Association (2005) "Survey of Internet Access Management in Public
8. Libraries." Retrieved December 13 2010 from http://www.lis.uiuc.edu/gslis/research/Internet.pdf
9. Anonymous (2000). E-business or Bust: The Impact of the Internet/Net Effects, *Sales and Marketing Management, 15:2,* pp. 63-65.
10. Anonymous (2001).Internet Abuse is on the Increase, *Management Services*, 45:6, 2001, p. 3.
11. Bus. J. (1998). *The Secret Agents of Fortune*. Retrieved June 12, 2011 from http://www.secure-data.com/art9.html
12. Camille L. H. (2002) *Methods and Extent of Employer Use of Electronic Monitoring and Surveillance*, Employee Privacy Law Retrieved June 12, 2011 from http://www.amanet.org
13. Caroll, W. R (2007) Electronic Monitoring in the Workplace: *A Review and Discussion about Future Trends. The workplace Review, 4, 2 3-7:* Retrieved on January 12, 2011 from *http://www.smu.ca/-academic/sobey/workplacereview/Nov2007/WPR novIsuue.pdf*
14. Cochran, W.G. (1987). *Sampling techniques*. Wiley Eastern Limited, p.268
15. David, D., David, F. & Marczyk, G. (2005).*Essentials of research design and methodology*. New Jersey: John Wiley & Sons Inc., 18p.
16. Davies, R. A. (2001) *Cybers lacking: Internet abuse in the workplace.* Retrieved July 20, 2011 from http://www.Internetaddiction.ca/cyberslacking.html
17. Dancaster, L. (2001) "*Internet Abuse: A Survey of South African Companies*" ILJ Volume 22 p. 862
18. Deisz, J. (2005). Internet filtering and how it affects security, efficiency and thriving in Norwegian Companies. *Msc Thesis published with Royal Institute of Technology (KTH), Stockholm.* Retrieved 13 December, 2010 from http://www.nislab.hig.no
19. DeTienne, K.B. & Abbott N.T. (1993) Developing an employee centred electronic monitoring system. *Journal of Systems Management*, Volume 44(8) p.12.
20. Elise M. B., (2002) Competing Interests in the Post 9-11 Workplace*: The New Line Between Privacy and Safety*, 1317 Practicing L. Inst./Corp. 303
21. Erah, P.O, & Dairo, E.A.(2008) Pharmacy Students Perception of the Application of Learning Management System in Patient-Oriented pharmacy Education: University of Benin Experience. *International Journal of Health Research, June 2008*. Vol. 1(2) pp. 63-72.
22. Forrester Research, Inc., (2007) "Internet risk management in the Web 2.0 world," September, 2007

23. Fox News (2000) Employers Crack Down on Internet Abuse. *FoxNews.com* November 5, 2000 Retrieved February 12, 2011 *http://www.foxnews.com/scitech/-110500/survwillance.sml*
24. Gahtan, A. (2002). Monitoring Employee Communications. *The Cyber law Encyclopedia*. Retrieved January 06, 2011 from *http://www.gahtan.-com/alan/articles/monitor.htm*
25. GFI WebMonitor (2005) http://www.gfi.com/-webmonitor/Retrieved December 11, 2010.
26. Griffiths, M. (2000). Does Internet and computer ''addiction'' exist? Some case study evidence. Cyberpsychology and Behavior, Volume 3(2), 211–218.
27. IBM (2004) "Global Business Security Index 2004". Retrieved January 24, 2011 from *http://www1.ibm.-com/services/us/index.wss/rs/imc/a1008866?cntxtId=a1000400*
28. International Data Corporation (IDC) (2004) Worldwide Leader in Web Filtering Expands into Web. Retrieved January 17, 2011 from http://www.idc.com/getdoc.jsp?containerId=32218
29. Internet based encyclopaedia. Retrieved January 07, 2011 from *http://www.wikipedia.org*
30. Jason, P. (1997). Banking on computers. *African Business* Volume 219, 40-42.
31. Lane, F. S. (2003). The Naked Employee: How Technology Is Compromising Workplace Privacy. *New York: American Management Association. 2003. Print.*
32. Lehr, B. & Lichtenberg, F.(2000). Information Technology and Its Impact on Productivity: Firm-level Evidence from Government and Private Data Sources 1977-1993, *Canadian Journal of Economics, 32:2, pp. 335-362*
33. Leung, L., & Wei, R. (1999). The gratifications of pager use: sociability, information-seeking, entertainment, utility, and fashion and status. *Telematics and Informatics* 15(1), 253–264.
34. Leung, L., & Wei, R. (1999). Who are the mobile phone have-nots? *New Media & Society, 1*(2), 209-226.
35. Leung, L., & Wei, R. (2000). More than just talk on the move: Uses and gratifications of the cellular phone. *Journalism and Mass Communication Quarterly*, 77(2), 308-320
36. Leung, L. (2001). College student motives for chatting on ICQ. *New Media and Society* 3(4), 483–500.
37. Leung, L. (2002). Loneliness, self-disclosure, and ICQ (''I Seek You'') *use Cyber Psychology & Behavior* 5(3), 241–251.
38. Lim, E. and Vivien, G (2002). The IT way of loafing on the job: cyberloafing, neutralizing and organizational justice. *Journal of Organizational Behavior*. 23, 675-694. Wiley InterScience (www.interscience.wiley.com).
39. Lippert, S.K. (2004). The Effect of Trust on Personal Web Usage in the Workplace. *A guide to Effective Human Resources Management.* Information Science Publishing, USA. 2004, pp 178-200 Retrieved on 05 December, 2010 from http://www.idea-group.com
40. Lyold, P.C (1967). *The City of Ibadan*. Cambridge University Press. ISBN 978-0521112178.
41. Marsan, C.D (2000). "Employee Study Cites Rampant Internet Abuse, *Network World*, 17:17, p. 38
42. Madueme, I. S. (2010) Evaluation of the Impact of Information Communication Technology on Banking Efficiency Using the Transcendental Logarithmic Production function and Camel Rating. *International Journal of Engineering Science and Technology*, Vol.2 (1), 2010, 1-6.
43. Net Monitoring Survey (2000) *Informationweek.com* 2000 Volume 805 pp211.
44. Ndukwe, E. (2005), "ICT Infrastructure: An Essential Foundation for Implementing the WSIS Process in Nigeria", *e-Nigeria Annual National Conference*, 28-30 June, Abuja, Nigeria.
45. Nwagwu, W. E. (2007). The Internet as a source of reproductive health information among adolescent girls in an urban city in Nigeria*. BioMed Central Public Health* 7(2), 2-13.
46. Olatokun, W. M. & Adeboyejo, O.C. (2009) Information And Communication Technology Use By Reproductive Health Workers In Nigeria: State Of The Art, Issues, and Challenges. *An Interdisciplinary Journal on Humans in ICT Environments*. Vol. 5(2), November 2009, pp. 181- 207. Retrieved on January 26, 2011 from http://www.humantechnology.jyu.fi
47. Omolase, C. O., Ihemedu, C. O., Ogunleye, T. O., & Omolase, B. O. (2010). Use of Internet for Health Information amongst Medical Practitioners in a Nigerian Community. *TAF Preventive Medicine Bulletin, 2010*. Vol. 9(2):93-98
48. Orhuozee, E. (2002, August), More Promising E-Governance Strides in Nigeria, *PC World West Africa*, IT Media Group, 6-7.
49. Otokhine, E. (2002, January). Nigeria Moves Forward with E-Banking, *PC World West Africa*, IT Media Group, 4-7
50. Overly, M.R. (1999) E-Policy: How to Develop Computer, E-mail, and Internet Guidelines to Protect your Company and its Assets, *NY: American Management Association (AMA).*
51. Papacharissi, Z. & Rubin, A. M. (2000). Predictors of Internet use. *Journal of Broadcasting & Electronic Media, 44*(2), 175-196.
52. Paul E. H. & Ibrahim C. M.., (1996). E-Mail, Electronic Monitoring, and Employee Privacy *International Journal of Engineering Science and Technology*, Vol.23(2) p. 893- 897

53. Peters, O. (2007). *Social Psychological Determinants of Mobile Communication Technology Use and Adoption: A Comparison of three Models to Explain and Predict Mobile Communication Technology Behavior* (Thesis), University of Twente, pp. 23-27.
54. Privacy Rights Clearing House web site, Retrieved January 23, 2011 from http://www.privacyrights.org/fs/fs7-work.htm
55. Raposa, P., & Mujtaba, B. (2003). The Ethics of Employee Monitoring: What You Need to Know. *Business, Trust and Responsibility* Conference, 11-13 April, 2003. Orlando, Florida. http://www.idc.com/getdoc.jsp?containerId=32218
56. Secure Computing (2004) Secure Computing filtering overview. Retrieved January 26, 2011 from http://www.securecomputing.com/index.cfm?skey=274
57. Seltzer L.,(2000). Monitoring Software. *PC Magazine* 2000 Volume 20(5) pp26-28.
58. Schulman, A. (2000). Privacy Foundation web site, Retrieved. January 23, 2011 from http://www.undoc.com/onworsurproj.html
59. Silva, D. (2001). "Companies Take Steps to Combat Internet Abuse," *Puget Sound Business Journal*, Seattle, vol. 22(23), 2001, pp. 5-7
60. Simmers C.A. & Anandarajan, M. (2004). Convergence or Divergence? Web Usage in the Workplace in Nigeria, Malaysia and the United States. *Personal Wed Usage in Workplace: A guide to Effective Human Resources Management.* Information Science Publishing, USA. 2004, pp 178-200 Retrieved on 05 December, 2010 from http://www.idea-group.com
61. Singh, M. A. (2004) Managing employee Internet abuse. *South African journal of Information management* Vol.6(3) September 2004
62. Society of Human Resource Managers (2002). "Technology and Privacy Use."Retrieved June 23, 2011 from http://www.shrm.org/trends/visions/default.asp?-page=0300c.asp
63. Sonny S. (2002) Computer Monitoring: Benefits and Pitfalls Facing Management, *Information & Management*. Volume 39, p.553, 556-557.
64. SR. (2000). Snoop at Your Peril. *PC Magazine* 2000 Volume 19(17) pp86.
65. Stratopoulos, T. & Dehning, B. (2000). "Does Successful Investment in Information Technology Solve the Productivity Paradox?" *Information & Management*, 38:2, 2000, pp. 103-117.
66. Sullivan, K.B. (1996). *Web Monitoring and Filtering Programs Promote Productivity* PC-Week, 13:50, 1996, pp. 21-22.
67. Swanson S. (2001), Beware: Employee Monitoring Is On The Rise. *Informationweek* 2001 Voulme851 pp57-58.
68. Telenor (2004) *"IT sikkerhet -Trender og utvikling i 2004"* Retrieved on December 24, 2010 from http://www.telenor.no/bedrift/sikkerhet/news_show.php?news_id=35
69. The Central Intelligence Agency (CIA) 2000 World Factbook (2000). Retrieved January 24, 2011 from: http://www.cia.gov/cia/publications/factbook/index.html.
70. Thompson, J. (1994). Here come the giants. *African Business*, Vol.190(2), pp. 42.
71. United Nations Publication(2007) Internet Use For Business Development: An Introductory Set Of Training Modules For Policymakers. Bangkok 2007
72. Urbaczewski A. (2000). Monitoring Strategies for Internet Technologies. *Personal Web Usage in Workplace: A guide to Effective Human Resources Management.* Information Science Publishing, USA. 2004, pp 178-200 Retrieved on 05 December, 2010 from http://www.idea-group.com
73. Vanscoy K., (2001), What Your Workers Are Really Up To. *Smartbusinessmag.com* 2001 Volume 15(9) pp50-54.
74. Villeneuve, N. (2008) Breaching Trust: An Analysis of Surveillance and Security Practices on China's TOM-Skype Platform, Information Warfare Monitor/ONI Asia. Retrieved June 30, 2011 from http://www.nartv.org/mirror/breachingtrust.pdf.
75. Wallace P. (2004), The Internet in the Workplace: How new technology is Transforming Work. Cambridge University Press. USA Retrieved on January 31, 2011 from http://www.cambridge.com
76. Websense (2005), Homepage of Websense Internet filtering company. Retrieved January 25, 2011 from http://www.websense.com
77. Wei, L. & Zhang, M. (2008). The Adoption and Use of Mobile Phone in Rural China: A Case Study of Hubei, China. *Telematics and Informatics* 25, 169-186.
78. Wilder C, (2001) A Question of Ethics. *Informationweek.com* 2001 Volume825 pp39-50.
79. World Internet Users. *InternetWorldStats.com.2010.* Retrieved December 18, 2010 from http://www.Internetworldstats.com/stats.htm
80. Young, K. S. & Case, C.J. (2003) Employee Internet abuse: risk management strategies and their Effectiveness, *Proceedings of the American Society of Business and Behavioral Sciences, Las Vegas,* February 21, 2003, p 1688-1694
81. Yulihasri, Ramayah T., Norzalila J., & Amlus I., (2006) Use and Misuse of the Internet in the Malaysian Workplace: Preliminary Findings from an Exploratory Study IAMOT, 2006
82. Zuckerman, E. (2010) Intermediary Censorship in Access controlled, in Deibert, R., Palfrey, J.,Rohozinski, R. And Zittrain, J. (Eds) *The Shaping of Power, Rights and Rules in CyberSpace*, the MIT press, pp 71-85

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Examining the Relation of Productivity and Competitive Factors with Market Sales and R&D: A Study of Selected Agri-Biotech Firms of Punjab

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Abstract- The present study covers empirical research on selected Agri-Biotech firms of Punjab. The sample has been chosen from state of Punjab covering sectors Food Process Industry, Fertilizer and Pesticides Industry. The study tries to identify factors influencing productivity. These factors are Internal and External Environment; Cost Efficiency; Production Planning and Control; Technological Advancement. On the basis of factor analysis the study has also identified key factors influencing competitiveness. These are Threat of new competition; Threat of substitute products or services; Bargaining power of suppliers; Intensity of competitive rivalry; Bargaining power of customers; Rivalry among existing firms. The study also tries to evaluate the findings on the basis of author-factor matrix.

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Abstract- The present study covers empirical research on selected Agri-Biotech firms of Punjab. The sample has been chosen from state of Punjab covering sectors Food Process Industry, Fertilizer and Pesticides Industry. The study tries to identify factors influencing productivity. These factors are Internal and External Environment; Cost Efficiency; Production Planning and Control; Technological Advancement. On the basis of factor analysis the study has also identified key factors influencing competitiveness. These are Threat of new competition; Threat of substitute products or services; Bargaining power of suppliers; Intensity of competitive rivalry; Bargaining power of customers; Rivalry among existing firms. The study also tries to evaluate the findings on the basis of author-factor matrix.

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I. Introduction

Bio-technology has become one of the emerging spheres and technologies in India as well on a global level. Indian economy is going through a transition phase where the restructuring of industries and firms are taking place in the form of privatization, globalization, and liberalization. Along with the global economic integration, there has been a marked acceleration in the pace of technological and scientific progress. Advances in technology have created new opportunities for businesses. Technology plays a vital role in the development of any Economy. Modern industry is driven by technology, and lack of access to technology can stunt economic growth. Technology played an important role in the rapid economic growth observed in the late twentieth century in Korea, Taiwan, and Singapore. The World is changing fast and the world of business is changing faster. In the new millennium, business corporations will have to deal with entirely new challenges to meet customer demands, move from competition to collaborative reconfiguration, dovetail supplier and subcontractor processes to the corporate goals and empower employees to be able to meet and surpass customer expectations. Due to global competitiveness now companies are taking more effective steps to improve overall productivity and efficiency.

To attain a place in the competitive market, companies have to reduce the cost price of their product. It can only be possible if production of goods is increased by applying same input or by reducing time wastage. Past experience shows that Indian firms took decades to be able to catch up with global productivity levels. There is a strong need to evaluate available technological options to overcome new challenges and become top performers. At the strategic level, the main challenge is to become globally competitive by adopting collaborative manufacturing strategies. The process of acquiring a production capability is initiated by importing a plant from another country or having a new plant built with the help of a technology provider.

