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## CONTENTS OF THE ISSUE

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- i. Copyright Notice
  - ii. Editorial Board Members
  - iii. Chief Author and Dean
  - iv. Contents of the Issue
- 
1. Sustaining Good Governance through Effective Intergovernmental Relations in Nigeria: A Focus on Imo State-Local Government Relations. *1-10*
  2. A Comparison of Effectiveness of Global Leaders and Domestic Leaders in Electronic Retail Industry. *11-20*
  3. The Reality of Algerian Universities Doctoral Students Configuration. *21-33*
  4. The Internet of Things and Printed Electronics: Case Studies of Innovation by SME Manufacturers. *35-44*
  5. The Nexus between Motivation and Employees' Job Satisfaction: Special Reference to the Base Hospitals in Ampara District. *45-50*
  6. Effect of Compensation on Basic School Teachers' Job Satisfaction in the Northern Zone: The Case of Ghana. *51-59*
  7. A Systematic Review of the Benefits and Challenges Associated with the Hybrid Collaboration of Cloud with Specific Reference to Small and Medium Businesses (SMB'S). *61-66*
- 
- v. Fellows
  - vi. Auxiliary Memberships
  - vii. Process of Submission of Research Paper
  - viii. Preferred Author Guidelines
  - ix. Index



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# Sustaining Good Governance through Effective Intergovernmental Relations in Nigeria: A Focus on Imo State-Local Government Relations

By Nnaeto Japhet Olusadum & Ndoh Juliet Anulika

*Gregory University*

**Abstract-** Intergovernmental relations are basically one of the fundamental tenets of federalism. Effective IGR practice is a *sin qua non* for the sustenance of good governance in a federation like Nigeria. Objectives of this paper are to examine the interconnectedness between good governance and intergovernmental relations in the Nigerian federation and its effects on the rural dwellers. Secondly, examine the fiscal behaviour of Imo State towards its local governments and the impact of such relations on the standard of living of the people. The study argued that the fundamental cause of stunted development among the local government of Imo State is the excessive usurpation of politico-administrative powers of LGAs and illegal diversion of funds statutorily allocated for the LGAs. The study was predicated on the theory of structural-functionalism as espoused by Almond and Powell (1966). The study applied a qualitative research method, utilizing data from the secondary source while content analysis and trends analytical techniques were adopted for data analysis. It is our finding that the major setback to good governance at the grass root is the ambiguous position of the LGA as provided by the 1999 constitution which provided a leeway for the state to plunder the LGAs. The study recommended expunging the constitutional ambiguity against the LGAs through amendment of the relevant section. In conclusion, good governance is not attainable amidst flagrant violation of doctrine of non-interference.

**Keywords:** *intergovernmental relations, sustaining, good governance, state-local, effective.*

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Nnaeto Japhet Olusadum<sup>α</sup> & Ndoh Juliet Anulika<sup>σ</sup>

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## I. INTRODUCTION

The heterogeneous composition of Nigeria has evidently made federal system of government as most suitable for its existence. Besides, the multiplicity of ethnicities that made up Nigeria, the recognition and acceptance of a constitution that prescribed the adoption of a three-tier government; the federal, state and local governments appears to be in the right and positive direction. The existence of the three tiers of government as a result of devolution of power and functions has raised the important need for intergovernmental relations either vertically or horizontally. Our focus is on the vertical IGR involving State-Local government. The fundamental reason for

adoption of federal system of government is apparently to ensure good governance (improve the standard of living and quality of life of the citizen). The paper argues that effective intergovernmental relations are a strong condition for good governance in a federal system of government. This is predicated on fact that effective IGR ensures recognition of the powers, functions and rights of the component parts of the federation.

Numerous agitations by various ethnic nationalities that are constituent parts of Nigeria are serious pointers that the federal system is largely imbalance, requiring immediate restructuring to reflect true federalism that can sustain good governance. The issues of national question which involves; what has been happening to resource control, revenue allocation formula, state-local government relations, local government autonomy and rural development are considered serious sticks in the spoke of good governance in Nigeria. Fundamentally, a federal structure should cede power and functions to the constituent parts for further development. The major objectives of this paper are to examine the interconnectedness between good governance and intergovernmental relations in the Nigerian federation and its effects on the rural dwellers. Secondly, examine the fiscal behaviour of Imo State towards its local governments and the impact of such relations on the standard of living of the rural dwellers.

## II. THEORETICAL FRAMEWORK

The study is predicated on the theory of structural-functionalism as espoused by Almond and Powell. Basically, the theory considered the existence of societal structure and expected roles that will make system operationally effective and efficient. It is the observable activities which make up a system (Almond & Powell, 1966). While functions deal with the consequences involving objectives as well as processes of the patterns of action structures refer to those arrangements within the system which perform the functions (Das & Choudhury (ND). This implies that function represents objective that must be achieved while structure connotes those arrangements (which could include the bureaucracy) put in place to perform the functions, Nyewusira (cited Nnaeto, 2017, p.11).

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Structuralism observes the existence, autonomy and ability of sub-units to function in a manner that can perfect the system. The theory aims at achieving functional or operational synergy among the three tiers of government in the Nigerian federation. The act of governance has it that it is difficult to achieve good governance in a federal system without co-operate federalism. Therefore, when such governmental structures like the central, state and local governments in Nigeria synergize in terms of information sharing, devolution of power and function, autonomy, resource control, the prospect of good governance and national development will be brighter.

The concept of intergovernmental relation especially in a federal state like Nigeria depicts the existence of many structures of government, and also the need for these structures to function accordingly in order to achieve the ultimate and collective goal of good governance and national development. These expressions provided the justification for adopting structural functionalism as our theoretical framework. Furthermore, good governance can only be understood and seen to have been achieved if the three tiers of government (federal, state and local governments) independently or cooperatively perform their functions and achieve different objectives at their various levels. Structural functionalism suits this work because the theory recognizes the importance of structures, functioning of the structures, and devolution of powers to the structures and ultimately, the maintenance of operational synergy in the system. This is the only arithmetic that can effectively guarantee good governance in IGR.

### III. CONCEPTUAL CLARIFICATION

#### a) Good Governance

There is probably no singular and all encompassing explanation of good governance. However, there are observable changes that could point to the existence of the concept in a particular political or social system. Donald.F.Kettl (cited in Heady, 2001.p.428) refers to good governance as "transformation of governance". The fundamental essence of government and administration is to identify and offer solutions to public needs. When government does this, it is offering good governance. Another dimension the concept is when government leads the citizens with utmost transparency, accountability and citizens' consultation in the act of governance. Citizen consultation is a huge condition for good governance. Scholars have made good comments on good governance because of its cardinal position in promoting the welfare of citizens and the state. Good governance is a good idea, we would all be better off, and citizens of many developing countries would be much better off, if public life were conducted within

institutions that were fair, judicious, transparent, accountable, participatory, responsive, well-managed, and efficient. For millions of people throughout the world who live in conditions of public insecurity and instability, good governance is a mighty beacon of what ought to be (Grindle 2010). The critical assignment of the state is to protect both the state (by administering it in tandem with the rule of law) and citizens (by providing the basic needs of life) including recognizing and consulting them during policy actions that affect them.