II. Review of Literature

One of the perquisites for developing a well-structured hypothesis is Review of literature that enables the Researcher to avoid pit falls and difficulties experienced by predecessors and help them to draw a well-designed plan in the area of his interest. To have a proper perspective of the subject, it is essential to have bird's eye view of the findings of other academic researchers. Thus the planning and execution of any research study should be preceded by thorough Review of Literature in related fields since it helps to familiarize with the work that has been done in that area, eliminates the possibility of unnecessary duplication of efforts and provides valuable information on research techniques. Many explanatory and interesting studies have been undertaken in India as well as in other countries of the world to analyse the productivity and competitiveness in different sectors.

According Lall (2001), a complete competitiveness analysis must define what competitiveness means and how it is to be measured and identify the most important factors influencing it. It

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should also highlight the interactions between these factors and how they affect the competitiveness. Buckley et al. 1988 opines that Competitiveness is synonymous with a firm's long-run profit performance and its ability to compensate its employees and provide superior returns to its owners.

Productivity comprises of capital productivity as well as labour productivity but according to Hassan Arif et al. (2006) successful organizations in today's business environment are those who manage along with their technological resources their human resources also well. Organizations perform better when they are making investment in training their employees and broaden their skills (Hollbeche, 1998). Employee's creativity and innovation skills can increase only by giving them appropriate recognition and reward for their creative work (Koning, 1998). Sheel (2002) states that for technological advances new infrastructures, mainly telecommunication, information technology, new strategic thinking practices are needed for hyper competitive environment.

Sethi et al. (2007) highlight that various factors may be quite important to manufacturing firms trying to compete with flexibility competence and technological capabilities. Human factor in term of their skills, technical expertise, training involvement, and attitude has been found to be the most significant for achieving flexibilities. For gaining competitive advantage and developing firm's internal capabilities, Technology adoption and adaptation are considered to be among the most critical elements for a firm (Khamba and Singh, 2001). The study by Lee et al. (2007) compares the real output and labour productivity of Chinese and Indian manufacturing from 1980 to 2002. The analysis shows that since 1980, real value added and labour productivity growth for Chinese manufacturing has been well above Indian levels. The study explores the impact of trade policy reforms on TFP growth in the Indian manufacturing sector. The three-digit estimates for each year over the pre and post-reform period shows that for the whole pre-reform period, the majority (0.53) of three digit industries experienced TFP regression, while for the post-reform, the majority (0.69) of industries experienced TFP growth. There have been a lot of studies focusing on using patents as indicators of innovation, but there are certain pitfalls associated with measuring innovation outcomes with patent data (Griliches 1990). One widely accepted notion is that patents only capture a part of the innovation output. Moreover, there exist remarkable differences in what Scherer (1983) called the propensity to patent across sectors or firms. Thus the present study shall try to cover all the aspects of competitiveness.

Limited work has been done on analyzing the impact of new policy regime on the productivity and competitiveness in biotech sector. Most studies cover the overall manufacturing sector of Punjab. A few studies covering some aspects of the Punjab manufacturing have been discussed below:

Singh (1987) has calculated the partial and total factor productivity for the manufacturing sector of Punjab. The time period covered by the study is 1967-68 to 1981-82. The study is based on the ASI data. The author has studied the manufacturing sector (census sector as reported in ASI) and has calculated both the partial and total factor productivity indices. While the labour productivity and the capital intensity showed a rising trend, the capital productivity showed a falling trend. Total factor productivity as measured by Kendrick, Solow and Translog indices showed a declining trend.

Bhardwaj (1990) studies the structure and growth of hosiery industry in Punjab over the period 1975-76 to 1980-81. The industry had growing demand for its products both in domestic and international markets. The small scale units have been engaged in solving the problem of unemployment, increasing the level of per capita income, national income and exploration of natural resources. The study suggests a great need to develop the industry on modern lines with expansion of units, modernization of spinning and knitting units etc.

Singh (2004) studies the impact of economic reforms on productivity growth in manufacturing sector of Punjab covering the period 1983-84 to 1998-99. In this study total factor productivity is calculated by the three indices that are: a) Kendrick Index b) Solow Index and c) Translog Index. Growth rates of labour productivity, capital productivity and capital intensity have also been calculated in this study. Period from 1983-84 to 1990-91 is descripted as pre-reform period and 1991-92 to 1998-99 as post-reform period. The findings of the study show that labour productivity increased in the manufacturing sector of Punjab. It is found that the growth rate of labour productivity is more pronounced in the post-reform period. The average annual growth rates of capital productivity reveals that it shows a declining trend in the manufacturing sector of Punjab for the entire study period. But growth rate of capital productivity is positive in post-reform period and negative for the pre-reform period. The results suggest that efficiency of capital input had declined in the manufacturing sector of Punjab in the pre-reform period but post-reform period shows some increase in efficiency of capital input.

The estimates of average annual growth rates of capital intensity reveal that it has increased. This result indicates that the process of capital deepening has taken place in the manufacturing sector of Punjab during both pre and post-reform period. The comparative analysis of average annual growth of Kendrick, Solow and Translog indices suggests that the overall factor use efficiency in the manufacturing sector of Punjab has declined during the post-reform period,

which shows that there emerged technological retrogression in Punjab.

Banerji (1975) analyzed partial productivity indices of labour and capital and total productivity index during the perod 1946-64. The trend in the study shows that the performance of the manufacturing secto was sluggish over this period. While labour productivity showed up significant up trend, no evidence was found to indicate the presence of technical progress in the sector. Mehta (1980) in a comprehensive study has calculated partial and total factor productivity indices for large scale industries. This study for Indian manufacturing shows that overall efficiency of the industrial sector declined during the period under study.

According to Stuart Smyth et.al while most innovations commonly enter the marketplace with little notice or fanfare, this cannot be said for products of agricultural biotechnology. The commercialization of innovative new transgenic crops and the resulting food products have resulted in some products entering the market that are not desired by some consumers. It is argued that these new products are creating a new class of socioeconomic liabilities in the marketplace. The global agri-food industry has reoriented itself in the past decade around technological change and innovation. Both farmers and the rest of the agrifood supply chain have recognized that the long-term threat to their livelihoods is other local and regional demand for land, labor, and capital. Ultimately, the sector will need to achieve productivity gains at least equal to those in other domestic sectors, which will require significant technological and institutional change. Change creates risk, which can, if not anticipated and managed, create liabilities for someone. Biological control of liabilities, either through contemporary technologies described above or those yet to be devised, is the science side of the story. The human, institutional element is the complementary other side. Ultimately, these two parts must fit together in a discussion of the relative costs (risks) and benefits of alternative options. Similarly, control mechanisms are not cheap. Incomplete institutional approaches can lead to millions of dollars of losses when technologies are widely dispersed. Governments tend to have a larger role in defining, managing, and adjudicating liability because we live in an imperfect world, where individual market actions do not lead to socially acceptable outcomes. In a world characterized by perfect, costless information, governments could simply define rights and then allow adjudication institutions to operate. If those systems did not impose any transaction costs on those who chose to enter into a transaction, the existence of the threat of liability would lead to an efficient market outcome. The existence of legal liability would act as a perfect deterrent, as the full costs of any transaction would have to be accounted for by those entering into the transaction.

According to Jeremy Hall et.al Many argue that transgenic technology will have wide-ranging implications for farmers in developing nations. A key concern is that competencies may be destroyed by predominantly foreign multinational transgenic technologies, exacerbating problems of social exclusion in the case of subsistence farmers. Conversely, those that fail to adopt the technology may become uncompetitive, particularly in commodity-based export markets. Drawing on interview data conducted in Brazil and supporting data collected in North America, Europe and China, we found that the impact of transgenic technology varies. It has less impact on farmers that adapt the products to their crop systems and environment, and greater negative implications for less formally educated subsistence farmers in consequence of both complexity and compatibility. Agriculture plays a major economic and social role in these countries, for domestic consumption, employment and acquisition of foreign exchange through exports. Countries that fail to adopt the technology may become uncompetitive in international markets. Conversely, traditional breeding competencies, ecosystem diversity and crop knowledge may be destroyed by predominantly foreign transgenic technologies, thus widening the gap between developed and developing nations. A key challenge for companies promoting transgenic technology is to recognize socioeconomic differences amongst regions and reconcile these often conflicting pressures and needs, most of which are beyond the boundaries of their firm, the extended value chain and other key primary stakeholders.

Coming to the studies related with competitiveness different studies have used different parameters. IPRs are emerging as important factors to enhance competitiveness and give an edge to firm possessing more IPRs. Cornish and Lewelyn (2003) used the term IP to describe the various forms of intangible property that include trade mark, patent, copyright. Maskus (2000) talked of two contrasting views of intellectual property, the natural-rights view that sees ownership of mental creations as a natural right of the creator, and the public-rights view which deems all information to be in public domain, since free access to information is vital to social well-being and cultural growth. Intellectual property is the term that describes the ideas, inventions, technologies, artworks, music and literature that are intangible when first created, but become valuable in tangible form as products. Intellectual property is not the product itself, but the special idea behind it, the way the idea is expressed and the distinctive way it is named and described (Idris, 2002).

According to Kavida et al. (2008), India is emerging as the hub of 'knowledge economy' in south Asia. India has proved her strength in information technology. Davis (2004) explored the changing role of

intellectual property rights (IPRs), tracing four recent, inter-related trends in the IP landscape: the growing prominence of intangible assets as sources of competitive advantage, the globalization of business activities, advances in digital technologies and changes in the legal framework governing the strength and scope of IPRs. The researcher analyzed the implications of these trends for firm strategy by considering the 'overall value' and effectiveness of patents for firms. In order to be competitive in today's world of globalization and liberalization Indian organizations have to use of advanced technology, technical manpower, and innovative research and development (Narain et al., 2004).

According to Lalitha (2004) the status of biotechnology in India was improved with the establishment of National Biotechnology Board (NBTB) in 1982. One of NBTB's tasks was to coordinate the biotechnology research done by various agencies like the Department of Science and Technology, Department of Atomic Energy, Council of Scientific Research, Indian council of Agricultural Research, Indian Council of Medical. Research and various universities. NBTB's role was to improve research initiatives on BT, develop infrastructure and skills required for R&D in BT and other strategies like bio-safety, regulation, intellectual property rights, etc. In 1986, the Department of Biotech- nology (DBT) replaced NBTB. Under this move, infrastructure and research facilities were created; besides the facilities for maintenance of cell lines, acquisition of research biological at a central point and distribution was created. Under DBT's guardianship, financial institutions started encouraging investments in BT commercialization by entrepreneurs. An interface organisation called Biotech Consortium of India was established to serve as a link between research organisations and industry located either in India or abroad. A survey of Indian patents in biotechnology during 1972-1988 carried out for the Department of Biotechnology and subsequently updated until 1991 showed that patenting in biotechnology is foreign-dominated with nearly 75% of the patents owned by foreigners. Predominantly, patents related to the pharmaceutical sector covered processes for the preparation of antibiotics, vitamins, enzymes, antibodies and vaccines, although patenting also covers chemicals such as alcohols and polysaccharides. In the agricultural sector, it covers plant growth regulators, veterinary vaccines, plant cells and tissue culture. In the food industry, dairy and fish products, yeast and food additives, starch products, glucose and fructose syrups are covered by the biotechnology patents. However, what is significant is that biotech patents are marked by a shift towards newer areas employing gene manipulation techniques. Huge resources are spent on introducing new traits in plants through GMOs, and all over the world, the field of transgenic crops has been expanding ever since such products were introduced in1996. It is considered that use of transgenic crops results in sustainable and resource-efficient crop management practices, aside from reducing the use of pesticides in crop production, and thus impact positively on biodiversity (James, 2001). Because of these advantages, the total land area used for transgenic crops increased from 1.7 million ha in 1996 to 58.7 million ha in 2002. In the United States alone, the total land area used for these crops increased from 1.5 to 39 million ha (majority under transgenic cotton), where patents and UPOV 1991 protect innovations in plant varieties.

In 2000, a total of 13 countries, 8 industrial and 5 developing countries, grew GM crops. Although plant biotechnology is considered to provide solution to the growing food insecurity among developing countries, lack of appropriate and concrete answers to the concerns raised relating to the environment have induced the developing countries to tread cautiously in the area of transgenic crops. One reason for the slow spread of transgenic crops in developing countries is that governments in many developing countries are with- holding approval for the release of GM crops due to their insufficient technical, financial and infrastructure capacities to assess GM crops for biological safety. In some developing countries, even if the technical capacity to regulate for bio-safety is strong, approvals for GM crops have been delayed because of political pressures from local and international anti-GM activist groups and uncertainty regarding consumer acceptance of GM products in international markets. GM crop technologies created by private companies restrict technology transfer to poor farmers in poor countries because of the privately held intellectual property rights. Lack of protection for intellectual property rights in developing countries demotivates the entry of the private sector.

Gupta (2006) observes that, in comparison with the plant protection in more than 30 countries, the protection offered to the extent and farmer varieties to protect the land races by the Indian Act is a bold attempt and has not been tried by any other country. However, some modifications in the following lines perhaps will be more useful for the farmers and the breeders. While it is appreciable that the Indian Act provides for the registration of extant and farmers varieties, the condition that such varieties will have to meet the criteria of distinctiveness, uniformity and stability (DUS) may not be realized, at least in the case of local land races and wild relatives of economic plants. Although it appears relatively easy and inexpensive to obtain plant variety right than a patent, still the local communities cannot exercise such rights.

The uniformity and stability requirements imply that only commercial breeders of genetically uniform varieties can benefit from the system (Dutfield, 2000).

He points out that 'local communities whose land races (or traditional cultivars) may be rich in intra-varietal genetic diversity (due in part to the preference of communities for versatility and adaptability) are unable to acquire protection because of this genetic diversity'. Hence, in view of this, the DUS requirement may be modified in the case of extant and farmers varieties. A related issue is that in order to provide effective protection to the local land races, cooperation of local communities having knowledge about such varieties and village organisations is very essential. This would be useful in (a) creating and updating a national database of such varieties and (b) benefit sharing whenever such varieties are exploited for further development. Furthermore, the period of protection provided by the Indian Act is shorter than the period of protection offered by other types of plant protection. Taking into account the role of plant bio- technology in agriculture and pharmaceutical sector, it is essential to protect the extant and farmers varieties for a longer period, so that the local communities can also benefit from research or developments that are based on local land races. The Indian Act provides for the farmer's rights to save, use, sow, re-sow, ex- change share or sell his farm produce including a protected seed variety, although a farmer cannot sell the protected seeds as a branded seed.

The other area where intellectual property rights become very essential is in protecting traditional resources from bio-piracy resulting from bio-prospecting. Increasingly, plants and plant-based resources are used in pharmaceutical preparations. Whereas over 90% of genetic resources are estimated to be found in the tropical regions of Africa, Asia and South America, which are economically resource-poor countries, the countries which rely on such resources for industrial production and research, however, are in the North and are economically rich (Biber, 2000). With the increase in outsourcing of biotechnology production and re- search by western countries, developing countries are demanding that the country of origin of genetic resources should also benefit by the larger research and subsequent commercialization of the research. Although Article 15 of the Convention of Biodiversity says that the benefits of the research should be shared 'in a fair and equitable' manner with the country providing those resources, in the absence of effective international arbitration and without specific regulations at the national level to fix the level of fairness and equitability, currently the benefits are shared by mutually agreed contract arrangements.

Although the Indian Act incorporates the concept of benefit sharing so as to benefit the local communities, the methodology to arrive at a formula that will be acceptable for both the local community and the researcher is yet to be laid down. Nevertheless because benefit sharing can take financial, conservation, social and scientific forms, they must therefore be resolved during the prior-informed-consent process before any bio-prospecting permits are issued (Moran, 2000). As case studies demonstrate, opportunities for financial compensation include upfront payments and medium-term benefit sharing as research progresses. Many companies offer stakes in equity, profit sharing and joint venture opportunities. In the case of drugs produced from plant resources, royalties occur only if and when a drug is marketed. The researcher concluded that Innovations in biotechnology have several useful applications in agriculture and are useful for developing countries like India. However, current resources for such innovations have nevertheless resulted in their protection by way of appropriate intellectual property rights. While patents prevent further research, a sui generis system adopted by India benefits both the farmers and the breeders, and diffusion is possible. Although plant protection rights will check unlawful bio-prospecting, to protect the interests of farmers and breeders, large databases that document the existing varieties need to be undertaken. This paper highlighted some of the issues that emerge from the context of extending protection to extant and essentially derived varieties, and the implications for agricultural research in the context of adopting transgenic technology. While protection may encourage the private sector to go for research in commercial crops, it may also divert the resources of the public sector from investing in research on food crops to regulating and monitoring the research in private sector. The task that confronts developing countries like India is in focusing on developing the physical and scientific infrastructure to provide plant protection effectively.