#### b) Typology of good governance

According to Grindle, the following is a fair representation of good governance;

1. Good governance means: Check and balances in government, decentralization, efficient/equitable/independent judiciary, free press, sound regulatory system
2. Institutions for: Bank and finance regulation, civil service, market efficiency, managing decentralization, participation, transparent budgeting, etc
3. Law for: Trade mark protection, enforcement of contracts, biodiversity, foreign investment, labour standards, intellectual property rights etc.
4. Policies about: Land reform, land policy, capital markets, community development, downsizing bureaucracy, fisheries, insurance, social safety nets etc.
5. Services for: HIV/AIDS, communications, public transportation, safe water, legal aid for the poor, micro-credit, targeted transfer etc
6. Strategies for: Asset creation for the poor, capacity building in the public sector, empowering the poor, engaging the poor, environmental protection, knowledge development, private sector development ( Grindle,2004.p.8).We also add the need for effective affirmative action as important component of good governance.

The effort depicts an elaborate expression of good governance which considers virtually every aspect of citizens needs, tangible and intangible. It touches virtually every aspect of the life of both state and citizens and therefore is good enough to assume empirical yard stick for measuring good governance in a political system. Good governance means competent management of the country's resources and affairs in a manner that is open, transparent, accountable, equitable and responsive to public needs (Alam, & Hasina, 2014). Good governance is generally needed in both developed and developing nations like Nigeria. However, well-outlined components of good governance have not been actualized by the state especially in developing countries, thus making the concept elusive in the citizens' life. Good governance is a product of good leadership. It aims at total observation of constitutionalism to uphold utilitarianism

sequel to citizen's welfare and nation building. Implementation of the people's document (constitution) is the shortcut to good governance (Nnaeto & Okoroafor, 2016.p.162).

Nzimakwe (2014) compares good governance with the *ubuntu* leadership style. He expressed that *ubuntu* principles such as sharing of opportunities, responsibilities and challenges, participatory decision making and leadership, and reconciliation as a goal of conflict management are a kin to good governance. *Ubuntu* is a leadership practice on the African continent, especially around the frontline states. It is however very clear that the concept of good governance, no matter the phraseology is about ensuring the happiness of the citizens and protection of the state. This is a huge task for the government-thus explaining why Saparniene (2012) and (Vries 2013) respectively opine that good governance is a responsible work of the authorities and a single most important factor in eradicating poverty and promoting development.

#### c) *Inter Governmental Relations (IGR)*

The need for cooperative federalism in Nigeria is borne out of the federal structure of the state which clearly approved three tiers of government. In this arrangement, Nigeria is the whole while the central, state and local governments are the parts. Logically, since it takes the cooperative IGR among the three tiers of government (parts) to ensure good governance in Nigeria (whole), intergovernmental relation remains an indisputable and indispensable condition for the development of both the parts and the whole. An intergovernmental relation is a mechanism to provide understanding, cordiality, balance and collaboration between and among units of government, and between government and citizenry (Akume, 2014). Intergovernmental relation is about interaction that is based on mutual respect, trust and collaboration for actualization of systemic equilibrium. Similarly, Freinuman (2007) opines that:

Longer term perspectives of economic policy reform in the country are critically dependent upon improvements in the organization of intergovernmental arrangement. Such arrangement has direct implications for achieving national growth and poverty reduction targets.

Okoli (2005) however introduced intergovernmental relations to "involve pattern of cooperative relationship between various levels of government in a federal government structure". Ogbuishi (2007) expressed IGR through the identification of reasons for its adoption. He states that "intergovernmental relation has two major reasons. One, to enhance the emergence of cooperation rather than competition in the federation, two, to minimize intergovernmental conflict among the various levels of government". Contributing, Wright (ND) submits that

there are five phases of intergovernmental relations which includes; (1) conflict (2) cooperation (3) concentration (4) creativity and (5) competition. He is of the opinion that the accomplishment of intergovernmental relations hinges on the successful management of the complexity. The Nigerian IGR appears to have been affected by three of Wright's phases of IGR. They include conflict, concentration and competition. These have accorded each higher tier of government the naked force to unduly control the other lower tiers. For example, the federal government against the state, and the state against the local governments. Wright's observation is in consonance with that of Adedire (2014) who stressed that there is a disarray in Nigerian IGR due to conflict over issues of tax jurisdiction, revenue allocation, fund transfer, over-concentration of power at the centre, illegal removal of government officials, among others.

Intergovernmental relations is construed here as cooperative federalism. This explanation is borne out of the reason for intergovernmental relation in a federal set up like Nigeria. The three tiers of government make up the Nigerian federation. If any component lags behind, it will distort the development of the entire state. Therefore IGR in the form of cooperative federalism remains a sine qua non to accomplish good governance in Nigeria. Lack of cooperative federalism is the major cause of unhealthy competition and struggles among the three tiers of government in Nigeria of which the LGAs and their citizens are always at the receiving side.

#### d) *Federalism*

Nigeria is a federal state. The constitution that Nigeria adapted suits federal system of government. The written and rigid constitution of Nigeria is expected to ensure the proper devolution of power and function relative to a federal state. Furthermore, it is expected to protect the three tiers of government against undue influence by any part. This is the concept and intention of federalism. Wheare aptly captions that by federalism I mean a method of dividing powers so that general and regional governments are each, within a sphere coordinate and independent... each government should be limited to its own sphere, within that sphere, should be independent (Ofoeze, 2008, p.2 & Ekwonna, 2012, p.2)

Similarly, in an effort to elucidate the concept of federalism, Oates (1999, p.1) notes:

The United States, the central government has turned back significant portions of federal authority to the state for a wide range of major programmes, including welfare, Medicaid, legal services, housing and job training with the hope that state and local governments, being closer to the people will be more responsive to the particular preferences of their constituencies and will be able to find new and better ways to provide these services.

Federalism is the constitutional devolution of political-cum-economic powers to the constituent units of a federation in a manner that no unit will exact undue influence on the other. The essence of such devolution of power is for each unit to properly manage the affairs of citizens in such tier of government with maximum concentration. Nwabueze (cited in Sagay, 2008, p.71, & Nyewsira, 2011, p.12) opines

By doctrine of federalism which Nigeria has adopted, the autonomy of each government, which presupposes its separate existence and its independence from the control of other government, is essential to federal arrangement. Therefore, each government exists not as an appendage of another government, but as autonomous entity in the sense of being able to exercise its own free will in the conduct of its affairs, free from direction by another government.

It is however, important to note that the doctrine of federalism is marked with the following features;

- 1) Supremacy of the constitution – usually written and rigid
- 2) Devolution/distribution of powers and functions
- 3) Supremacy/in-dependence of the judiciary

A transformational intergovernmental relation is simply the practice of cooperative federalism. It is germane to note at this juncture that the essence of cooperation among the component units in a federation is that it is inevitable for collective development without which the federation will lose its cohesion. The doctrine of federalism stipulates that the three tiers of governments remain autonomous but cooperative for the purpose of complementarily and mutual assistance, not for domination. It is not all federalism that is cooperative. Presently, Nigeria is a federation with competitive, instead of cooperative and centralized, instead of decentralized status. This status has apparently striped her of cooperative bond which is considered the source of momentum for general and even development in federal structure. This is why a lot of citizens are calling for the restructuring of Nigerian federalism. Cooperative federalism will ensure that the three tiers of government will need each other in a fair manner for both individual and collective development.

#### e) *Local Government*

Anyadike (2011) has expressed that local government, like other concepts in social sciences does not have one definition that is acceptable to all owing to the fact that various definitions of the concept are given by different scholars. That notwithstanding, Okoli (2005) sees local government as a unit of government, established by act of law, to administer the functions of government, and see to the welfare and interest of the local dwellers, under the local government system. According to him, the function of service delivery to the local people is the key reason for establishing local government. The guidelines for the reform of local

government in Nigeria (1976) presented a comprehensive outline of what local government is. The paper states:

Local government is the government at the local level exercised through a representative council established by law to exercise specific powers within defined areas. This powers should give the council substantial control over local affairs as well as the staff and institution and financial powers to initiate and direct the provision of services and to determine projects so as to implement the activities of the state and federal government in their areas and ensure, through active participation of the people and their traditional institutions that local initiative and response to needs are maximized.

Local government in Nigeria has been on the receiving end in the frosty intergovernmental relations in the federation. Local government in Nigeria has suffered the worst set back in history with Nigeria's return to democratic government from 1999 to date. The federal and state governments are relatively autonomous in the federation. The federal government appears to treat the state with relative fairness, but the state treats the LGA in an opposite direction which has accounted for the high level of poverty and deprivation in the local government area.

f) Data presentation and analysis

Table 1: Detail of statutory federal allocation to States and local governments in Nigeria (1999-2007)

S/N	Beneficiary	State Governments	Local Governments	Total
1	Abia	113,956,322,728.62	66,957,033,320.83	180,913,356,049.45
2	Akwa Ibom	111,973,469,608.66	88,385,118,660.50	200,358,588,269.16
3	Akwa Ibom	384,370,238,540.34	110,896,366,330.24	495,266,604,843.58
4	Anambra	97,592,269,763.11	85,847,543,591.19	183,439,623,354.30
5	Bauchi	128,248,345,518.84	98,833,751,081.01	227,082,096,536.85
6	Bayelsa	414,158,710,867.12	38,101,380,075.82	452,260,540,942.94
7	Benue	120,963,431,284.39	100,767,342,004.41	221,639,773,288.79
8	Borno	127,814,189,455.35	114,329,322,081.28	242,143,511,536.62
9	Cross River	115,403,682,833.25	74,990,493,054.89	190,394,175,888.13
10	Delta	463,459,893,918.76	97,961,571,804.08	561,421,465,722.84
11	Ebonyi	97,825,886,665.52	51,780,333,382.06	149,606,220,047.59
12	Edo	119,085,051,909.31	77,565,785,400.62	196,650,837,309.93
13	Ekiti	92,732,057,109.79	60,134,219,325.71	152,866,276,435.50
14	Enugu	103,979,483,787.19	68,964,491,966.13	172,943,975,753.31
15	Gombe	96,583,878,576.74	49,916,381,357.36	146,500,259,934.10
16	Imo	132,104,455,243.39	99,280,101,362.71	231,384,566,606.10
17	Jigawa	117,009,316,440.23	108,615,763,243.89	225,625,079,684.13
18	Kaduna	138,928,609,161.09	117,182,125,094.69	256,110,734,225.77
19	Kano	179,437,799,067.94	191,497,373,448.88	370,935,172,516.81
20	Katsina	140,721,433,816.83	139,822,729,992.43	280,544,163,809.26
21	Kebbi	109,325,901,797.25	86,787,009,340.22	196,139,911,137.47
22	Kogi	108,937,683,153.98	86,187,515,182.3	195,125,198,336.31
23	Kwara	99,576,991,214.56	66,011,107,696.79	165,588,098,911.35
24	Lagos	182,535,977,642.02	149,392,517,393.59	331,928,495,035.61
25	Nasarawa	90,518,301,030.98	54,487,876,090.81	145,006,177,121.79
26	Niger	126,254,889,591.23	111,114,801,856.06	237,369,691,547.30
27	Ogun	114,180,594,528.10	81,197,512,355.95	195,378,106,884.06
28	Ondo	183,313,507,542.89	74,082,244,267.18	257,395,751,810.07
29	Osun	107,476,926,982.08	102,574,611,292.67	210,051,538,274.76
30	Oyo	135,928,952,381.15	127,367,093,326.38	263,298,045,707.53
31	Plateau	81,759,592,808.53	73,434,508,057.07	155,194,100,865.61
32	Rivers	517,682,993,860.57	104,313,280,579.65	621,996,274,440.22
33	Sokoto	118,067,536,171.07	96,232,809,149.69	214,300,345,320.76
34	Taraba	103,462,234,004.51	72,869,810,839.60	176,332,044,844.11
35	Yobe	104,904,723,192.25	72,326,009,351.84	177,230,732,544.09
36	Zanfara	112,898,217,046.50	70,091,324,490.36	182,989,541,536.86
37	FCT	149,703,394,069.21	43,324,238,862.88	193,027,632,752.09
	<b>Total</b>	<b>5,742,904,843,313.33</b>	<b>3,313,534,856,541.80</b>	<b>9,056,438,699,855.13</b>
38	<b>Federal government</b>	-	-	<b>7,390,688,951,768.72</b>
	<b>Grand Total</b>	-	-	<b>16,447,127,651,623.80</b>

Source: Federal Ministry of Finance

The data above reflected the earnings from the federal allocation to both states and their local governments from May 1999-May2007, covering a period of almost eight (8) years. At this time, the naira was comparatively stronger against dollar than today. In the contemporary political economy of the world, political and economic emancipation of the country and citizens are largely predicated on the availability of funds and the ability of the leadership to effectively utilize the public funds for utilitarian purpose in both capital and recurrent projects. As a result, the provision of an aspect of good governance (service delivery) to the rural dwellers in Nigeria obviously cannot happen without

financial autonomy. Regrettably, it is obvious that both the federal and state governments have to an extent, achieved financial autonomy, leaving the local government in a pathetically disadvantaged corner. The table reveals the amount the local governments of each state earned from the commonwealth of Nigeria (1999 – 2007) which, if honestly disbursed to each local government of each state would have ensured fair development in the areas. We shall compute the monthly average earning of the selected LGAs across the six geopolitical zones within the time as seen on the above table.

**Table 2:** Expected yearly and monthly federal statutory allocation to Local Governments (expected to be released to the LGAs by the States from State Joint Local Government Account-SJLGA)

S/N	States	No. of LGA	Expected yearly average allocation from FG to each LGA	Duration 8 years	Expected average monthly allocation from FG to each LGA	Actual remittance to LG by state government as required
1	Imo	27	459,630,107	1999-2007 (8 yrs)	38,302,508.92	Not Available
2	Anambra	21	501,996,749.61	1999-2007	42,583,062.3	N/A
3	Enugu	17	507,091,852.8	1999-2007	42,257,654.4	-N/A
4	Lagos	20	933,703,233.8	1999-2007	77,808,602.82	-N/A
5	Oyo	34	468,268,725.5	1999-2007	39,022,393.79	-N/A
6	Osun	30	427,394,213.8	1999-2007	35,616,184.48	-N/A
7	Rivers	23	566,920,003	1999-2007	47,243,333.59	-N/A
8	Akwa Ibom	31	447,162,767.5	1999-2007	37,263,563.96	-N/A
9	Delta	25	489,807,859	1999-2007	40,817,321.58	-N/A
10	Kaduna	23	636,857,375.5	1999-2007	53,071,614.63	-N/A
11	Kano	44	544,026,629.1	1999-2007	45,335,552.43	-N/A
12	Jigawa	27	502,850,755.8	1999-2007	41,904,229.65	-N/A
13	Adamawa	22	502,188,174.3	1999-2007	41,849,014.53	-N/A
14	Bauchi	20	617,710,944.3	1999-2007	51,475,912.03	-N/A
15	Borno	28	529,302,417	1999-2007	44,108,534.75	-N/A
16	Niger	24	578,722,926.9	1999-2007	48,226,910.57	-N/A
17	Kwara	16	515,711,778.9	1999-2007	42,975,981.57	-N/A
18	Benue	22	572,024,670.5	1999-2007	47,668,722.54	N/A

Source: Computed by the author, 2017.