According to Clemente (2006) Pharmaceutics, biodiversity and ethnic knowledge are critical areas of impact. 'Trade-relating' intellectual property might allow developing countries to be compensated, but incentive implementation of optimal compensation in the legislatures seems infeasible. Scientific communities in developing countries are particularly vulnerable to limitations of cooperation and access to information, resulting from stronger intellectual property rights protection, as their efforts to obtain normal science results must be considerable. Developing countries' policies and academic debate on intellectual property have followed a pendulum-like movement. Soon after the Second World War, a new perspective on the importance of technology in trade and development was created by the work of United Nations programmes (such as the Economic Commission for Latin America) and independent economists from developing countries. These analyses, which centred on technology transfer issues, concluded that developed and developing countries should take a different stance concerning the protection of intellectual property. He stressed that situations of monopoly and oligopoly in

world technology markets prevented developing countries from having fair access to technology.

Penrose (1951) maintained that developing countries could not expect any advantage from protecting IPR, for these were concentrated in the hands of residents of developed countries. From the point of view of global welfare, it was argued, industrialized countries would not lose much from the lack of protection in those countries and, overall, welfare would improve with low protection. Between the 1950s and the middle of the 1980s, developing countries succeeded in maintaining a special status in the international intellectual property system. Regional organizations such as the Latin America Free Trade Association (LAFTA), the Andean Pact and others advanced common intellectual property policies along these lines. In 1970, India adopted a patent law with considerable restrictions on patent holders. The choice of this country in favour of process patents rather than product patents allowed local production of imported products whenever the use of a different process was demonstrated.

In the mid-1980s, a shift in this scenario began to occur on the initiative of the United States Government. Responding to the concerns of US-based firms, and sometimes in agreement with other advanced countries, the United States pursued what David (1993) views as "a direct, unilateral course of action", that was chosen instead of renegotiating international intellectual property agreements (Paris or Berne Conventions). First introduced in bilateral agreements, this shift in intellectual property regulation was finally enacted multilaterally in the Uruguay Round of the 1990s, as part of the conditions to join the World Trade Organization. Four major changes in the global regime of intellectual property rights and trends related to it appear to be affecting the ways scientific and technological research is conducted in developing countries: (1) the already mentioned Uruguay Round of the General Agreement on Tariffs and Trade, that resulted in the 1994 agreement on trade-related aspects of intellectual property rights (TRIPs) and in the establishment of specific conditions for access to the World Trade Organization, (2) the extension of patent protection to the pharmaceutical sector in most developing countries, following the TRIPs agreement, (3) the 1980 Bayh-Dole and Stevenson-Wydler Acts in the USA, permitting universities, non-profit organizations in general and SMEs to appropriate knowledge resulting from research financed with public Federal funds, and the more recent 1999 Research and Innovation Law in France which seeks the same purpose, and (4) the patenting of research tools and databases.

Mei-Fang Chen *et al* used DEA (data envelopment analysis) and Mamlquist models to evaluate the efficiency and productivity of Taiwan's biotech industry. Moreover, we use the two-stage approach to find the effects of environmental variables on efficiency and productivity scores. A panel data set is used composed of 31 listed or over-the-counter biotech-related firms during 1998–2001. The DEA results show that the proportion of biotech firms with inefficient returns to scale rose during this period. The results from the Tobit regression further indicate that food-related firms have higher scale efficiencies than others. Mamlquist indices reveal that food- and chemical-related firms have lower technical efficiencies than others, and their total factor productivities (TFP) grew from 1998 to 2000 but fell in 2001. Obviously, technical changes constitute the main source of biotech TFP changes in Taiwan. In addition to maintaining competitive advantage in technology improvements, the managers in Taiwan's biotech industry have to put more efforts into efficiency improvement.

According to Kiran et.al the study analyzes the trends in value added , labour, capital as well as trends in labour, capital and total factor productivity for sixteen industrial groups on the organized manufacturing sector for the period 1980-81 to 2002-03. The present study tries to examine the trends in partial productivities as well as total factor productivity. In this study, the focus is on the empirical measurement of (a) growth of output, capital and labour (b) capital productivity (c) labour productivity and (d) total factor productivity. Partial factor productivity measures the ratio of output to one of the inputs setting aside interdependence of use of other output. Labour productivity (V/L) is the ratio of value added to total no of persons employed. Capital Productivity (V/K) is the ratio of value added to gross fixed capital.

Studies by Ahluwalia (1985,1991) for the period 1959 to 1985 examines total factor productivity. The studies show that during the two decades of the sixties and seventies total factor productivity in the manufacturing sector declined. However there is also a finding that in the first half of eighties productivity growth improved. The dominant source of the acceleration in total factor productivity has been growth of value added.

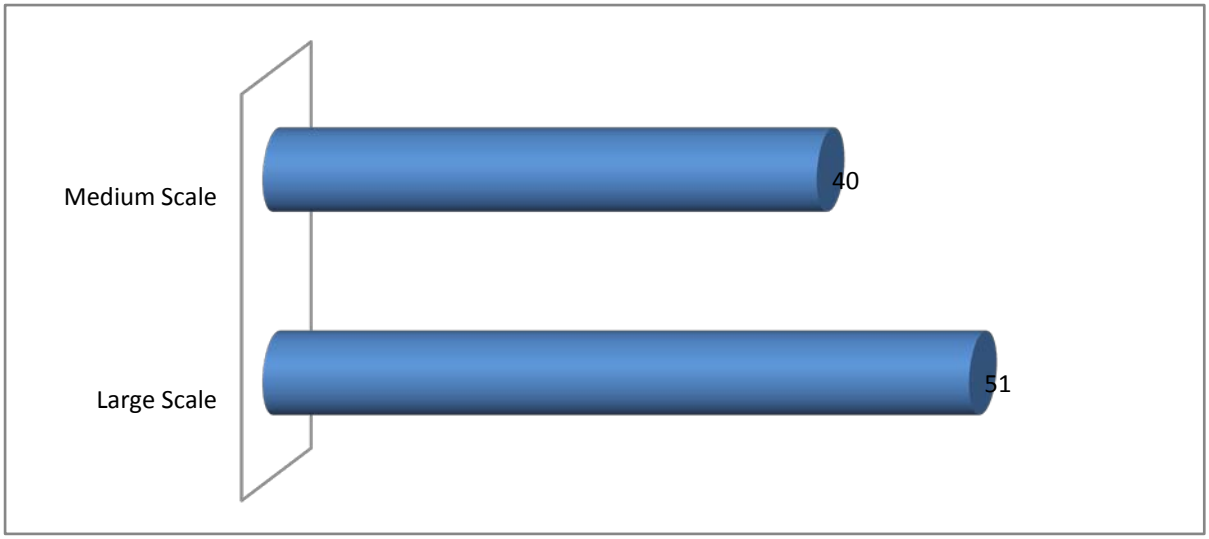


Figure 1 : Scale of Firms

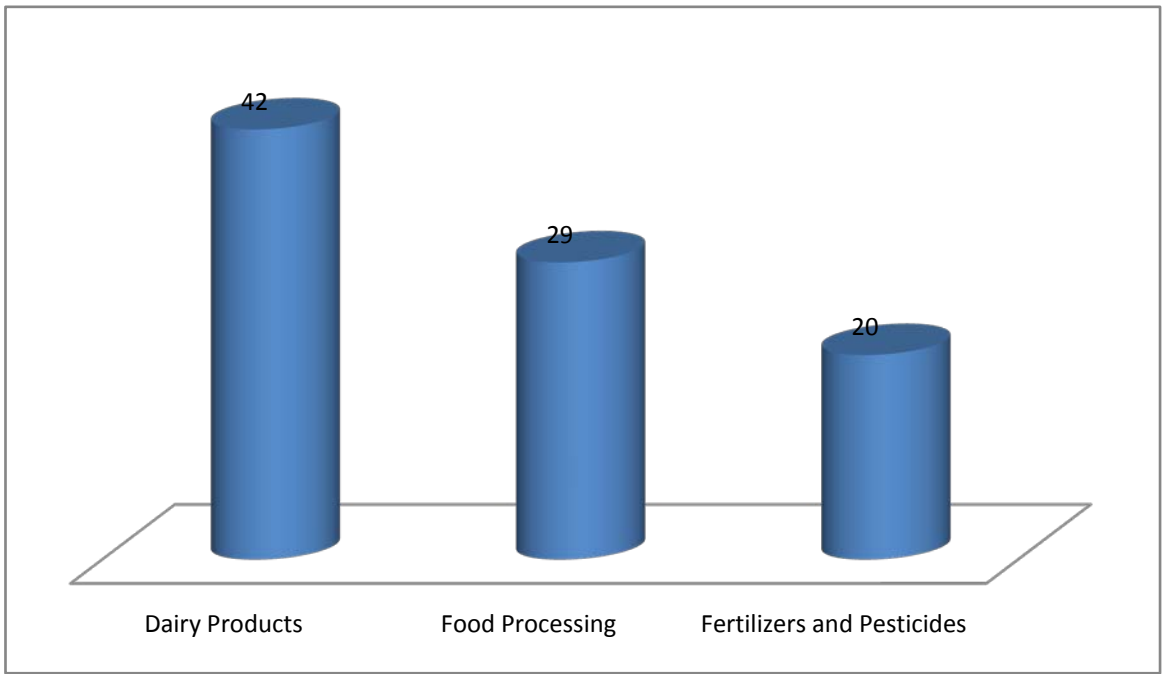
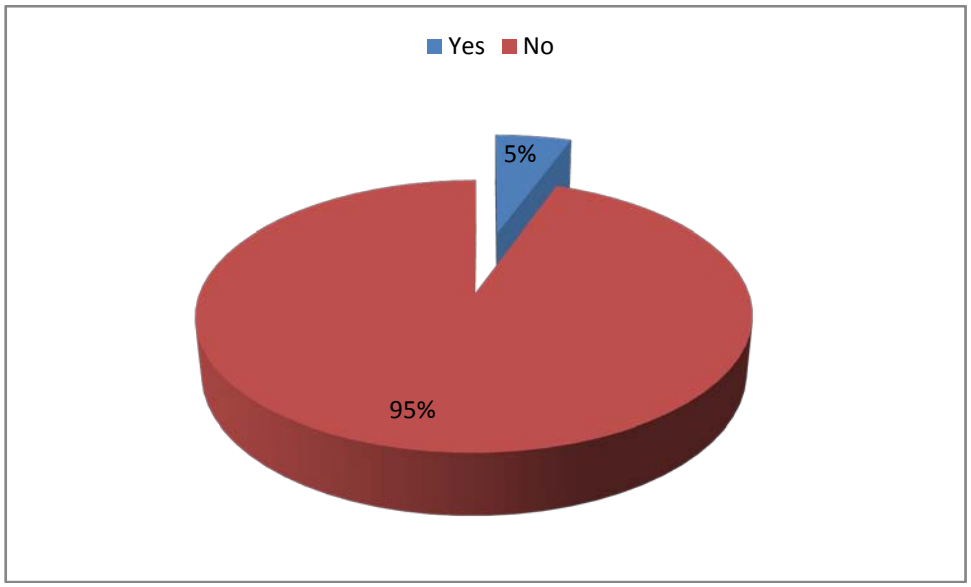
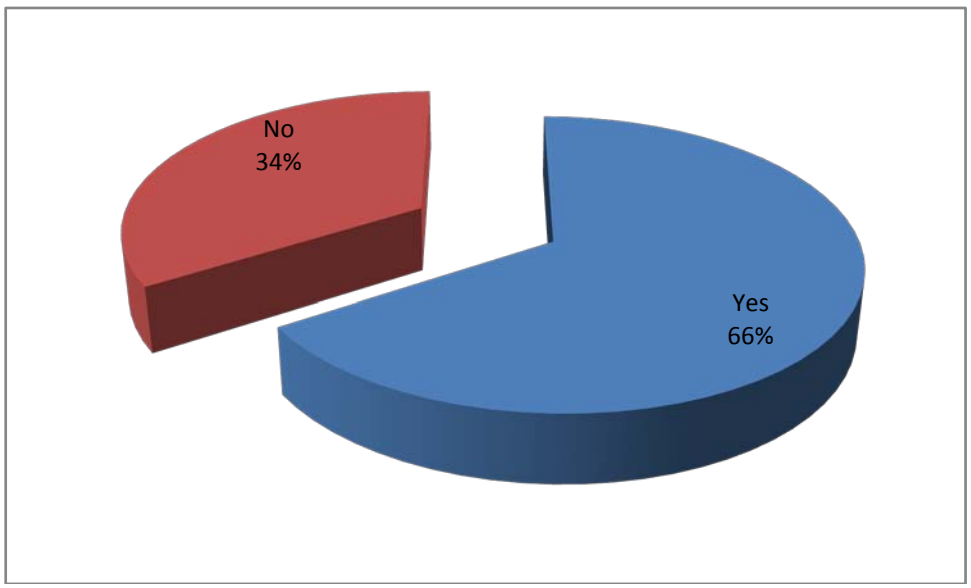


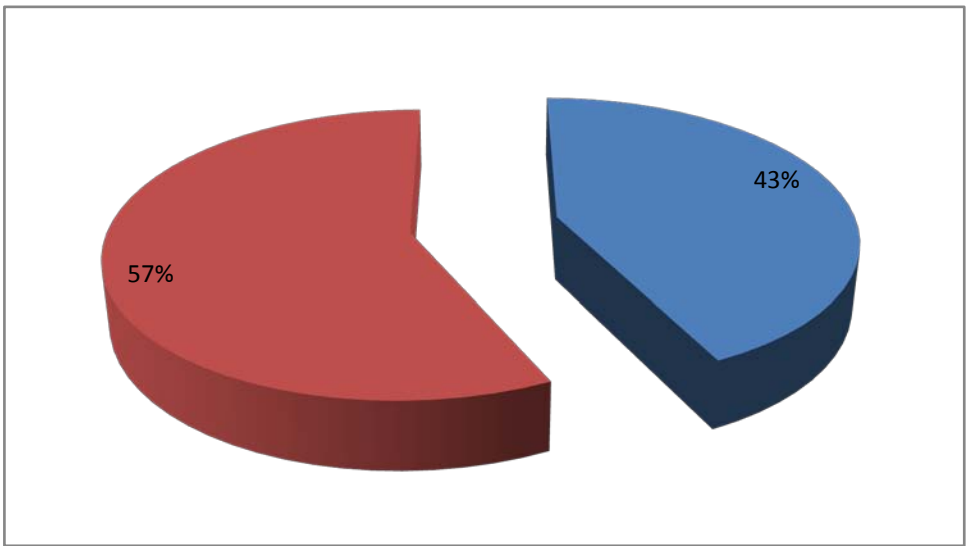
Figure 2 : Nature of Industry



Patent Scenario



Trademark Scenario



Copyright Scenario

Many explanatory and interesting studies have been undertaken in the world to analyse the productivity and competitiveness in different sectors. The satisfaction of the customers can be measured by the quality provided by the firms. Different companies have used various factors for judging the quality factor. Table 1 shows factor analysis for competitiveness, Table 2 shows factor analysis for productivity.