This table was computed from the information obtained from table 1. The computation displayed reflected the total amount of money the entire local government of the selected states (three LGAs from each of the six geopolitical zones) should earn as federal allocation from 1999-2007. It also reflected the average allocation various or individual local government of a particular state should receive within the stated duration judging from the available data from the Ministry of Finance. We did the computation on the average basis because we do not know the sharing formula adopted by each State House of Assembly in sharing the allocation deposited by the Federal Government in the contentious State Joint Local Government Account (SJLGA).

Section 162 (8) provides that:

The amount standing to the credit of local government councils of a state shall be distributed among the local government councils of that state on such terms and in such manner as may be prescribed by the House of Assembly of the state.

Insofar as politics and administration are concerned, there is no watertight separation of power and function between the executive and legislature of most states in the Nigerian federalism. This is partly because states wield powerful influence over their respective Houses of Assemblies through lobby and bribery to do their bidding. We cannot ascertain the true remittances to LGAs by their respective states governments because of obvious reasons; first, the financial state of local governments and lack of

development clearly support the hypothesis that remittances to the local government do not represent actual allocation from the Federal Government. Second, given the provision of section 162 (8) as cited, various states are involved and therefore may not adopt uniform sharing formula, finally the observable undue interferences on the general operations of LGs by the states.

It is important to note that with the computed average monthly allocation to the local government areas of the selected states, one would no doubt expect to notice a lift in the standard of living of the rural dwellers if such amounts due to LGs are not diverted. For example, if the 27 LGAs of Imo state had received N38, 302,508.92 on monthly basis as the computation indicated, without diversion by the state government (1999-2007), the areas would have had great development changes in terms of good roads, electricity, healthcare, cottage industry and credit facilities, security of life and property, quality education and tangible improvement in the standard of living and life expectancy of the rural dwellers. Capital projects that trigger job opportunities would have been visibly achieved in the council areas.

The exploitative vertical IGR between states and local governments has made it impossible for local governments in Nigeria to access and plan with the funds centrally allocated to them. This is the most debilitating challenge to good governance. Looking at the computation, states like Lagos, Kaduna, Rivers, and Benue, (if not states' diversion of LGAs funds), would

have seen their LGAs develop better. Local governments that earned N77.8m, N53.0711m, N47.24m and N47.66m monthly, respectively in 1999 - 2007 could be capable of paying staff salaries, settle pensioners on monthly basis and most importantly,

ensure capital and overheads of the council are not neglected. Regrettably, most of the LGs of the states selected owe their staff many months of unpaid salaries resulting in frustration, sickness and death of citizens.

**Table 3:** Total revenue allocation for December 2013 to states and local governments of selected states from the six geopolitical states in Nigeria's

S/N	States	Gross statutory allocation to state (NGN)	Gross statutory allocation to LG (NGN)	Total allocation state and LG (NGN)
1	Akwa Ibom	2,974,177,451.58	3,015,177,801.84	5,989,955,253.42
2	Delta	3,003,601,490.62	2,521,933,307.23	5,525,534,797.85
3	Rivers	3,190,274,806.60	2,594,390,488.41	5,784,665,295.01
4	Kano	4,692,185,009.09	4,942,495,319.58	9,634,680,328.67
5	Kaduna	3,875,880,634.26	3,104,415,372.89	6,980,296,007.15
6	Lagos	3,962,854,635.92	2,958,613,259.67	6,921,467,895.59
7	Borno	3,675,342,475.76	3,053,002,394.56	6,565,724,498.41
8	Oyo	3,317,891,748.85	3,338,832,749.23	6,656,724,498.41
9	Niger	3,504,025,908.17	2,868,032,834.61	6,372,058,742.78
10	Imo	3,075,651,417.40	2,627,536,847.42	5,703,188,264.82
11	Benue	3,317,525,201.82	2,812,012,035.63	6,129,537,237.45
12	Bauchi	3,538,449,559.65	2,545,202,289.49	6,122,651,849.14
13	Jigawa	3,308,148,409.78	2,760,474,856.64	6,068,623,266.42
14	Osun	2,697,903,929.47	2,646,880,114.14	5,344,784,043.61
15	Anambra	2,941,272,664.55	2,276,433,298.90	5,217,705,963.45
16	Adamawa	2,946,793,134.57	2,264,197,349.82	5,210,990,484.39
17	Kwara	2,633,222,745.56	1,736,788,906.35	4,370,011,651.91

Source: Office of the Auditor General of the federation, 2013.

The table above reflects the gross earnings of the randomly selected states of the federation and collective earning of their local governments from the federal allocation in December, 2013. The data early reveals that more than 95% of local governments selected grossly earned well above N2.5 billion

collectively in the month of December, 2013. From the available data, we shall compute the expected average earning of each of the local government areas of the selected states considering the differences in the number of local governments of the state.

**Table 4:** Average expected remittance to LGA by their states in December 2013

S/N	States	No. of LGA	Gross statutory allocation from FAAC	Expected monthly remittance to LG by state	actual remittance to LGA by state
1	Imo	27	2,627,536,847.42	97,316,179.53	Not made public
2	Anambra	21	2,276,433,298.90	108,401,585.7	Not made public
3	Enugu	17	1,960,522,936.35	115,324,878.6	Not made public
4	Akwa Ibom	31	3,015,177,801.84	97,263,800.06	Not made public
5	Delta	25	2,521,933,307.23	100,877,332.3	Not made public
6	Rivers	23	2,594,390,488.41	112,79,586.5	Not made public
7	Kano	44	4,942,495,319.58	112,329,439.1	Not made public
8	Kaduna	23	3,104,415,372.89	134,974.581.4	Not made public
9	Lagos	20	2,958,613,259.67	147,930.663	Not made public
10	Borno	28	3,053,002,394.23	109,035,799.8	Not made public
11	Oyo	34	3,338,832,749.56	98,200,963.22	Not made public
12	Niger	24	2,868,032,834.61	119,501,368.1	Not made public
13	Benue	22	2,812,012,035.63	127.818,728.9	Not made public
14	Bauchi	20	2,812,012,035.63	127,818,728.9	Not made public
15	Jigawa	27	2,760,474,856.61	102,239,809.5	Not made public
16	Osun	30	2,646,880,114.14	88,229,337.14	Not made public
17	Adamawa	2	2,264,197,349.82	102,918,061.4	Not made public
18	Kwara	16	1,736,788,906.36	108,549,306.6	Not made public

Source: Computed by the Author, 2017 (from the data on total revenue allocation to state and local governments for December, 2013 from the office of the Auditor General of the federation.

The table above indicates the number of local governments each selected state from the six geopolitical zones has. Furthermore, it also reveals in clear terms the gross statutory allocation to a collection of local government of each state got for December 2013 federal allocation. Similarly, attempt was made to determine what each state was expected to remit to its respective LGAs on average basis in December, 2013. The table equally reveals that none of the 774 local government areas in the Nigerian federation statutorily earned less than N88.2 million in December, 2013. It is only Osun State that each local government earned N88.2m in the period under review. Efforts to find out how much was actually remitted to each local governments by their state counterparts proved abortive, obviously because of the closed, manipulative and diversionary strategies of state governments over the financial autonomy of local governments in Nigeria. This position is strongly against the theory and practice of good governance as was chronicled by Grindle (2004, p.8). Besides Grindle's typology of good governance, the UNESCAP presented eight representation of good governance which includes; consensus oriented, participatory, follows the rule of law, effective and efficient, accountable, transparent, responsive, and equitable and inclusive( Nnaeto & Okoroafor, 2016, p.165). Juxtaposing the critical review of the tables/ the attitude of the state towards the local governments and what good governance stands for both in theory and practice, empirically conclude that the type of IGR in Imo State does not support good governance. Justification for this position lies in the fact that the state government does not consult the LGAs in policy formulation and implementation that affect them. This has affected the consensus, participatory and transparent part of good governance. Furthermore, the state does not make public the actual amount of allocation from the federal government lodged in the State Joint Local Government Account and disbursement formula, and the 10% internally generated revenue that it is expected to remit to LGAs. There is a case of unaccounted illegal deductions and diversion which have defied accountability and transparent aspect of good governance. The alarming state of infrastructural decay in all the LGAs in Imo State is indicative of clear lack of effectiveness and efficiency and responsiveness which are hallmarks of good governance. The oral interviews conducted across the LGAs of Imo State using the eight attributes of good governance as focus revealed a more developmentally pathetic situation where many white elephant projects are scattered across the LGAs which the people claimed were conduits through which the tax payers money were neatly misappropriated Those white elephant projects according to the locals were covers for diverting LGA funds. One of the interviewees expressed that the state-local relation in Imo State is a

“negative omen that must be reversed quickly to save the existential interest of the rural dwellers”

The essence of cooperation among the three tiers of government in Nigeria is to foster unity, and collective and mutual development. This is good governance. However, when the relations between the state and local government are transactional and manipulatively based, the achievement of good governance will be endangered. If the 27 local governments of Imo and Jigawa states got their full allocation of N97.2million and N102.2million respectively in December, 2013, there would have been visible developmental changes in their respective local government areas. Furthermore, if the local governments in Kaduna, Benue, Rivers, and Lagos states got their due federal allocation in the month of December, 2013, being N134.9million, N127.8 million, N112.3 million and N149.9 million, respectively, workers of the respective local governments would not have been owed months of unpaid salaries, pensioners would have been paid, and capital projects that would enhance standard of living of the rural dwellers would have been initiated, completed and commissioned. Ugoh (2011, p.20) opines that the period intergovernmental relation started in the United States was termed period of massive government initiative which brought about policies on social welfare programmes. This point to the fact that in a federal system, good governance cannot be achieved except when IGR is planned to function in a manner that ensures public welfare.

Juxtaposing the indicators of good governance such as; consensus oriented, participatory, rule of law, effective and efficient, accountability, transparency, responsive, equitable and inclusive (Nnaeto, & Okoroafor, 2016) with the analysis of the data, it therefore means that the intergovernmental relations in the Nigerian federation, especially such vertical relations as state and local governments do not, in practice enhance good governance. This is because the States ignore the local government in virtually everything that requires the observation of the indicators of good governance. This has practically made the local government play the role of an extension of the state government and administrative unit, not a level of government in the Nigerian federation. In view of this, therefore, the state is culpable of violating the principles of accountability, participative management, rule of law, responsiveness to the plight of the local government, transparency, inclusiveness, which are the basic reason for intergovernmental relations and the bedrock of good government.

#### g) Findings

- There is largely skewed IGR among the states of Nigeria and their local government councils.



- The state dominate and dictate the direction of state- local government IGR in Nigeria
- The general poverty in Imo State LGAs is attributed to undue interference on the statutory and financial operations of LGAs by the state government.
- LGAs in Imo State are run as appendages to the state, not as tier of government with relative independence and powers.
- The use of Caretaker Committee system of local government administration brought incurable administrative seizure on LGAs.

#### IV. CONCLUSION

Intergovernmental relation, be it vertical or horizontal, is a basic tenet of federal structure. The Nigerian federal structure, comprising the federal, state and local government is such that requires cooperation and collective support to achieve the goal of national development which obviously should of necessity, pass through good governance. States and local governments in Nigeria have long been in serious battle for supremacy and freedom with the states clearly wining. Many states agents such as Ministry of Local Government and Chieftaincy Affairs, State Joint Local Government Account (SJLGA), Caretaker Committee system serve as instrument of oppression to good governance at the local government. The absence of indicators of good governance in the state-local government IGR simply underlined the extent of bastardization of IGR in Nigerian federalism. The paper dutifully examined the concepts of good governance, federalism especially as practiced in Nigeria, intergovernmental relations, cooperate federalism and a typology of good governance. Information on fiscal relations in the federal system was obtained to help understand and analyze the work. In a functional federal system, cooperative and effective intergovernmental relation remains a sine qua non for administration of good governance. Regrettably, the scenario in Nigeria is counterproductive where States see the LGAs as revenue mills.

#### V. RECOMMENDATIONS

- Proper restructuring of Nigerian federal system in a manner that will ensure proper devolution of power and functions to the three tiers of government in Nigeria.
- For the above point to work effectively there is need to amend the relevant section of 1999 constitution to provide and protect the doctrine of non-interference among the three tiers of government in the federation.
- Since it is not possible for federating units in a federation to maintain absolute independence, effort has to be made to ensure a model of IGR that will observe and respect the statutory powers and

functions of the federating units while they interact and check each other.

- Change has never occurred without the willingness of the people to change. Therefore, the actors across the three tiers of government in the federation should turn to attitudinal change to ensure good governance in Nigeria. Politicians (policy makers) and bureaucrats (policy executors) should work according to the laid down rules of the land to avoid leadership complication in the system.

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## A Comparison of Effectiveness of Global Leaders and Domestic Leaders in Electronic Retail Industry

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**Abstract-** By the end of twentieth century 'global manager' emerged as a new managerial reality. In the sphere of cultural, geographical, and temporal complexity, global leaders come into prominence in terms of managerial skills and effectiveness. This study aims at demonstrating a comparison of the effectiveness of global leaders with domestic leaders in the electronic retail businesses. Fulfil this aim we investigated the competencies of both global and domestic leaders and the correlation between leadership competencies and challenges in global consumer electronic retail businesses and managerial skills against these challenges. The comprehensive literature review analysis in this paper shows that informational role, interpersonal, and decisional roles are carried out by both domestic and global leaders but 'global mindset' is additional attribute of global leader to work effectively in diversified and cross-cultural environment therefore global leaders are more suitable in dealing with issues of complexity, connectedness, and context. This study is unique to demonstrate global and domestic leader's approaches to challenges in electronic retail industry which enable to show the effectiveness of both leadership.