Table 1 : Factor Analysis for Competitiveness

Factor Name	Items	Factor Loading	Eigen Value	% of Variance	Cumulative
1) Threat of new competition	• Barriers to entry • Economies of product differences • Absolute cost Industry profitability;	0.821 0.891 0.663	5.113	20.452	20.452
2) Threat of substitute products or services	• Buyer propensity to substitute • Buyer switching costs • Perceived level of product differentiation • Number of substitute products available in the market • Quality	0.660 0.787 0.930 0.738 0.922	4.989	19.958	40.410
3)Bargaining power of suppliers	• Supplier switching costs • Supplier concentration to firm concentration • Ability to forward vertically integrate	0.863 0.764 0.591	4.286	17.144	57.553
4) Intensity of competitive rivalry	• Sustainable competitive advantage through innova tion • Competition between online and offline companies • Level of advertising expense • Powerful competitive strategy	0.938 0.951 0.760 0.631	4.227	16.906	74.459

	• Flexibility through custom-ization, volume and variety	0.778			
5) Bargaining power of customers (buyers)	• Buyer concentration • Bargaining power • Buyer information availability • Buyer price sensitivity • Products uniqueness	0.678 0.769 0.886 -0.575 0.813	2.808	11.231	85.690
6) Rivalry among existing firms	• Competitor products • Existence of labor unions • Competitive position	0.933 0.636 0.625	2.630	10.518	96.208

On the basis of factor analysis results six factors that emerged are:

1) Threat of new competition
2) Threat of substitute products or services
3) Bargaining power of suppliers
4) Intensity of competitive rivalry
5) Bargaining power of customers (buyers)
6) Rivalry among existing firms

These six factors account for 96.208 percent of total variation. Threat of new competition emerged as an important factor explaining 20.452 percent of total variation. All the variables in this factor account for loadings in the range of 0.821 to 0. 891. The item industry profitability had item loading of 0.663.The second factor viz. threat of substitute products or services had variables accounting for 19.958 percent of variation. Here the item buyer propensity to substitute had item loading of 0.660 while the variables buyer switching costs, perceived level of product differentiation, number of substitute products available in the market, quality had item loading of 0.787,0.930,0.738 and 0.922 respectively.

The next perceived factor is bargaining power of suppliers which accounts for 17.144 percent of variation. The items supplier switching costs, supplier concentration to firm concentration had item loading of 0.863, 0.764 whereas the item ability to forward vertically integrate had item loading of 0.591. The fourth factor is intensity of competitive rivalry which explains 16.906 percent of total variation. The items sustainable competitive advantage through innovation, competition between online and offline companies, level of advertising expense, powerful competitive strategy, flexibility through customization, volume and variety had item loading of 0.938,0.951,0.760,0.631,0.778 respectively.

The fifth factor bargaining power of customers explains 11.231 percent of variation. It has items viz. buyer concentration having item loading of 0.678, bargaining power having item loading of 0.769, buyer information availability having item loading of 0.886, products uniqueness having item loading of 0.813. The last factor is rivalry among existing firms accounts for 10.518 percent of variation. It has three items competitor products, existence of labor unions, competitive position having item loadings of 0.933, 0.636, and 0.625.

a) Factors Influencing Productivity

The study has taken four factors influencing productivity. These are: Internal and External Environment; Cost Efficiency; Production Planning and control; and Technological advancement.

Production Planning and control emerges as a factor with highest mean score, followed by Internal and external environment as depicted through figure 4. Technological advancement has the lowest mean score. Thus there has to be focus on this factor as this seems to be a neglected factor. Similar trend is reflected by large scale sector with Technological advancement reflecting the lowest score of 3.47. The trend is slightly different for medium and small scale as the highest mean score for these two sectors has been for Internal and External Environment, followed by Production Planning and control. The least mean score for these two sectors has been recorded by Technological advancement (Figure IV).

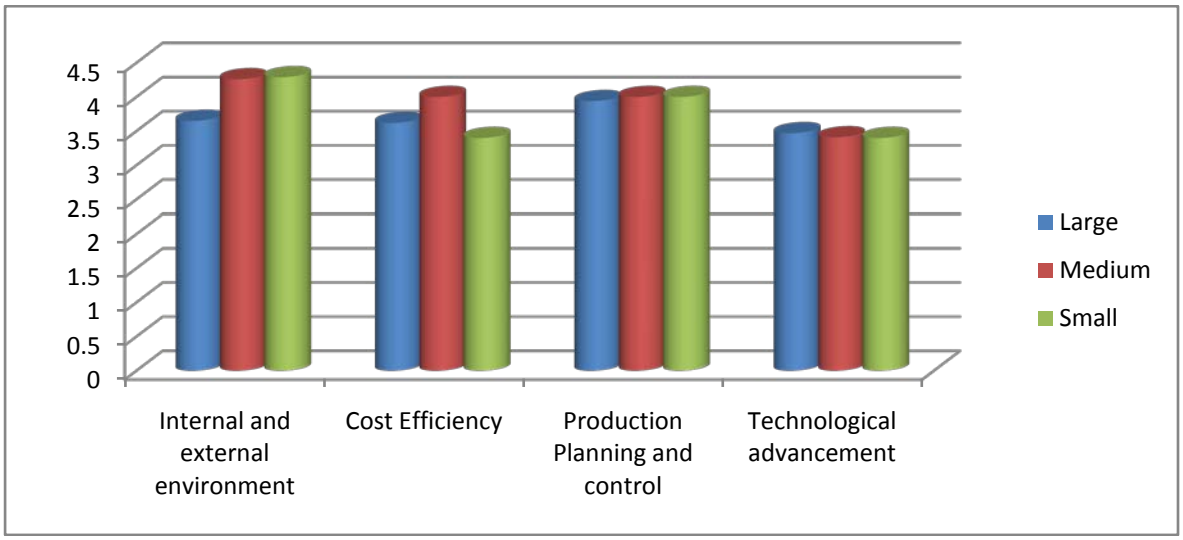


Table 2 : Factor Analysis for Productivity

Factor Name	Items	Factor Loading	Eigen Value	% of Variance	Cumulative
1) Internal and External Environment	i. Trends of the past years for new technology ii. Consider consequential changes iii. Education and training iv. Participation of engineers v. Selection of supplier of technology vi. Availability of better technology due to globalization vii. Govt regulations	0.710 0.709 0.992 0.556 -0.620 0.718 0.963	4.993	31.208	31.208
2) Cost Efficiency	i. Alternate processes cost effective ii. Economic viability study iii. Threats iv. Cost of training and education v. Lack of finance	-0.975 -0.639 0.806 0.961 0.824	3.936	24.600	55.808
3) Production Planning and Control	i. Cost of new technology ii. Opportunities due to globalization iii. Increased maintenance expenses	-0.647 0.756 -0.807	2.990	18.685	74.493

4) Technological Advancement	i. Adopting new technology ii. Attitude of employees towards adoption iii. Availability of Professional Consultants iv. Production management skill deficiency v. Problem of compatibility of equipment	-0.821 -0.632 0.623 0.946 0.973	2.588	16.176	90.669

On the basis of factor analysis results four factors that emerged are:

1) Internal and External Environment
2) Cost Efficiency
3) Production Planning and Control
4) Technological Advancement

These four factors account for 90.669 percent of total variation. Internal and External Environment emerged as an important factor explaining 31.208 percent of total variation. The items education and training and Govt regulations had very high item loadings of 0.992 and 0.963. Other items like trends of the past years for new technology, consider consequential changes and availability of better technology due to globalization had high item loadings of 0.710, 0.709 and 0.718 whereas the item participation of engineers had item loading of 0.556.

The second factor is cost efficiency which accounts for 24.600 percent of total variation. The items threats, cost of training and education, lack of finance had item loading of 0.806, 0.961, 0.824 whereas the item alternate processes cost effective, economic viability study had item loading of -0.975 and -0.639.

The third factor is production planning and control which explains 18.685 percent of total variation. The items opportunities due to globalization, cost of new technology and increased maintenance expenses had item loading of 0.756, -0.647, -0.807respectively. The fourth factor is technological advancement which accounts for 16.176 percent of total variation. The items adopting new technology, attitude of employees towards adoption, availability of professional consultants, production management skill deficiency, problem of compatibility of equipment had item loading of -0.821, -0.632, 0.623, 0.946 and 0.973.

III. Conclusion

The factors of productivity are Internal and External Environment; Cost Efficiency; Production Planning and Control; Technological Advancement. The factors of competitiveness are Threat of new competition; Threat of substitute products or services; Bargaining power of suppliers; Intensity of competitive rivalry; Bargaining power of customers; Rivalry among existing firms. The result of factor analysis has been validated through the author-factor matrix. There are a number of studies where the individual factors have been identified. The present study adds upon that literature by the aggregative analysis. Some of the factors identified for competitiveness have been related to Porter model which has been used as a base. Empirical results through factor analysis have helped in identifying their importance.

IV. Future Work

This study has identified factors influencing competitiveness and productivity in Indian scenario. For future work case-study analysis can be done to validate the factors identified in the study.

References Références Referencias

1. Ahluwalia, I. J. 1985, Industrial Growth in India-Stagnation since the mid-sixties, Oxford University Press, Delhi.
2. Ahluwalia, I. J. (1991), Productivity and Growth in Indian Manufacturing, Oxford University Press, New Delhi.
3. Banerji, A. (1975) Capital intensity and productivity in Indian Industry, Delhi: Macmillan.
4. Bhardwaj, R.P. (1990), 'A Study of Structure and Growth of Hosiery Industry in Punjab', A thesis submitted in fulfillment of the requirements for the award of the degree Doctor of Philosophy, Department of Economics, Punjabi University, Patiala, Punjab.
5. Biber, K., 2000. Biotechnology and traditional knowledge—in search of equity. International Journal of Biotechnology 2 (1– 3).
6. Brahmananda, P.R.(1982), "Productivity in the Indian Economy: Rising Inputs for Falling Outputs", Bombay : Himalaya Publishing House.
7. Cornish, William and Llewelyn, David (2003) Intellectual Property, Sweet & Maxwell London (5th Edn).
8. David, P.A., 1993. Intellectual property institutions and the panda's thumb: patents, copyrights, and trade secrets in economic theory and history. In: Wallerstein, M.B., Mogee, M., Schoen, R.A. (Eds.), Global Dimensions of Intellectual Property Rights in Science and Technology. National Academy Press, Washington, DC, pp. 19–62.

9. Davis, Lee (2004) 'Intellectual property rights, strategy and policy', Economics of Innovation and New Technology, 13: 5, 399 – 415.
10. Dutfield, G., 2000. Intellectual Property Rights, Trade and Biodiversity—Seeds and Plant Varieties Earthscan, London.
11. Gangopadhyaya,S. And Wadhwa,W. (1998), 'Economic Reforms and Labour', Economic and Political Weekly, May30,1998.
12. Goldar,B. (1986), "Productivity Growth in Indian Industry", Allied Publishers Private Limited ,New Delhi.
13. Goldar,B. (2000), 'Employment Growth in Organized Manufacturing in India", Economic and Political Weekly, Vol.35, no.14,April pp1-7.
14. Gupta, A., 1999. Making Indian agriculture more knowledge intensive and competitive: the case of intellectual property rights. Indian Journal of Agricultural Economics 54 (3), 342– 369 (July–September).
15. Gupta, S. and Bawa R.S. (2006), 'Growth Performance of Small Scale Industry in Punjab: A Comparative Study of Pre Liberalisation and Liberalisation Periods', *Apeejay Journal of Management and Technology*, Vol. 1, No. 1, pp. 50-55, January 2006.
16. Griliches Z, Mairess J, Productivity and R&D at the firm level. Z. Griliches(Ed.)R and D, patents and productivity,Chicago,University of Chicago Press(1990).
17. Hall Jeremy, Matos Stelvia, Lang ford Cooper H, (2008), 'Social Exclusion and Transgenic Technology: The Case of Brazilian Agriculture' Journal of Business Ethics (2008) 77:45–63
18. Hassan Arif, Hashim Junaidah, Ismail Ahmad Zaki Hj (2006) 'Human Resource Development Practices as Department of HRD Climate and Quality Orientation', Journal of European Industrial Training, Vol. 30, No. 1, pp 4-18.
19. Holbeche, L.(1998) 'High Flyers and Succession Planning in Changing Organizations', Journal of European Training, Vol. 24, No. 2/3/4, pp 65-93.
20. Idris (2002) 'Intellectual Property: A Power Tool for Economic Growth', World Intellectual Property Organization, Geneva, Switzerland.
21. Kaur M. and Kiran,R. (2008) 'Indian Manufacturing Sector: Growth and Productivity under the New Policy Regime', Global Economy & Finance Journal Vol.1 No.1, pp 66-78.
22. Kiran, R and Kaur M(2007) 'Is Liberalisation associated with higher productivity ? A case study of Punjab Manufacturing', The Journal of Business Perspective Vol.11, No. 4,October-December, 2007.
23. Kiran, R (1998) 'Dynamics of Productivity in Indian Manufacturing Industries' Thessis submitted in Dept. Of SOMSS, Thapar Institute of Engineering and Technology, Patiala.
24. Kavida, V and Sivakoumar, N. (2008) 'Intellectual Property Rights – The New Wealth of Knowledge Economy: An Indian Perspective', SSRN-id 1159080.
25. Khamba, J.S and Singh, T.P (2001) 'Flexible Management of New Technology', Global Journal of Flexible Systems Management, Vol. 2, No. 4, pp.41-53.
26. Koning, John W. (1998), 'Three Other R's: Recognition, Reward and Resentment', Research Technology Management, Vol. 31, No. 4, pp. 19-46.
27. Lee K R, The Sources of Capital Goods Innovation: The Role of User Firms in Japan and Korea. Amsterdam: Harwood Academic Publishers 2007.
28. Maskus, K.E. (2000) Globalization and the Economics of Intellectual Property Rights: Dancing the Dual Distortion. Intellectual Property Rights in the Global Economy. Washington, DC: Institute for International Economics.
29. Mehta, S. S.(1980) Productivity, Production Function and Technical Change, New Delhi: Concept Publishing Company.
30. Mei-Fang Chen, Jin-Li Hu, Cherng G. Ding (2005) Efficiency and productivity of Taiwan's biotech industry, International Journal of Biotechnology 2005 - Vol. 7, No.4 pp. 307 – 322.
31. Moran, K., 2000. Bioprospecting lessons from Benefit-sharing experiences. International Journal of Biotechnology 2 (1– 3), 132– 144.
32. Narain, Rakesh, R.C Yadav and Antony Jiju (2004), 'Productivity gains from flexible manufacturing: Experiences from India', International Journal of Productivity and Performance Management, Vol. 53, No. 2, pp 109 – 128.
33. N. Lalitha (2004), "Diffusion of agricultural biotechnology and intellectual property rights: emerging issues in India", Ecological Economics 49 (2004), pp 187– 198.
34. Penrose, E., 1951. The Economics of the International Patent System. Policies Relating to Technology of the Countries of the Andean Pact: Their Foundations. UNCTAD, Johns Hopkins Press.
35. Pineda, Clemente Forero (2006), The impact of stronger intellectual property rights on science and technology in developing countries", Research Policy 35 (2006), pp 808–824.
36. Scherer FM, Innovation and Growth: Schumpeterian perspectives, MIT Press, Cambridge, Mass,1983.
37. Sethi, A.P.S, Khamba, J. S, Sushil and Kiran, Ravi (2007), 'Linkages of Technology Adoption and Adaptation with Technological capability, flexibility and success of AMT, Global journal of Systems Management, vol.8, No.3, pp 27-40.
38. Sheel, Carlos (2002), 'Knowledge Clusters of Technological Innovation', 'Journal of Knowledge management', Vol. 6, No. 4, pp. 356-367.

39. Singh, L. (1987), 'Productivity Trends and Factor Substitutability in Punjab Industry', *The Indian Journal of Economics*, Vol. 67, Part III, No. 266, January.
40. Singh, F. (2004), 'Economic Reforms and its Impact on Productivity Growth of Manufacturing Sector - A Case Study of Punjab' A dissertation submitted to Punjabi University, Department of Correspondence Courses, Punjabi University, Patiala, Punjab.
41. Singh, I. , Kiran R & Kaur M (2007), 'New Policy Regime and Productivity Growth of Manufacturing Sector in India', Produtivity-A Quaterly Journal of the National Productivity Council,Vol.48, December2007, No.3
42. Smyth Stuart, Phillips Peter W.B., Kerr W.A., 'Managing Liabilities arising from Agricultural Biotechnology', Regulating Agricultural Biotechnology: Economics and Policy.
43. Trivedi, P, Prakash, A and Sinate, D. (2000), 'Productivity in Major Manufacturing Industries in India:1973-74 to 1997-98, 'Development Research Group Study no.20, Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai.
44. Unel,B.(2003), 'Productivity Trends in India,s Manufacturing Sector in the last Two Decades'. IMF working paper WP/03/02.

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Total Quality Management in Higher Education: Defenders, Opponents, and Attempts for Modifications

By Iman Rabah

EdD: Management, United Arab Emirates

Abstract- The purpose of this paper is to clearly present TQM principles and characteristics initiated by TQM founders and to review the literature that witnesses TQM success as well as failure in higher education and attempts to modify the TQM model to fit the higher education context. The higher education total quality management model and its impact on the university including professional autonomy and scholarly activities are examined in order to study its positive and negative effects.In order to understand TQM principles and its applicability or inapplicability to the higher education context, the TQM principles are studied as developed by the main TQM scholars. The founders of TQM basically initiated it in manufacturing, yet this paper studies this literature in order to give a comprehensive picture of TQM so as to make its principles clear for the sake of studying its implementation in higher education.

Keywords: higher education, total quality management (TQM), TQM founders, TQM defenders, TQM opponent, TQM modification.

GJMBR - A Classification : JEL Code: M10

Strictly as per the compliance and regulations of:

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Keywords: higher education, total quality management (TQM), TQM founders, TQM defenders, TQM opponent, TQM modification.

I. Introduction

Some scholars argue that TQM can be taken from the business sector and be implemented in the same way in higher education. For example, Tuttle (1994) argues that the same reasons that led industry and the government which were using old management systems that cannot work in this changing and competitive world also led education to adopt TQM. On the other hand, TQM opponents like Kosh (2004) conducted a study 10 years after Tuttle's which insists that TQM did not work in higher education and was just a fad whose time had passed very quickly because it does not take the intellectual property into consideration.This paper is divided into four sections. Firstly, it presents the literature of the founders of TQM including Crosby (1979), Deming (1966; 1986; 2000), Feigenbaum (1961), Imai (1986; 1996; 1997), Ishikawa (1985; 1990), Juran (1995; 1999; 2004), and Taguchi (1997). Secondly, it views the literature of scholars who argue that TQM can be implemented in higher education like Aly and Akpovi (2001), Antony and Preece (2002), Kluse (2009), Moon and Smith (1998), Roettger, Roettger and Walugembe (2007), and Sousa (2006). Thirdly, it discusses the reasons that made other scholars argue that TQM cannot suit higher education especially in the academic department like Brown and Koenig (1993), Entin (1993),Kosh (2003), Mehralizadeh and Safaeemoghaddam (2009), and Sirvanci (2004). Finally, it discusses the arguments of some scholars about the need to modify the TQM model to fit the higher education context like Bailey and Bennett (1996), Ensby and Mahmoodi (1997),McCulloch (1993), Padro (2009), and Stensaker (2008).

a) Founders of the Total Quality Management Principles

The TQM movement started prior to World War II in order to achieve quality as an outcome of organized processes of planning and implementation. The quality movement was based on Deming's Plan-Do-Check-Act Shewhart cycle, his fourteen points, and Juran's Trilogy of quality control, quality plan, and quality improvement (Deming, 2000; Juran 1999). The quality leading experts Deming andJuran helped Japanese businessmen to pursue quality in 1950 and 1954 (Flores-Molina, 2011). Quality concepts were first implemented in the manufacturing industry in Japan using data and statistical quality control. Another expert of quality management is Ishikawa who used the seven quality tools that can be used at the shop floor level (Ishikawa, 1985), Ishikawa also introduced quality circles that included operators and engineers, and this was successful in manufacturing organizations in Japan. According to Imai (1997, p. 43), total quality management requires its own culture where people understand it and gain the required skills gradually over time and this should be done through the Japanese GembaKeizen concept. 'Gemba' in Japanese means 'the workplace' and 'Keizen' means 'continuous improvement,' which is a method of management based on changing one thing at a time (Imai, 1997, p. 43). On the other hand, according to the theorists Jary and Parker (1994), changing one thing has a minor impact on everything when assuming a machine system rather that a human 'system' that is interconnected and interdependent. In fact, the terms Total Quality Control, Total Quality Management, and Quality Systems were

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coined by Feigenbaum who moved the quality concept from technical methods into a business management strategy (Feigenbaum, 1961).As a result some service companies, marketing, sales, logistics, and customer service agencies adopted the total quality management model. International Quality awards like ISO 9000, The European Foundation for Quality Management (EFQM) and Baldridge Malcolm National Quality Award (MBNQA), Six Sigma, and Eight Sigma were extended from manufacturing and service organizations to the government sector, and then moved on to other public organizations like healthcare and education (Evans and Lindsay, 2005). Some public organizations and universities modified this model in order to suit them by doing things like changing the concept of customers and clients to stakeholders as this involves a wider focus of good performance (Evans and Lindsay, 2005).

TQM originally started in Japan and was developed gradually in the U.S.and other countries through its main scholars: Crosby (1979), Deming (1966; 1986; 2000), Feigenbaum (1961), Imai (1986; 1996; 1997), Ishikawa (1985; 1990), Juran (1995; 1999; 2004), Taguchi (1997).

William Edwards Deming was an American consultant, lecturer, author, professor, and statistician (Andrea, 1992). He is best known for the 'plan-do-check-act' cycle that was named as Deming's cycle (Harold, 1993). From 1950 onwards he moved to Japan as a consultant who taught top managers how to improve sales, testing, products' quality, services, and design through quality control and statistical methods (Virginia, 1993). Deming is known as the man who had the greatest impact on Japan's business and manufacturing, he contributed to its economic power and to the high quality of its products (Harold 1993). It took a long time for Deming to win recognition in his home country even though he was considered a hero in Japan (Virginia, 1993). Deming was awarded the National Medal of Technology by President Reagan in 1987, and received the 'Distinguished Career in Science Award' from the National Academy of Science in 1988 (Andrea, 1992). According to Deming's philosophy, when organizations adopt appropriate principles of management, they can reduce litigation, staff attrition, rework, and waste and therefore cost, and as a result they simultaneously increase quality and customer loyalty (Deming, 1986). Deming argues that the key is continuous improvement and viewing manufacturing as a system instead of bits and pieces (Deming, 1966). In 1970 Deming's Japanese proponents summarized his philosophy through a comparison of 'A' versus 'B', A: when organizations and people focus mainly on quality defined as quality =results of work efforts/total costs- quality increases and cost decreases. B: when organizations and people focus mainly on costs- quality decreases and cost increases (Andrea, 1992).

According to Deming (1986), each manager should have a system of profound knowledge as summarized in four points in Table 1.

Table 1 : Deming's System of Profound Knowledge (Deming 2000)

Deming's System of Profound Knowledge			
Appreciation for a system	**Understanding variation**	**Theory of knowledge**	**Psychology**
Most organizational processes are cross-functional Parts of a system must work together Every system must have a purpose Management must optimize the system as a whole	Any process includes various sources of uncontrollable variation Many variations cause product failures, unnecessary costs, and unhappy customers Statistical methods lead to improvement through identification and quantification of variation.	Knowledge cannot exist without theory Experience describes but does not establish a theory Cause-and-effect relationships are shown through theory and can be used for prediction	People are motivated intrinsically and extrinsically; intrinsic motivation is the most powerful Fear is de-motivating Managers should develop joy and pride in work

Deming's (2000) system of profound knowledge is the foundation of his popular 14 points in quality management for managers in order to run an effective business. Deming does not use the term 'total quality management', yet those 14 points were considered to be the launch of the total quality management movement (Antony and Preece, 2002; Evans and Lindsay, 2005). They are summarized below in Table 2.

Deming's 14 points	
Point 1	Create and publish a company mission statement and commit to it.
Point 2	Learn the new philosophy.
Point 3	Understand the purpose of inspection.
Point 4	End business practices driven by price alone.
Point 5	Constantly improve system of production and service.
Point 6	Institute training.
Point 7	Teach and institute leadership.
Point 8	Drive out fear and create trust.
Point 9	Optimize team and individual efforts.
Point 10	Eliminate exhortations for work force.
Point 11	Eliminate numerical quotas and ' Management by Objective' (MBO), focus on improvement.
Point 12	Remove barriers that rob people of pride of workmanship.
Point 13	Encourage education and self-improvement.
Point 14	Take action to accomplish the transformation

Table 2 : The 14 points of Deming (Deming, 2000)

The second scholar who assisted in the foundation of TQM is Joseph Moses Juran who was a management engineer and consultant recognized as an evangelist for quality management and quality improvement (Debbie, 2004; Nick, 2008; Selden, 1997). His quality management philosophy is known as Juran's Quality Trilogy and consists of quality planning, quality control, and quality improvement (Juran, 1995). Quality planning is the phase of meeting customers' needs through developing the required process and products, and in this phase goals and the means to reach the goals are set (Juran, 1999). Quality control is the phase where plans are executed and operations are monitored in order to detect variation between goals and actual performance (Juran 2004). Quality improvement is the last phase and consists of the improvement of planning and performance in order to fill in any gaps between goals and actual performance (Juran, 2004). Figure 1summarizes the three phases.

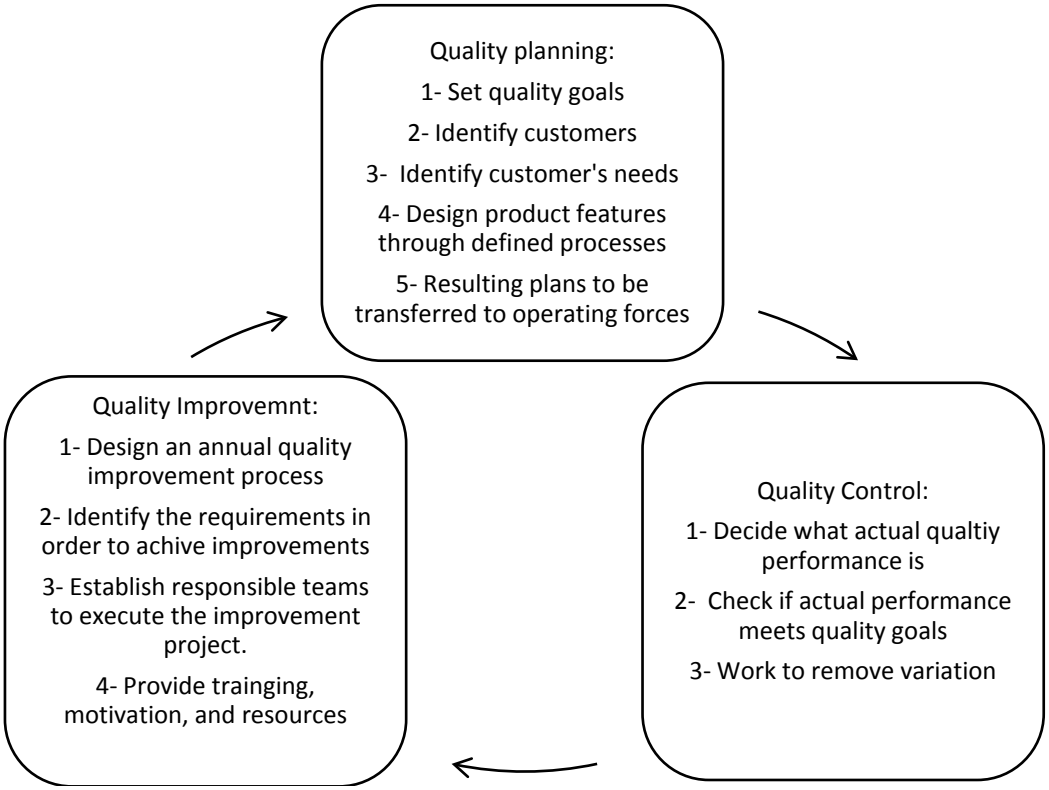

Figure 1: Phases of Juran's Trilogy

Philip Bayard Crosby is also one of the main scholars who developed the concept of quality and quality management (Bill, 1994). He was an author and businessman who contributed to the quality management practices and management theories through his concept of 'zero defects' (William, 1993). '*Quality is Free*' is the first book that Crosby published in 1979 based on the idea that organizations establishing a quality program save returns of more than what they pay off as cost for the quality program. It was very popular during the 1980s because of the crisis of North American quality where Japanese manufactures were taking North America's market shares between the 1970s and 1980s due to the better quality of Japanese products. Crosby (1979) responded with his principle of 'doing it right the first time' which consists of four major elements:

- Quality is defined as conformance to customer and product's requirements.
- Quality is prevention
- The standard to performance relative to requirements is zero defects
- The price of non-conformance is the measurement of quality.

Masaaki Imai is a Japanese quality management consultant known as the 'Learn Guru' and the continuous improvement father. Imai is the founder of 'kaizen,' who defines it as "a problem-solving process"(Imai 1997, p. xvi). According to Imai (1997), the kaizen strategy starts and ends with people, and 'kaizen' is a culture of sustained continuous improvement, it is a systematic approach to identify, reduce and/or eliminate 'muda', 'mura' and 'muri'. Kaizen is a Japanese word that consists of kai, which means change and zen which means good-for the better, giving Kaizen which means continuous improvement. Therefore, 'kaizen' means improvement/change for the better in personal life, home life, social life and working life and this change has to be continuous. Imai (1997) uses another Japanese word, 'gemba,' meaning the real place, which is the work place or the work environment. Gemba Kaizen means continuous improvement in the work place. 'Muda' is any wasteful activity or obstruction to the smooth flow of an activity, 'mura' is inconsistencies in the system, and 'muri' is physical strain (Imai, 1997). Gemba Kaizen simply means a process of continuously identifying, reducing, and eliminating muda, mura and muri (3 Mu) from the Gemba.

Kaizen is a daily activity that goes beyond simple productivity and improvement. It is a process that can humanize the workplace and eliminates overly hard work (both mental and physical) "muri" (Imai, 1986).The concept of kaizen covers all areas in the workplace:

improving the work environment by making it more efficient and effective, creating a teamwork atmosphere, and improving everyday procedures, employee satisfaction, and job fulfilment (Imai, 1997). The key objectives of kaizen's philosophy are: eliminating waste, quality control, just-in-time delivery, standardized work and the use of efficient equipment (Imai, 1997). Kaizen methodology includes making changes and monitoring results and adjusting, and Imai (1997) suggests replacing large-scale pre-planning and extensive project scheduling by smaller experiments that can be adapted immediately as new improvements. Kaizen "covers many of the management techniques…including quality circles, total quality control, total productive maintenance, suggestion systems, just-in-time productivity improvement, robotics and automation" (Wittenburg 1994,p.14). Kaizen supports process-oriented thinking by directing management to focus on establishing reliable processes since it is considered that good results follow automatically (Kruger, 1996).Imai (1997) describes gemba as a place for "value adding activities that satisfy the customer" (p. 16). According to Imai (1996), the 'golden rules of gemba kaizen' are:

- Go to gemba when a problem arises
- Take temporary countermeasures on the spot
- Find the root cause of the problem
- Standardize to prevent recurrence.

Feigenbaum is the scholar who devised the concept of total quality control and then developed it into total quality management (Bill, 1994). According to Feigenbaum (1961), total quality control is a system of quality development, maintenance, and improvement to provide products and services that meet customer's satisfaction at the most economical levels. He argues that a lot of extra work has to be done in order to correct a mistake, which is why quality should be everyone's job, resulting in it being nobody's job if it becomes the standard that everybody works for. According to Feigenbaum and Donald (2009), there are three steps to quality:

- First, focusing on planning through quality leadership
- Second, the entire workforce involved in modern quality technology
- Third, continuous training and motivation supporting organizational commitment.

Kaoru Ishikawa was a Japanese professor in higher education and an innovator in quality management who was famously known in the U.S for the Ishikawa diagram, also known as the cause and effect diagram or fish-bone that is used in industrial processes analysis (Donald, 1988; Yoshio, 1994) (See Figure 2). In addition to product design, this diagram is commonly used for the prevention of quality defects in order to identify potential causes for a specific effect in which each cause of variation is a reason for imperfection and where factors of management, environment, material, people, processes, and equipment cause the problem and sub-causes are connected by smaller arrows to major causes (Ishikawa, 1985). Ishikawa is also known for developing the quality circle, which is a group of volunteers like workers or students who have a team leader or a supervisor (Ishikawa, 1985). After being trained their job is to identify, analyze and solve problems related to their work (Ishikawa, 1985). Those solutions should be presented to their managers for the sake of improving performance and enriching the work and motivation until they become mature and self-managing after gaining management confidence (Ishikawa, 1985). The term quality circle is derived from Deming's 'plan-do-check-act' cycle (Greg, 2004). Quality circles are free to discuss any topic other than members' salaries or topics related to work terms and conditions (Ishikawa, 1985). Quality circles have a continuous responsibility and they keep moving from one project to another (Ishikawa, 1990). Ishikawa had an important role in developing Japanese quality strategies; he influenced participative approaches that involve all employees and advocated using simple statistical techniques and visual tools (Greg, 2004).