**Keywords:** leadership, global, domestic, effectiveness, e-retail industry.

**GJMBR-G Classification:** JEL Code: L81



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# A Comparison of Effectiveness of Global Leaders and Domestic Leaders in Electronic Retail Industry

Adnan UI Haque<sup>α</sup>, Erhan Aydin<sup>σ</sup> & Elif Uysal<sup>ρ</sup>

**Abstract-** By the end of twentieth century 'global manager' emerged as a new managerial reality. In the sphere of cultural, geographical, and temporal complexity, global leaders come into prominence in terms of managerial skills and effectiveness. This study aims at demonstrating a comparison of the effectiveness of global leaders with domestic leaders in the electronic retail businesses. Fulfil this aim we investigated the competencies of both global and domestic leaders and the correlation between leadership competencies and challenges in global consumer electronic retail businesses and managerial skills against these challenges. The comprehensive literature review analysis in this paper shows that informational role, interpersonal, and decisional roles are carried out by both domestic and global leaders but 'global mindset' is additional attribute of global leader to work effectively in diversified and cross-cultural environment therefore global leaders are more suitable in dealing with issues of complexity, connectedness, and context. This study is unique to demonstrate global and domestic leader's approaches to challenges in electronic retail industry which enable to show the effectiveness of both leadership.

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## I. INTRODUCTION

In this study, we aim at exploring why global leaders are more effective than domestic leaders in organisational settings in electronic retail businesses (hereafter e- retail). In order to achieve the aim, we consider roles, skills, and approaches differently demonstrated by both global and domestic leaders in a complex environment. This also provides a comparison of the effectiveness of global leaders with domestic ones in the consumer e- retail businesses. Since our approach includes a comprehensive literature analysis, the comparison of effectiveness of global leaders and domestic leaders have been diagnosed through investigating the challenges faced by leaders; identifying the competencies of global leaders and domestic leaders; assessing and evaluating the link between leadership competencies and challenges; and exploring the managerial effectiveness of global/ domestic leaders in consumer e- retail industry.

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We refer to effectiveness as the level to which identified and targeted problem is resolved and extent to which set objectives are accomplished. In present study, the effectiveness demonstrates the attainment of remaining competitive in the stiff competition. Thus, this concept provides an understanding in relation to the adaption of approaches to deal with complex global business environment.

According to the report of World E- retail Congress (2012), rising rental cost, adaption of changing habits of customer's preferences, providing consistent multichannel offerings and forming persuasive promotions are e- retailer's biggest challenges nowadays. In discussion with modern day successful leaders in the world, it is evident that the focus on the customers is kept constantly to overcome these challenges through board having talented team (ibid). In e- retail industry, global leaders' success is mostly credited to talented team on board (ibid).

However, global leaders confirmed that in modern e- retail, new technological advancement and e-commerce have been exciting aspects which further enhance challenges for e- retail industry in global context. Technology is effective but it cannot be regarded as an absolute competitive advantage for the organisations because technology can be replicated by competitors. Moreover, e-commerce has improved business efficiency but 56% customers were dissatisfied regarding online services in e- retail industry (Artificial Solutions White Paper, 2016). Based on the aforementioned discussions, a self- constructed framework for addressing the research question was formed as shown in Figure 1.

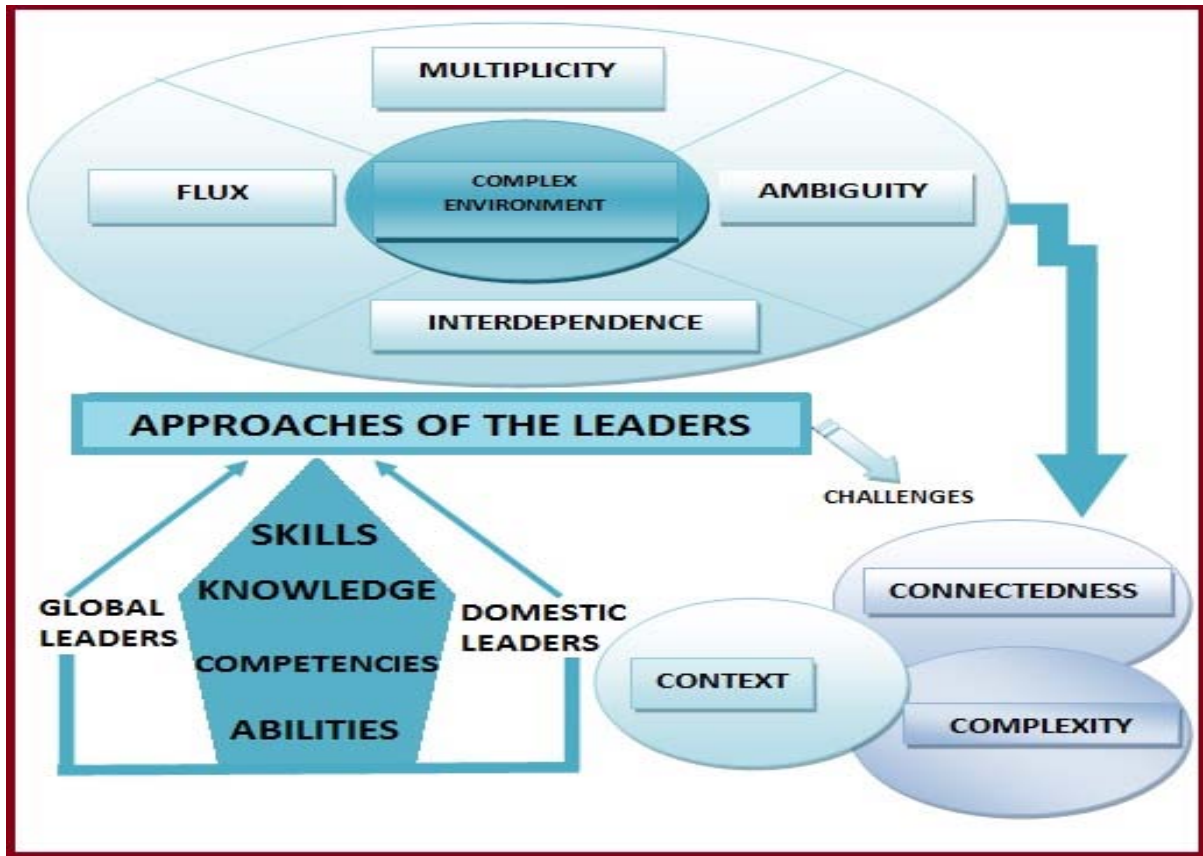


Figure 1: Self-constructed framework for addressing the research question

In order to create a comparison amongst leaders, this study is divided into five sections. In the first section, we provide a comprehensive literature review on global leadership through considering the concept of leadership, global mind-set, global leaders' competencies and complex environment framework including context, connectedness, and complexity. In the second section, we discuss the complexity in global paradigm in order to unpack the difference between global and domestic leaders. In the third section, we compare domestic leaders and global leaders in e-retail industry, fourth section includes the overall discussions for this study and finally in the last section there is conclusion and recommendations.

## II. CONCEPTUALISATION OF LEADERSHIP

According to Antonakis et al., (2004) in social science discipline, leadership is regarded as most widely studied phenomena. "Leadership is influential process of making others do things that are required of them in a right manner by ensuring that individual and collective efforts are supported to attain mutual objectives" (Yukl, 2006; P. 08). On the other hand, Northouse (2010) explained leadership as, "a management's practice to achieve mutual aim by motivating group of individuals through one person" (P. 03). From early leadership trait theory (Cowley, 1931) to

modern fourfold leadership typology (Grint, 2005) there is vast literature available on leadership however Western (2013) concluded that, various types of leadership definitions indicate towards four key attributes that are (a) Leadership emerges in group framework, (b) It involves influencing others, (c) It is a process, and (d) leaders and their follows share common interest therefore work for common aim. Nevertheless, Haque et al. (2015) investigated the domestic leadership in cultural-oriented workforce but there is no conclusive evidence regarding a comparison of contrasting leaders. These attributes are common for both domestic and global leaders. However, global leadership as a concept must be explored since it requires a broader perspective in comparison to the domestic leadership.