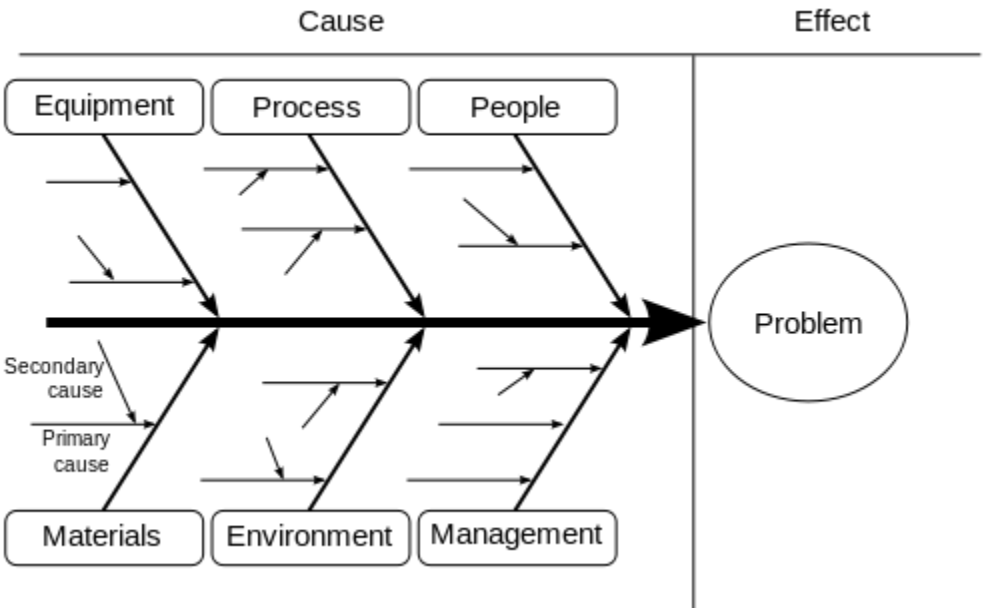

Figure 2 : Ishikawa fishbone diagram (Ishikawa, 1990, p.81)

Genichi Taguchi was a statistician and an engineer, and he contributed to the improvement of the quality of manufacturing through applying a statistical methodology in studying products variation from the standard requirements (Harrison, 1997). His methodology was mostly helpful in controlling quality in manufacturing (Paul, 1997). A new perspective on quality was pioneered by Taguchi focusing on the economic value of reducing variation, being on target, and dispelling the traditional view of conformance to specifications.

Deming's 'plan-do-check-act' cycle, system of profound knowledge and his 14 points and all the TQM principles that were developed by the rest of the TQM main authors started in manufacturing but was then implemented in other sectors like the service sector, healthcare and education. In some cases it witnessed success, and in other cases it failed, and this positions scholars in this realm in two different groups: those who advocate it and those who consider it a failure.

b) Defenders of Total Quality Management in Higher Education

Some scholars argue that TQM can be implemented in both administrative and academic departments in higher education. Moon and Smith (1998) consider that TQM can be implemented in any public organization including higher education in all departments. They found that it was successfully applied in two public organizations in the UK: Her Majesty's Custom and Excise and the Benefit's Agency. These two cases are government administration departments where improvements had taken place such as reducing waiting and answering call times, but the study does not include any successful evidence in academic departments in universities.

Antony and Preece (2002) argue that TQM is continuous improvement through self-assessment, where performance is compared to an excellence model to find gaps and ways for their suitable bridging and this can be implemented in higher education. It is important to point out that academic freedom is essential for professors as in order to approach any course from a variety of directions and tailor their courses and teaching to students; a professor has to use foundational principles that are applied differently in each case rather than replicable practices (Deem, 1998). Professors who teach in the same way and deliver the same lectures provide minimal opportunity for students to learn (Roettger, Roettger and Walugembe, 2007, p. 126). Sousa (2006) points out that there is no one type of best teaching, but it is essential to incorporate different approaches in teaching for optimal learning.Aly and Akpovi (2001) support the use of TQM in universities and argue that a lack of leadership and resources to encourage continuous improvement causes TQM to fail in academic departments. In their case study of TQM practices in the University of California (UC) and California State University (CSU), questionnaires were sent to the two university campuses to both administrative and academic managers to check on TQM programs offered by their schools. Half of both universities used TQM concepts, and seventy six percent of them reported that they are using them in the administrative departments only (Aly and Akpovi, 2001). The study results also indicate that academic institutes use TQM in administration, which is easier than academic departments because some processes may

be the same. Ali and Akpovi demonstrated those administrative processes, staff morale, teamwork, the quality of the programand personnel hiring improved when the universities adopted TQM principles. It should be noted that programmes are designed only by scholars qualified in the disciplines and they have to reflect lavational interests of the university as well as the particular expertise of those in a discipline who happen to be there. The universities implemented TQM radically through reengineering where TQM was dramatically challenged because of staff and faculty resistance in academic departments, and this would be one reason that hindered TQM from developing in the academic departments and demonstrates the need to modify the TQM model in order for it to be successful in higher education.

According to Green (1994), there are two basic dimensions that should be assessed in higher education: producing graduates who meet the human resource needs of organizations and enhancing knowledge through research. Green (1994) accepts the importanceof teaching and research in higher education, however he refers to assessing those essential values in higher education while ignoring the difficulty of assessment in this human system context and limiting the role of graduates to being university products. Green (1994) defends the implementation of TQM in higher education explaining that quality was internal in the past, however the concern about efficiency, quality, and accountability is growing and TQM control and assessment can serve the quality of higher education. Indisputably, Green (1994) does not take into consideration the uniqueness of higher education and that fact that its body is constituted of professionals who can self-assess the quality of their performance in teaching and who are in a continuous improvement process through creating knowledge when they conduct research.

Some scholars argue that TQM can be implemented in any organization, including higher education. Pike and Barnes (1996, p. 24) defines TQM by stating: TQM is a way of managing to improve the effectiveness, flexibility and competitiveness of a business as a whole. It applies just as much to service industries as it does to manufacturing. It involves whole companies getting organized in every department, every activity and every single person at every level.

TQM is a phrase that can be broken down into three terms: "Total," which reflects everyone's involvement; "quality," which implies meeting customers' requirements; and "management," reflecting the commitment of senior management (Witcher, 1990).In 1999 there were four higher education institutes out of fifty-one in Malaysia surveyed in a study by Kanji and Malek (1999) that implemented TQM. The results show that TQM success factors like teamwork, leadership and continuous improvement influenced the four institutes' performance and led to business excellence, but it is not clearly stated in Kanji and Malek's article how those factors caused a successful TQM, and especially how some professors can do research individually and teach using their own ways and methods.Montano and Utter (1999, p. 57) argue that: "While implementing TQM and quality improvements endeavours at educational institutions can be difficult at best, the results can be extremely beneficial for all involved." However, Montano and Utter (1999) advocate TQM in teaching and research ignoring the learning theory and different scholarly styles. "According to the socio-cultural theory of learning, mental processes are actions that cannotbe separated from the environment where they are performed" (Roettger and Roettger and Walugembe, 2007, p. 128).

According to Schargel (1996) TQM is a very successful management system that should not be applied from the business sector to higher education only as it should also start in schools. Based on results from an empirical study, he argues that TQM helps in creating well-educated students and thus a well skilled work force that will thrive when they work in industry; otherwise they need to be trained and educated in their workplaces that cost billions of dollars. His study is a case analysis of initiating the 'Westinghouse Education Quality Initiative' in the 'George Westinghouse Vocational and Technical High School', which introduced a TQM program. The school had many problems including high-aged teachers, entry students with poor math and reading skills and high rates of failure. Schargel (1996) explains how TQM was introduced to the high school through training a group of voluntary teachers about the TQM model and then writing down a mission, choosing a quality steering committee and a quality coordinator. The first target was increasing the morale of staff through choosing a staff member to be recognized every month by writing up his/her name on a bulletin board for everyone to see (Schargel, 1996).Since this practise is similar to giving young children stars on their work, scholars and academics are cynical about this kind of activity, as it is not based on scholarly practices and standards. Schargel (1996) explains that the philosophy of TQM was also introduced to students and a class of children was chosen as a quality leader who used to meet with the principal every month to discuss students' improvements and last year students were assisting their peers in the first year where dropout rates dwindled. The improvements included more extra-curricular activities, more parents attending parent-teacher meetings and more students were able to graduate and join colleges, and intrinsic motivation for students to be knowledgeable people was created (Schargel, 1996). The 'George Westinghouse Vocational and Technical High School' was the only vocational high school and one of only six high schools to receive a grant for an employment office.Schargel (1996) argues

that TQM can be implemented in all education institutes as a complete model, where it is a never-ending process that will embrace more and more TQM principles.This case study shows some quantitative measures as evidence of the improved results, yet some TQM concepts such as how to measure continuous assessment were not mentioned.

Although during the 1990s there are more studies that advocate TQM in higher education, there are some scholars who still defend TQM and consider that it could be implemented exactly the same way as in business without any modification. Sirvanci (2004) claims that a secondary student enrolling in higher education should be considered the same as raw material that goes through the production process from one step to another. From a very commercial point of view he argues that a student passes from one course to another in order to gain his degree, which is a similar process to the brand that a product in manufacturing is labelled with, and therefore the student goes to the workplace and competes with other peers among employers in same way as any competing product in the market. This is anoversimplification of the learning process, and in fact it leaves out most of it; he excludes student input, personality, communication impact, knowledge, and personal development. The student's role is learning through an active and cooperative way in order to solve illustrated problems and professors coach, facilitate and guide this action (Roettger and Roettger and Walugembe, 2007, p. 129). When the Baldridge Education award was developed in the 1990s in the U.S it focused on 'student satisfaction' and although the term 'customer' was not used by its criteria, the student was treated as a customer. In 2002 changes were made to the award's criteria where 'student learning results' became the main focus of the award (Sirvanci, 2004). Sirvanci (2004) considers that this change was due to awareness of the student being considered as a product and not a customer. He considers that a student is a customer only when he/she graduates and donates as alumni, however he insists that the student is a product, and employers hiring graduates from the same university reveal repeated purchase. This debate is unacceptable since it is a reduction of the human being and its complex development, ideas, and motivations. This change in the Malcolm Baldridge National Quality Award criteria is not necessarily intended to change a student's position from a customer to a product but the focus on the 'student learning outcome would embrace quality teaching and thus knowledgeable students. Sirvanci (2004) identifies some challenges that face TQM in non-profit organizations like higher education such as customer identification, leadership, organizational and cultural issues, the role of the student, and performance measures.

Focusing on leadership like Aly and Akpovi (2001) and Kluse (2009), Sirvanci argues that presidents and chancellors of higher education institutes are unlike CEOs in business organizations as they have less authority in their positions, and this holds them back from taking decisions to change the environment of their organizations in both the administrative and academic departments into a TQM culture. In addition to leadership, Sirvanci (2004) argues that there are three more reasons that hinder TQM in higher education: old traditions, faculty interest, and lack of team spirit. He states that old traditions that have been built in education have deep roots that prevent change, especially changing the whole culture to apply TQM. In fact, old traditions are not always negative, and TQM would not be better in higher education. Sirvanci (2004) argues that faculty members are product focused on research more than market focused on students' preparation to meet employers' requirements. Sirvanci (2004) considers that the problem is in higher education since it prevents the successful implementation of TQM and discusses education using business terms, however faculty members are not product focused and are instead research and publications focused. According to Sirvanci, team spirit is hard to achieve in higher education since departments compete with each other for university resources, and this creates an extra challenge for TQM implementation. In fact, this is only partly true since research funds usually come from external sources and professors in a department do not all do the same thing as they have different specialisations and different teaching styles. It is the variety and exposure to difference that is important at the academic level, not all getting the same thing. "It is important for the university professor to be acquainted with basic information about thehuman brain and to understand the processes involved in learning in order to better facilitatethe learning experience for all students" (Roettger and Roettger and Walugembe, 2007, p. 126).

Sohail, Rajadurai, and Rahman (2008) provide a case study of Pahang State College of Professional Development in the US about implementing quality management in higher education through the total quality management model. They try to prove that through their study and the replies they got from staff TQM empowered staff and helped to improve their practices from their own points of view. Their study aims at providing a benchmark for adopting TQM in higher education in order for other universities to improve the way they manage staff to motivate them. Although it is qualitative based on the emergent design, the position of the study was presented in the introduction, which shows TQM as a successful model that helps universities improve their staff performance and thus their programs and the way they are delivered. Indisputably, the discussion was only limited to the positive side of quality management. The authors

discuss the implementation of TQM in one university in the US and generalize conclusions on all universities in the world. The paper used qualitative methods in collecting information through a survey, including open-ended questions for students to check their satisfaction with quality, but the study doesn't include faculty, and conclusions were based solely on a sample of students. The findings are based on the findings of a case study about a training institute, which is not the right scope and sample to conclude results and recommend practices in higher education in general.

Taylor and Braddock (2007) looked at some theoretical and methodological matters in international university ranking systems and ideas through a conceptual interpretation of two systems that they consider to be the best in the world: Times Higher Education Supplement World University Ranking and the Shanghai Jiao Tong Academic Ranking of World Universities. The study concludes that although the Jiao Tong is not perfect it is better than the Times Higher Education Supplement since it includes more aspects in evaluating universities, and based onits criteria they suggest how a ranking system should be formatted. Through qualitative analysis the study examines the criteria of each of the two ranking systems by comparing them to conclude the ideal system would be. In the research statement the outcome is included, which is to find the best ranking system, and the purpose of the study is embraced within the discussion throughout the research ,which intends to find an ideal criterion for university excellence. Taylor and Braddock (2007) argue that even if a system is not perfect; there will always be advantages and good points to be benchmarked for university excellence. Nevertheless, the study sampling is limited to two ranking systems and some strength in other systems would have been ignored like continuous improvement in the Malcolm Baldridge National Quality Award. The paper suggests modification to the Jiao Tong ranking system through placing more emphasis on teaching and research as the basic finding of the intended purpose.

Ahmad and Hamdoon (2006) study the obstacles and challenges of implementing TQM in UAE higher education through a case study of Sharjah University. The purpose of the paper is to show the importance of TQM and to discover the problems that hinder its implementation in higher education. The paper refers to a lot of literature about TQM, including western and Arab scholars' research, which is valuable in highlighting different views on quality at a time when few papers included Arabic literature in this field. On the other hand, the paper covers research with positive results of TQM and ignores the opinion of TQM opponents. Using qualitative analysis, the paper discusses problems of TQM implementation in Sharjah University. A survey was conducted using a multiple part questionnaire, and the results show that all staff, faculty, and students support TQM implementation but that their knowledge of TQM is simplistic. These results contradict many other studies (e.g., Brown and Koenig, 1993; Entin, 1993; Kosh, 2003) that show that faculty have negative attitudes of TQM. The reason may be the small sample used or the lack of information about TQM as Ahmad and Hamdoon mentioned, although the researcher should make sure that the participants are aware and knowledgeable of the questionnaire's approach when they are giving input about it.The conclusion of this article recommends TQM implementation in UAE higher education, although the paper does not place enough emphasis on the Arab culture to adopt TQM in higher education.

Other studies about quality management in higher education include Brown and Marchal (2008). They present a study of a higher education nursing department at the University of Virginia that initiates the continuous quality improvement framework to improve its programs. The nursing department decided that continuous quality improvement should be applied through three main goals to be achieved: student satisfaction with advisement, students' satisfaction with the program, and raise of pass average and work to achieve the goals through Deming's (plan- do- check-act) model. The study uses a fish bone diagram to present what the department found to be affecting its program, concluding that continuous quality improvement takes place when an action is needed to solve a failure problem like student's dissatisfaction or student's risk to fail or to meet accreditation requirements. Although the continuous quality improvement framework was initiated and studied by faculty it still wanted to achieve goals that may be political, which are considered essential in order for organizations to survive. In fact, this contradicts Deming's idea since his (plan- do- check-act) cycle is a continuous process for continuous improvement.

Zeitz (1996) studies employees' attitudes about implementing TQM in a regional office of the US Environmental Protection Agency. About a dozen interviews were conducted and 448 questionnaires were administered. The study found that: "Contrary to previous literature, clerical and managerial employees were most favourable toward the TQM program, whereas professionals were most negative" (Zeitz, 1996, p. 120). The study suggests that the reason for this could be because professionals had little direct rewards and more work from the implementation of the TQM process, and also because the agency hadn't started using TQM to simplify professionals' processes by the time the study was conducted. The study seeks to explain the causes of the attitudes of employees toward TQM through quantitative analysis and objective measurements. Zeitz (1996) addresses the issue of employees' attitudes towards TQM in a public department by defining a set of variables and

procedures to measure them. The variables include perception of measurement support, barriers to implementation, satisfaction with TQM, TQM awareness, training, team experience, intrinsic value, grade, and position (Zeitz, 1996). These variables were measured through a survey of employees in the Environmental Protection Agency regional office. The article presents six hypotheses related to different level of employees and their attitudes toward TQM. For example, hypothesis one states: "Lower to middle level managers will have less favourable view of TQM" (Zeitz, 1996, p. 122) is based on a literature review of Deming and Carr Littman who concluded that lower and middle managers mostly resist TQM programs. A theoretical framework guides the analysis and proposes that there is causal direction between its factors. Information comes from the whole population of the Environmental Protection Agency regional office. Zeitz (1996) reports ample information about the research measures, which helps scholars studying public administration to progress in the practice and theory of research in this topic. A deep understanding of the measurement approach is revealed which provides confidence in the research results. Zeitz (1996) uses two data collection methods: interviews and questionnaires. In most of the cases chi-square is used as a test, where employees are categorized based on their position at work and attitudes towards TQM.

Anyamele (2005) discusses the importance of leadership in developing and maintaining a quality management system in Finnish higher education. His study found that quality management helps higher education institutes to be learning organizations and cope with changes in the world. The scope focuses on educational managers (administrative and academic) in Finnish higher education organizations. The research is qualitative and Anyamele used a questionnaire with open-ended questions based on the EFQM criteria that was sent to different leaders in higher education; 30 replies came back in addition to interviews with five different senior managers in Finnish higher education. The results of the study depend a lot on interviews, although only five were conducted and they focused solely on the positive management characteristics of Finland education. Anyamele's (2005) study concludes that quality management in Finnish higher education institutes is presented through excellence in leadership and serving students who are considered the customers. All stakeholders and the academic community are also considered customers, but the study doesn't show how quality management serves the academic community. Anyamele (2005) used mixed methods in studying TQM as a type of public administration in Finnish higher education. The study focuses on the role of leaders to develop and maintain quality management. It finds that TQM helps universities to adapt to change and become learning organizations. The scope includes senior managers in academic and administrative departments in Finnish higher education institutes. The European Foundation for Quality Management (EFQM) was used as a theoretical frame that was used to construct a questionnaire. The article used quantitative analysis for the data collected from the questionnaires, however the results mainly depend on a qualitative analysis of interviews even though only five interviews with different senior managers were conducted, and these only focused on the strength of Finnish higher education management. Anyamele (2005) concludes that TQM is adopted in universities that have excellent leadership skills, and the findings are similar to some of Zeitz's (1996) findings that show the importance of managers' role in helping employees to have a positive attitude of TQM.

Potocki, Brocato and Popick (1994) conducted a study in Johns Hopkins University, Physics Laboratory Education Centre where the university implements TQM and believes that students should be empowered. Students gave input about the curriculum and course designs and the university asks for their feedback at the end of every class through a semi structured questionnaire consisting of three questions: What helpful aspects did you get from this class? What unhelpful and unclear aspects did you get? Is there any knowledge you learned which you didn't expect? (Potocki, Brocato and Popick, 1994) In this study qualitative methods were used to gather information through interviews and focus groups. During focus group sessions students identified six vital elements that contribute to their learning: challenge, interest, relevance to future jobs, flexibility of projects, knowledgeable instructors, and valuable teamwork. Based on these findings the study advocates TQM and recommends that all universities focus on their students' satisfaction in order for them to thrive, although the study's results were generalized based on a single university in the US.

Carroll et al (2009) studies the quality management system in higher education institutes in Oman. The article is an explanation of quality management requirements introduced by the government, yet it doesn't explain how higher education institutes perform to meet the quality requirements of the ministry of higher education and external accreditation bodies.The paper gives a historical background of higher Education in Oman and then an explanation of the Oman Quality Plan. The Oman Accreditation Council required all universities to get accredited locally in order to guarantee a standard quality that fits the local Arabic and Muslim needs. The historical background is well structured as it gives us a picture of the development of quality awareness in Oman. The paper concludes that the key success factors of quality management are benchmarking and the involvement of various stakeholders. This study gives a picture of the quality management in Oman introduced and forced by the

government. It is more about the requirements for a foreign university in order to export its programs to Oman than the quality management in the organization. The effectiveness of this paper is questioned since Carroll et al elaborates on how quality management was introduced to Oman universities from the governmental side where quality equals accreditation requirements, and this contradicts a lot of literature in quality management.

Reavill (1998) argues that there are 12 stakeholders in higher education and the quality assessment of higher education in the UK such as the Higher Education Funding Council of England, Scotland, and Wales does not cover all stakeholders' needs even though it contributed a lot to the quality of higher education. According to him the customer is clearly identified as the employer purchasing the output of higher education. He considers that the student is neither a customer nor a product, but is instead a stakeholder. To him, the 12 stakeholders are: students, employers, families and dependants of students, employees in the university, the university, university's suppliers of goods and services, secondary education schools, other universities, industry, nation, government, tax payers, and professional bodies. They are all stakeholders because they either pay for the university or benefit from it, or both at the same time. He argues that it is hard to prioritize them but the first four are the most important. The problem in Reavill (1998) is the same as in some previous articles discussed above, which is that he is considering education as part of the economical sector and not socio-cultural.

c) *Opponents of Total Quality Management in Higher Education*

Quality management was brought into education in an attempt to improve the quality of life in societies through improving the quality of teaching, quality in the classroom, and the quality in the teaching process (Evans and Lindsay, 2005). However, its application instead reduced the standards because it was not modified to suit educational organizations, there was no plan for the change, and there was a desire to do it fast without making adjustments to fit which were similar to the change from centralized control to a distribution of authority (Ramsden, 1998).

Some scholars argue that there are significant reasons that hinder the success of TQM in higher education. For example, Kosh (2003) argues that TQM has a very small impact on higher education since all of the successful cases were limited to administrative rather than academic departments. One of TQM's basic components is having defined processes and a consistent assessment and measurement of performance with standard processes. Kosh (2003) argues that this cannot be implemented in higher education since standardization in teaching limits professors' innovation in their classes. Professors are sometimes assessed at the end of the semester and with TQM they need to be assessed continuously and maybe on daily basis that is very hard (Kosh, 2003).Teamwork is essential in TQM, and this cannot be achieved in higher education according to Kosh (2003) since committees try to hinder work in higher education more than just getting on with it.

According to Brown and Koenig (1993), the major difficulty of TQM implementation in the academic department is that it gets a lot of resistance from faculty since it causes more committee work and provides less professional benefits. Entin (1993) argues in a study that he conducted on ten colleges and universities in and around Boston that senior management usually have a lot of enthusiasm to implement TQM but faculty resistance creates a huge gap between employers' requirements and academic institutions. Mehralizadeh and Safaeemoghaddam (2010) studied the extent of applying quality management models like TQM, ISO 9000, and EFQM derived from the business sector to higher education institutes in Iran. Mehralizadeh and Safaeemoghaddam (2010, p.177) discuss that new management ideas need to be "socially authorized, theorized, productivised, and progressive, harmonized, dramatized, and individualized". The results of the study are consistent with Brown and Koenig's observations and show that TQM was not socially authorized, especially by higher education institutes, since it requires more committee work and offers less individual benefits for them as scholars and also less freedom. Mehralizadeh and Safaeemoghaddam take the same view as Kosh that TQM works solely in administrative departments and weakens the academic culture that is supposed to be the priority in higher education institutes. Mehralizadeh and Safaeemoghaddam also argue that TQM is not properly theorized for education since it focuses on the process of enrolling students more than what students learn. It also contradicts all educational theories and does not build on the social and culture theories as education cannot be productivised since the outputs are heterogeneous. Mehralizadeh and Safaeemoghaddam also argue that TQM is not harmonized if stakeholders are not all satisfied and treated equally in higher education institutes, and this is reflected in the European Foundation for Quality Award and the Malcolm Baldridge National Quality Award criteria where the importance of different stakeholders is unequal. Mehralizadeh and Safaeemoghaddam also state that TQM is not dramatized since no empirical evidence in their article demonstrated that, and it is not individualized since it does not benefit people at the individual level or at the organizational level and the awards given do not reflect the actual success of TQM in higher education institutes. Mehralizadeh and Safaeemoghaddam use Rovik's model of management

solely and generalize the results to all Iranian higher education institutes, discarding any successful cases of TQM implementation that may have happened in Iran.

Pfeffer and Coote (1991) consider TQM to be a slippery concept since it includes a wide variety of meanings and means different meanings to different people. Wiklund et al (2003) argue that TQM is a vague concept referencing Deming the founder of quality management, and he states:

…the trouble of total quality management, the failure of TQM, you can call it, is that there inno such thing. It is a buzzword. I have never used the term, as it carries no meaning (quoted in Wiklund et al, 2003, p. 99).

Pfeffer and Coote (1991) argue that all definitions given to TQM are not clear, and they consider it as aiming to satisfy both internal and external customers through three components: values, tools, and techniques. For example, quality awards like the Malcolm Baldridge National Quality Award and European Foundation for Quality Management Award are tools that can be used in techniques such as self-assessment by supporting core values like commitment. Pfeffer and Coote (1991) consider that a student is an "active participant" in education and not a customer or a product. In 1995 the National Agency for Higher Education was established in Sweden to guarantee quality management in Swedish universities that had a dramatic increase in students during the 20th century. It focuses on system views and continuous improvements, where universities' assessment consists of two stages, first a self-assessment using the plan, do, check, act cycle of Deming, and then the National Agency's assessment based on criteria adopted from the Malcolm Baldridge National Quality Award and the European Foundation for Quality Management and Swedish Quality Award. In 2001 the National Agency also introduced "the national evaluation for subjects and program" which shifted from processes and systems that are TQM based and focused on what is done instead of how things are done. Wiklund et al (2003) also criticize this assessment because it requires a lot of statistical data that takes a lot of time to collect and which might not be useful after a short period of time. They also recommend engaging students more in the assessment process through involvement and creating commitment in them with new ways that assessments should bring into light what resources are needed. Their study generally criticizes assessment since it diminishes innovation and creativity and encourages future research on university case studies to analyze how assessment is affecting the university's performance.

Houston, Robertson, and Prebble (2008) present a study in the academic department in one of the eight public universities in New Zealand. The paper includes total system intervention as the main approach and its intent is action research using qualitative tools like focus groups and qualitative analysis, but the action research approach wasn't revealed clearly throughout the study. The desired outcome of the study was to discover whether this department is doing the right thing and whether they are doing it right in the programs they offer and their content. The purpose of the study is to give a beneficial report for national improvements of quality management in higher education. The paper constructs its conceptual framework and methodology based on critical systems thinking in which all students' inputs were collected. There were four hundred students in the department and it was impractical to conduct individual interviews as Houston, Robertson, and Prebble explained, and therefore focus groups were done instead. Participants from the entire department were requested to give a meaning for the word quality, which implied potential interventions for improvement and the quality improvements they suggest. The study reveals that quality models like audit processes gave little attention to educational theories, processes, and student learning. The critical systems approach used by the researchers helps in identifying problems, solving them, and offering methods to improve management systems in university departments. In regards to the context of the study, the scope only included a single department of a single university and the results are generalized even though the cases would vary in different universities in New Zealand. The study argues that finding problems helped in solving them but this wasn't represented. Nevertheless, we shouldn't deny that these results would be useful as a beneficial benchmark that will help in quality improvement in the national higher education sector, and thus meet the purpose of this study.

The research statement of Anderson (2006) focuses on finding the reason why academics are against the assessments used by their universities even though they contribute a lot to the quality of teaching and research. The paper is an interpretive study done over a sample of thirty academics from ten universities in Australia. Qualitative methods are used through semi-structured interviews. The study found that "…academics drew on notions of quality as understood within traditional academic discourses of excellence in scholarly endeavour" (Anderson, 2006, p. 171). They consider that in total quality management, quality is conformity with the lowest standards (Anderson, 2006). The study also finds that faculty members consider quality assurance threatening and feel it should be replaced. The study concludes that TQM doesn't work in higher education and generalizes this conclusion to all higher education institutes, although the sample is limited to one country and the cultural aspects of the participants are not mentioned. The findings answered the research question but did not show how this report would be used beneficially for academics or for managers and the problem was illustrated and the

reasons of the problems were discussed but there was no purpose shown to take the finding further and reveal beneficial effects in practice.

d) Arguments about modifying the TQM model in Higher Education

At the same time, between TQM extreme advocates and TQM extreme opponents some scholars suggest using this model in higher education with some amendments in order to suit its context. McCulloch (1993, p.7) considers implementing TQM in higher education if its language is carefully adapted to educational values. McCulloch (1993, p. 8) divides customers of higher education institutes into primary, secondary, and tertiary and states they should be prioritized and served accordingly. McCulloch (1993) argues that TQM encourages teamwork in committees through innovation and incremental change. Evans and Lindsay (2005), consider that when organizations support teamwork all personal initiatives are taken into consideration, which adds value to the processes and leads to continuous improvement. Training is part of TQM, but McCulloch (1993) argues that training for faculty should be substituted by self-development.

Stensaker (2008) summarizes quality assurance processes in universities through an abundant review of quality management literature and then explains the gap between expected and real outcomes in higher education. A new relationship between organizational change and quality assurance is recommended which is the outcome that the paper intended. The outcome and the purpose were not mentioned through a clear research question or statement but were only concluded in the final section. This interpretive study type helped in finding what the paper looked at, but this study was only based on theory where some qualitative methods like interviews and observation were missing.Stensaker is not against quality assurance in higher education but recommends that quality assurance programs should be aware of the gap between the required outcome of quality assurance and facts because quality reports are not used as an improvement process, however they are hindering freedom and innovation among academics. This recommendation reflects the effectiveness of the paper since it highlights a problem that the entire academic sector is suffering from, but it doesn't suggest any practical changes that would improve this situation.

Another example of approaching TQM in higher education is Padro's (2009) interpretive study, which discussed Deming's system of profound knowledge that can help universities change to meet the new accountability requirements they are facing. The paper is a theoretical conceptualization about Deming's profound knowledge system that includes four dimensions of his model. The first dimension is an appreciation for a system that views the organization as a whole integration between students, alumni, faculty, employees and the community, who have one aim as stated by the mission, and this focuses on integration and quality from inside the university, but it is not stated clearly in the article how this would be done. The second dimension is variation in knowledge, where variation is not considered to be a problem since it gives academic freedom and prevents students from being pushed to programs just for political or market needs. Padro supports academic freedom and variation. The third dimension is psychology, which is summarized by awareness of emotional intelligence and building trust. The fourth dimension is theory of knowledge through the plan-do-check-act cycle of Deming, and this reveals Padro's support for the idea of assessment in education. In addition to those four dimensions Padro added two more: independence, where motivation is different based on an individual's connections and interaction through public policy and defining quality through legislation. The public policy presented by Padrocontradicts Deming's dimensions, which focus on quality as an initiation from the organization and not as a government requirement. The paper is locating quality management in the administrative and academic departments of higher education institutes. In fact, the dimensions added in this paper contradict with Deming's position of quality in higher education. Deming believes in motivating staff at all levels through empowerment and process ownership (Walton, 1986).