Harris, Moran, & Moran (2004) stated that, although there is no one single agreed definition about global leadership but it can be explained as acquiring the skills and capabilities to work in global setting efficiently while considering adequately attributes of cultural diversity. On the other hand, Osland, et al., (2007: P. 2) explained global leaders as, "individuals who effect significant positive change in organizations by building communities through the development of trust and the arrangement of organizational structures and processes in a context involving multiple cross-

boundary stakeholders, multiple sources of external cross-boundary authority, and multiple cultures under conditions of temporal, geographical and cultural complexity" (cited from Mendenhall, et al. 2012; P. 41).

In short, domestic leaders operate within home boundary whereas global leaders operate boundary less (globally).

In a broad perspective, the skills and capabilities to execute and perform certain tasks are denoted as overall leadership competencies. It is a general notion considered that better performance within the organisational setting will be brought by a competent leader (Qureshi, 2013). Berke, Kossler, & Wakefield (2015) stated that, in order to understand the competencies of leader, a leadership competency model suggested by Creative Centre for Leadership (CCL) is effective as it supports competencies in three important areas including, "leading yourself", "leading others", and "leading organisation" while each competency zone is elaborated through specific competencies. To narrow down the competencies of a global leader, it can be stated that individual having the capability to work in dynamic environment with attributes of diversity, globalization, and complexity (Qureshi, 2013). However, Hazucha et al., (2012: P. 219) argued that, "global leader is a leader therefore abilities and roles performed by domestic and global leaders are similar to large extent".

### III. COMPLEXITY IN GLOBAL PARADIGM

In theoretical manner, it appears that there is not much difference between domestic and global leaders but in practical, there is a fine thin line that differentiates these two types of leaders. Some of the key features that have drawn this thin line include; cultural awareness, competencies, approach of performing tasks, and mindset respectively (Qureshi, 2013). Now, above features can be argued that, any domestic leader can develop one or all of these features with the passage of time so what else could be a reason that would make a leader global and others not. Simply, the complexity level is a reason that differentiates global leaders from domestic leaders in organisational settings. Complex environment could be understood by differentiating between complicated and complex environment. In complicated environment, features operate in patterned manner and interaction between them is also in consistent manner but in complex system features though operate in patterned manner but the interaction between attributes is constantly changing.

Increase in complexity is one constant element that drives global leader to strive hard to deal with it and survive in operating dynamics. In a global paradigm, complexity is apparent relative feature which exists and in order to survive and function in global paradigm,

global leaders have to manage it in effective manner. This is where competencies and role of global leaders come in framework. In other words, to manage complexity in global paradigm, role and competencies of leaders are effective instruments.

Lane, Maznevski, & Mendenhall (2004) explained in global complexity framework that there are four elements namely; ambiguity, interdependence, flux, and multiplicity. These four conditions communicate constantly in multi-dimensional manner and goes on to multiply the impact of variables emerging inside as well outside environment (ibid). As a result, leads to create preserves along with persistently altering complexity across the globe (ibid).

#### a) *Multiplicity*

Multiplicity dimension of complexity refers to practical stance where global leader certainly encounters it while they are performing their jobs (Qureshi, 2013). In simple terms, it is frequency of potentially interacting elements. It is linked with their job roles thus they are required to manage, control, and compete with it. Hence, complexity is not purely conveying that global leaders are handling the large frequency of people from different setups in contrast to domestic leaders but it is inevitable condition that is part of their routine tasks and it continuously multiply when mixes with other issues (Lane et al., 2006).

#### b) *Interdependence*

Lane et al., (2004) stated complexity's second dimension is interdependence which specifies that people, knowledge, capital's connectivity, and international movements in rapid manner. Since no one is self-sufficient and cannot commence in isolation whether it is individual, group, or any organisation therefore the condition of interdependence occur. Nowadays, with the advancement in modern technology, organisations, sectors, and countries are rapidly connecting with one another (Qureshi, 2013). According to Lane et al., (2006), organisations are now understanding that in order to sustain competitiveness, they should penetrate interdependent activities and engagements through networking, outsourcing, and alliances so that current value chain continue to create value or sustain price-competitiveness.

#### c) *Ambiguity*

In complexity framework, ambiguity is third condition. It is not just limited to uncertainty but involves inability to understand and infer information in sophisticated manner, which leads to delay in prompt action. "equivocality, nonlinear connections, and lack of accurate data are variables that are closely linked with ambiguity and lead to further enhance complexity" (Lane et al., 2006). Equivocality is resultant of unavailability of precise data and negation of linear relationship reflecting the situation where facts are not simple and various explanations can be made about facts (Meiss,

1995; Lichtenstein & Mendenhall, 2002; and Lane et al., 2006). This is a common situation that global leaders encounter in their routine jobs whereas domestic leaders are facing the lower level of ambiguity on scale of operations (Lane et al., 2006).

#### d) Flux

Flux is last dimension of global complexity indicating that it is condition where everything is in constant change (Lane et al., 2006). The whole universal system is moving constantly thus there is persistent fluctuation, and at times it seems like the fluctuation is changing at a high rate at continuous rate. Hence, when all these elements of complexity are combined, the multiplier impact is created that has been explained as; dynamic complexity = ambiguity x interdependence x multiplicity x flux (Lane et al., 2006). Theoretically, the mentioned equation indicates that complexity is inherent with the global leadership framework. From theoretical perspective, it is clearly evident that, complexity is a key factor that differentiates global leadership from domestic leadership.

Now, as complexity exists in global paradigm which means additional competency is required by global leaders to deal with it on a global stage. 'Global mindset' is additional competency that gives global leaders advantage over domestic leaders in complex environment, especially to deal with all four attributes of complex environment.

### IV. DOMESTIC LEADERS AND GLOBAL LEADERS IN E- RETAIL INDUSTRY

The business scope is limited for domestic leaders in e- retail industry therefore the style of management is traditional as store operation's format and business model for them are conventional type (Mott, 2014). Conversely, global leaders' uses contingent style of management due to design and structure of store format and operations are multidimensional to large extent (Mott, 2014). Moreover, the uniformity is a key competency demonstrated by domestic leaders in e- retail businesses while global leaders have high versatility in their approach (McNulty, 2013). This shows global leaders and domestic leaders have contrasting skills when operating in industry. However, there are various cases where domestic as well global leaders (Menhendall et al., 2008) demonstrate both types of skills.

According to Gitsham (2012), some of the biggest challenges that global leaders face in e- retail industry include; developing awareness about existing cultural differences, understanding regional population's preferences and norms, and creating strategic plans to ensure smooth operations. However, same study argues that, both domestic follows the similar types of procedures and global leaders to ensure bottom line performance of workforce improve. In addition to that,

domestic as well global leaders facilitate workforce by monitoring and communicating with them (ibid). Thus, this reflects that domestic and global leader perform Mintzberg's informational role in organisational setting. According to Mintzberg managerial roles; managers in organisational settings to ensure effective management perform ten behavioural roles. Those roles are combined into three roles namely; interpersonal, informational, and decisional roles. While interpersonal role provides information, informational role processes the information and decisional role uses the information.