Ensby and Mahmoodi (1997) proposed the criteria of the Malcolm Baldridge National Quality Award be used to assess quality in higher education institutes. The purpose of the research is to show that the accredited bodies should not be used as a measurement of quality since they do not lead to consistency in instruction practices and they do not meet the changing needs of their students. Although the article defends quality management concepts in education, it also pays attention to the resistance of faculty to adopt Malcolm Baldridge National Quality Award criteria, considering that this resistance is a result of faculty fear of losing control. The article only includes universities in the US and results cannot be generalized to other universities and it limits the quality management criteria to the delivery of material, course control, and assessment. Nonetheless, the article highlights the current system problems in many universities.

Similar to Ensby and Mahmoodi (1997), Bailey and Bennett (1996) focus on students in their quality management approach in higher education. The purpose of the article is to develop processes in higher education that meet the requirements of the students. The information presented is all based on a literature review through analysis of different articles that discuss whether the focus on higher education should be on the student or the employer in deciding what needs to be improved and for whom. The article suggests that universities should focus on developing processes to

enhance students' skills and knowledge in order to attract more employers who are considered as customers in the article. Although many scholars are against having these industry concepts in a socio-cultural organization like education, many universities consider such an outcome as being effective and beneficial where they work to have defined processes that are continuously measured and assessed.

Michael, Sower, and Motwani (1997) designed a comprehensive model of TQM in higher education by defining the customers as three groups: students, industry, and community. The model starts with defining a mission and a vision statement with keeping the customer in mind, driving out fear through empowering employees, developing pilot teams in administrative departments where TQM should start before moving to the academic departments having measurement criteria through some statistics, recognizing and rewarding successes, improving constantly, and reviewing progress. Milakovich's (2006) arguments are similar to Michael, Sower, and Motwani's (1997), and he considers that empowering is essential for a successful implementation of TQM where people who own their processes and form them based on what they argue is true perform at a very high level and benefit the whole organization.

Antony and Pierce (2002) advocated TQM in higher education institutes through quality function deployment by considering that it balances between teaching and research. In a case study at the University of Cincinnati Department of industrial engineeringthey identified the needs of various customers (businesses and students), and those needs were translated into product features such as "practice knowledge" and" communication skills" and then translated into process features like lab experiments, project reports, and presentations.

II. Conclusion

Defenders of TQM like Aly and Akpovi (2001), Antony and Preece (2002), Kluse (2009), Moon and Smith (1998), Roettger, Roettger and Walugembe (2007), and Sousa (2006) argue that TQM can help universities survive in the changing world in a similar way to any other organization in any other sector because old management styles cannot work in a competitive environment, however most TQM defenders witnessed its success in administrative departments but not academic departments and among faculty members where it was either resisted or led to a huge problem in teaching and research as the core activities of higher education in the countries reviewed. Those are the main reasons that led many scholars like Brown and Koenig (1993), Entin (1993),Kosh (2003), Mehralizadeh and Safaeemoghaddam (2009), and Sirvanci (2004) to stand against TQM and consider it a fad that cannot work in the public sector in general and in higher education specifically. When there is a decision to plunge the entire organization of some businesses in TQM it is deployed in some departments at the beginning and then spreads to the rest of the departments. The case in higher education would be the same, as starting TQM in administration and preparing the whole organizational culture to understand its goals and create a desire to implement it would help it spread to the academic departments, but with a number of the modifications discussed above. The literature review of TQM, its development, its defenders and opponents in higher education, and scholars who argued that it should be modified encourages future research to develop a new management model in higher education by combining TQM and professional autonomy in teaching and research supported by traditional university management systems like the collegial model, shared governance, and academic tenure.

References Références Referencias

1. Ahmed, A. M. & Hamdoon, B. (2006).*The Challenges and obstacles of TQM Implementation in the Higher Education Institutions: The case of Sharjah University in UAE* [online]. [Accessed 6 October 2010].
2. Aly, N. & Akpovi, J. (2001). Total quality management in California public higher education. *Quality Assurance in Education*, vol. 9 (3), pp.127-131.
3. Anderson, G. (2006). Assuring Quality/Resisting Quality Assurance: Academics' responses to 'quality' in some Australian universities. *Quality in Higher Education*, vol. 12 (2), pp.161-173.
4. Andrea, G. (1992). *The Man Who Discovered Quality: How W. Edwards Deming Brought the Quality Revolution to America*. New York: Penguin.
5. Antony, J. & Preece, D. (2002). *Understanding, Managing And Implementing Quality.* London: Routledge.
6. Anyamele, S. C. (2005). Implementing Quality Management in the University: The Role of Leadership in Finnish Universities. *Higher Education in Europe*, vol. 30 (3), pp. 357-369.
7. Bailey, D. & Bennett, J. (1996). The realistic model of higher education. *Quality Progress*, vol. 11 (29), pp. 77-79.
8. Bill, C. (1994). *The Five Pillars of TQM: How to Make Total Quality Management Work for You*. New York: Truman Talley Books.
9. Brown, D.J. & Koenig, H.F. (1993). Applying total quality management to business education. *Journal of Education for Business*, vol. 8 (3), pp. 44-62.

10. Brown, J.F. & Marshall B.L. (2008). Continuous Quality Improvement: An Effective Strategyfor Improvement of Program Outcomes in a Higher Education Scope. *Quality Improvement,* vol. 29 (4), pp. 205-211.
11. Carroll, M., Razvi, S., Goodliffe, T. & Al-Habsi, F. (2009).Progress in Developing a National Quality Management System for Higher Education in Oman. *Quality in Higher Education*, vol. 15 (1), pp. 17-27.
12. Crosby, P.B. (1979). *Quality is Free*. New York: McGraw-Hill.
13. Debbie, P.D. (2004), 100 Years Of Juran. *Quality Progress*. vol. 37 (5), pp. 25-39.
14. Deem, R. (1998). 'New managerialism' and higher education: The management of performances and cultures in universities in the United Kingdom. *International Studies in Sociology of Education*, vol.8 (1), pp. 47-70.
15. Deming, W. E. (1966).*Some Theory of Sampling*. New York: Dover Publications.
16. Deming, W. E. (1986).*Out of the Crisis*. Cambridge, MA: The MIT Press.
17. Deming, W. E. (2000).*The new economics* (2nd ed.). Cambridge, MA: The MIT Press.
18. Donald, D. L. (1988).A Serious Anomaly: TQC without Quality Circles. *Annual Quality Congress,* vol. 42,pp. 34-38.
19. Ensby, M. & Mahmoodi, F. (1997). Using the Baldrige Award criteria in college classrooms. *Quality Progress*, vol. 32 (9), pp. 85-91.
20. Entin, D. (1993). Case study number one: Boston, less than meets the eye. *Change*, vol. 25 (3), pp. 28-31.
21. Evans, J.R. & Lindsay, W. M. (2005). *The Management and Control of Quality*. Ohio: Thomson south-western.
22. Feigenbaum, A.V. (1961). *Total Quality Control.* New York: McGraw-Hill.
23. Feigenbaum, A. V. & Donald, S. (2009). *The power of management innovation : 24 keys for sustaining and accelerating business growth and profitability*. New York: McGraw-Hill.
24. Flores-Molina, J. C. (2011).A *Total Quality Management Methodology for Universities*. Ph.D. Thesis. Florida International University.
25. Green, D. (ed.). (1994). *What is Quality in Higher Education.* Buckingham: Open University Press.
26. Greg, W. (2004). The Legacy Of Ishikawa. *Quality Progress,* vol.37 (4), pp. 54-57.
27. Harrison, W. M. (1997).*Handbook of statistical methods for engineers and scientists* (2nd ed.). New York: McGraw-Hill.
28. Harold, S. (1993). *Managing with profound knowledge: A management process based on the Deming management theory*. Ohio: Harold S. Haller & Company.
29. Houston, D., Robertson, T. & Prebble, T. (2008). Exploring Quality in a University Department: Perspectives and Meanings. *Quality in Higher Education*, vol. 14 (3), pp. 209-223.
30. Imai, M. (1986). *Kaizen: The Key to Japan's Competitive Success*. New York: Random House Business Division.
31. Imai, M. (1996). A consultant and Gemba. *Journal of Management Consulting*, vol. 9 (1).pp. 130- 142.
32. Imai, M. (1997). *Gemba Kaizen*. New York: McGraw-Hill.
33. Ishikawa, K. (1985). *What is Total Quality Control? The Japanese Way*. New Jersey: Prentice Hall.
34. Ishikawa, K. (1990). *Introduction to Quality Control*. Translated by Loftus, J. H. Tokyo: 3A Corporation.
35. Jary, D. & Parker, M. (1994). The Mc University: organization, management and academic subjectivity. *Organization,* vol. 2, pp. 319-338.
36. Juran, J.M. (1995). *A History of Managing for Quality*. Milwaukee, Wisconsin: ASQC Press.
37. Juran, J.M. (1999). *Juran´s quality handbook*.(4th ed.). New York: McGraw Hill.
38. Juran, J.M. (2004), *Architect of Quality: The Autobiography of Dr. Joseph M. Juran.*(1st ed.).New York: McGraw-Hill.
39. Kanji, G. & Malek, A. (1999).*TQM in Higher Education*. Wisconsin: ASQ Quality Press.
40. Kluse, C. (2009). TQM and the Government: The Importance of Leadership and Personal Transformation. *Journal for Quality & Participation*, vol. 32 (3), pp. 27-31.
41. Kosh, J. V. (2003). TQM: why is its impact in higher education so small? *The TQM Magazine*, vol. 15 (5), pp.325-333.
42. Kruger, V. (1996). How can a company achieve improved levels of quality performance: technology versus Employees? *The TQM Magazine*, vol. 8, pp. 11-20.
43. Mehralizadeh, Y. & Safaeemoghaddam, M. (2010). The applicability of quality management systems and models to higher education: A new perspective. *The TQM Journal*, vol. 22 (2), pp.175-187.
44. Michael, R.K., Sower, V.E. & Motwani, J. (1997).A comprehensive model for implementing total quality management in higher education. *Benchmarking: An International Journal*, vol. 4 (2), pp.104-120.
45. Milakovich, M. E. (2006).*Improving Service Quality in the Global Economy.* Boca Raton: Auerbach Publications.
46. Montano, C. & Utter, G. (1999). Total Quality Management in higher education. *Quality Progress*, vol. 32 (8), pp. 52-59.
47. Moon, C. & Smith, C. (1998). Total quality management and new patterns of work: Is there life beyond empowerment? *Total Quality Management*, vol. 9 (2), pp. 301-310.

48. McCulloch, M. (1993). Total Quality Management: Its Relevance for Higher Education. *Quality Assurance in Education*, vol. 1 (2), pp.5-11.
49. Nick, N. (2008).Joseph Juran, 103, Pioneer in Quality Control, Dies. *New York Times*. 3 March, p. 3.
50. Padro, F. (2009). The Applicability of Deming's System of Profound Knowledge to Universities. *The Journal for Quality and Participation*, vol. 32 (1), pp. 10-15.
51. Paul, S.H. (1997). *Sales Process Engineering: A Personal Workshop*. Milwaukee, WI: ASQ Quality Press.
52. Pfeffer, N. &Coote, A. (1991). *Is Quality Good For You? A Critical review Quality Assurance in the Welfare Services.* London: Institute of Public Policy Research.
53. Pike, J. & Barnes, R. (1996). *TQM in Action.* London: Chapman & Hall.
54. Potocki, K., Brocato, R. & Popick, P. (1994). How TQM works in a university classroom. *The Journal for Quality and Participation*, vol.23 (4), pp. 87-120.
55. Ramsden, P. (1998). *Learning to Lead in Higher Education*. New York: Routledge Falmer.
56. Reavill, L.R.P. (1998). Quality assessment, total quality management and the stakeholders in the UK higher education system. *Managing Service Quality*, vol. 8 (1), pp.55-63.
57. Roettger, C., Roettger, L. & Walugembe, F. (2007). Teaching: More than Just Lecturing. *Journal of University Teaching and Learning Practice*, vol.4 (2), pp. 119-133.
58. Schargel, S. P. (1996). Why we need total quality management in education. *Total Quality Management*, vol. 7 (2), pp. 213-217.
59. Selden, P. H. (1997). *Sales Process Engineering: A Personal Workshop*. Milwaukee, WI: ASQ Quality Press.
60. Sirvanci, M.B. (2004). Critical issues for TQM implementation in higher education.*TQM Magazine*, vol. 16 (6), pp.382- 386.
61. Sohail, M. S., Rajadurai, J. & Rahman, N. A. R. 2008. Managing quality in higher education: a Malaysian case study. *The International Journal of Education Management*, vol. 17 (4), pp. 141-146.
62. Sousa, D. A. (2006).*How the brain learns?* Thousand Oaks, CA: Corwin Press.
63. Stensaker, B. 2008. Outcomes of Quality Assurance: A Discussion of Knowledge, Methodology and Validity. *Quality in Higher Education*, vol. 14 (1), pp. 23-41.
64. Taguchi, G. (1995). Quality engineering (Taguchi methods) for the development of electronic circuit technology. *IEEE Transactions on Reliability,* vol. 44 (2), pp. 225-229.
65. Taylor, P. & Braddock, R. (2007). International University Ranking Systems and the Idea of University Excellence. *Journal of Higher Education Policy & Management*, vol. 29 (3), pp. 245-260.
66. Tuttle, T. (1994). Is total quality worth the effort? How do we know? *New Direction for Higher Education*, vol. 21 (32), pp. 21-32.
67. Virginia, V. (1993).A look at the quality management audit applying Dr. Deming's principles for system transformation. *Education*, vol. 113 (2), pp. 210-221.
68. Walton, M. (1986). *The Deming Management Method*. New York: The Putnam Publishing Group.
69. Wiklund, H., Klefsjö, B., Wiklund, P. S. & Edvardsson, B. (2003). Innovation and TQM in Swedish higher education institutions – possibilities and pitfalls, *The TQM Magazine*, vol. 15 (2), pp.99-107.
70. William, H. B. (1993). *Raise Heaven and Earth: The Story of Martin Marietta People and Their Pioneering Achievements*. New York: Simon & Schuster.
71. Witcher, B.J. (1990). Total Marketing: total quality and the marketing concept. *The Quarterly Review of Marketing*, vol.6 (2), pp. 74-82.
72. Wittenburg, G. (1994), Kaizen – The many ways of getting better. *Assembly Automation*, vol.14 (4), pp. 23-31.
73. Yoshio, K. (1994). Kaoru Ishikawa: What He thought and Achieved, A Basis for Further Research. *Quality Management Journal,* vol.1 (4), pp. 86-91.
74. Zeitz, G. (1996). Employee attitudes toward Total Quality Management in an EPA regional office. *Administration & Society*, vol. 28 (1), pp. 120-143.

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3. Submission of Manuscripts,

4. Manuscript's Category,

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13. Have backups: When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

14. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

15. Use of direct quotes: When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

16. Use proper verb tense: Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

17. Never use online paper: If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

18. Pick a good study spot: To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

19. Know what you know: Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

20. Use good quality grammar: Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

21. Arrangement of information: Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

23. Multitasking in research is not good: Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

25. Take proper rest and food: No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

26. Go for seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.

Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

· Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

Title Page:

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.

Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

Procedures (Methods and Materials):

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

Please carefully note down following rules and regulation before submitting your Research Paper to Global Journals Inc. (US):

Segment Draft and Final Research Paper: You have to strictly follow the template of research paper. If it is not done your paper may get rejected.

- The **major constraint** is that you must independently make all content, tables, graphs, and facts that are offered in the paper. You must write each part of the paper wholly on your own. The Peer-reviewers need to identify your own perceptive of the concepts in your own terms. NEVER extract straight from any foundation, and never rephrase someone else's analysis.

- Do not give permission to anyone else to "PROOFREAD" your manuscript.

- Methods to avoid Plagiarism is applied by us on every paper, if found guilty, you will be blacklisted by all of our collaborated research groups, your institution will be informed for this and strict legal actions will be taken immediately.)
- To guard yourself and others from possible illegal use please do not permit anyone right to use to your paper and files.

Criterion for Grading a Research Paper (Compilation) by Global Journals Inc. (US)

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals Inc. (US).

Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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