Therefore both global and domestic leaders demonstrate managerial effectiveness through informational roles however global leaders are more effective in contrast to domestic leaders when dealing with the challenges of leading and inspiring other and training workforce to be more competitive in understanding cross-cultural awareness. In addition to that, Menhendall et al., (2013) argued that global mindset is vital to increase cross-cultural awareness.

Nevertheless, the work of Gitsham (2012) suggests that, comprehensive understanding of procedures and functionality of business is essential for global leader to ensure swift operations. In other words, global leader while operating in global consumere- retail industry have a global mindset that means competency to completely understand the local procedures undertaken by business while operating in certain environment. Moreover, in order to be effective, global leaders require in-depth knowledge about direct commerce and multi-channel e- retail operating in local regional areas (ibid). Hence, it is also the responsibility of top management of the organisation to ensure those strategic merchandising plans are designed in accordance with the relevant systems of the region.

McNulty (2013) argued that, global leaders when commencing their operations in e- retail sector should not neglect regional store formatting. To further establish his point, McNulty (2013) consider the case of Korea's e- retail industry where 3000 sq/ftp would be considered a large-scale operation in comparison to USA where same area would fall under medium size scale operations. Thus, in case of Korea's e- retail industry, aforementioned area would be requiring efficient transportation operations as region would be regarded as higher price point (ibid). This also indicates that, due to regional geographic complexity, the approach of global leaders needs to be flexible and adaptable as per strategic plan's requirement. Cohen (2010) stated that, the operational style of global leader in accordance with the region needs to be adaptive.

Li (2015) argued that in organisational settings, domestic leaders perform role of mediator while global leaders is involved in maintaining ethics and global standards at international workplace. Interestingly, Gitsham (2012) concluded that, flexibility and adaptability are two different attributes. Adaptability

means ability to adapt or get accustomed whereas flexibility indicates adjusting in accordance with requirements. The work of Gitsham (2012) revealed that, domestic leaders demonstrate flexibility while global leaders exhibit high level of adaptability. Furthermore, it is evident the domestic environment expansion is affected in indirect manner when organisations decide to expand its operations in global environment. The ability to understand operations as part of whole strategy is core competency of global leaders in e-retailing and manufacturing sectors (ibid). Nevertheless, global leaders face huge challenges post by rapidly changing political, socio-economic, and technological environment. Moreover, global leaders are effective when it comes to sustaining competitiveness through strategic planning.

Furthermore, Cohen (2010) argued that domestic leaders when operating in their specific regions usually undertake traditional operating system. This, indicates that, domestic leaders approach is mostly single dimension as they prefer to operate with same traditional operating system while global leaders may not remain effective if uses same traditional approach. Interestingly, this argument also reflects that to certain extent, while operating in e-retail sector, consistency is the core competency of domestic leaders to ensure effective operations while global leaders require adaptability as an important competency to make sure operations are running in effective and smooth manner. However, to large extent Mintzberg's (1994) identified role of 'innovator' is required competency by leaders to ensure effective operations and global leaders are using it more frequently due to context, complexity, and connectedness.

Moreover, domestic and global leaders face challenges in the e-retail business include; sustaining presence and availability of inventory (McNulty, 2013). In addition to that, Lane & Wallis (2009) argued that presence sustainability and inventory's availability are challenges for domestic leaders are limited to specific region while on large scale global leaders address these challenges. This means that, global leaders have to ensure that online and in-hand deliveries, customer engagement at all stages from product launching to feedback, and accessibility and availability of inventory to consumers through diversified channels are maintained in right way.

In addition to that, in global context, global leaders have to ensure product's demand and market is greater among the consumers because of large investments done in international and global market. Therefore, in e-retail sector, domestic leaders and global leaders role may appears to be similar to large extent but in terms of scope global leaders' role is higher than domestic leaders because of the complex business environment. Moreover, maximization of revenue and growth in market share is prime objective for

organisations to expand on global platform (Capegimi, 2012). Since, companies are moving its operations in global market where operations are significantly dynamic and different than domestic operations (ibid). Cohen (2010) argued that domestic leaders are most commonly linked with management of local workforce and their issues in e-retail and manufacturing industry.

According to Leslie et al., (2002), domestic leaders are more found in action role of Mintzberg's managerial roles. On the other hand, Cohen (2010) stated, global leaders' role is evident in strategic policies and conceptual model implementations. In addition to that, Mendenhall, et al., (2008) argued that internal experience and exposure are not leading to global managerial effectiveness but stabilizing emotions, decision-making, and negotiation are effectiveness managed by them in comparison to domestic leaders.

In addition to that cosmopolitan leaders are not seen as most trusting individuals as peers. Colleagues do not confide in their bosses, as perceptions of bosses (Leslie et al., 2002). McBer & Company (1995) conducted a research by interviewing fifty-five CEOs from Manufacturing, I.T & Communication, Engineering, & E-retail Industry to examine job role and it was confirmed that global and domestic leaders share similar platform in most of managerial tasks however, global leaders have additional responsibilities. Furthermore, 'driving for success', 'building commitment', and 'sharpening focus' are three competencies that are demonstrated by domestic and global managers (Mendenhall et al, 2008).

## V. DISCUSSIONS

The work of Mott (2014) showing the scope of business is determining factor in differentiating between domestic leaders and global leaders in the consumer-retail businesses as domestic leaders are mostly following traditional management functions as style and scope of business is limited to format of store operations while global leaders use contingent approach due to multi-format structure and design.

The challenge to remain effective is tackled by global leaders in complex environment through contingent approaches more adequately due to global mindset. In other words, in flux condition, global leaders are effective in attaining organisational objective in comparison to domestic leaders. Global leaders more effectively in contrast to domestic leaders deal the e-retail sectors' challenges in global context.

As also the study of McNulty (2013) shows that global leaders demonstrate high versatility whereas uniformity is key competency of domestic leaders. For instance, Kozai Group and View Sonic introduced 'Global Competency Inventory' and oracle to be more versatile in its approach whereas operations. Hence, when patterned work is going on, domestic leaders are



effective but as there is change in situation, global leaders are effective to ensure versatile approach is used. Especially in situation of ambiguity and connectedness, global leaders are more suitable for the organisations to attain its objectives. For instance, General Electronics' global leader - Jack Welch was more versatile in his approach to deal with ambiguity and connectedness. It means that, global leader having global mindset is versatile to deal with complex situation in contrast to domestic leaders. This also reflects that, 'change' as global leaders through versatility negotiate identified challenge in aforementioned literature.

According to the work of Gitsham (2012) in e-retail businesses, global leaders are facing bigger challenges of understanding cultural diversity and regional preferences so that overall strategic planning is done to have swift operations. Aim of both leaders; domestic as well global leaders work to ensure improvements in operations are to increase revenue for the organisations. Mintzberg's informational role including; communication and monitoring is evident by global as well domestic leaders in e-retail businesses however in complex environment where organisation is facing the challenges of globalization, context, connectedness, and cross-culture awareness, global leaders are more effective in comparison to domestic leaders in consumer-retail businesses. The challenge of e-retail industry is to remain competitive in the complex business environment is one significant factor that requires global mindset. This is a situation where global leaders have an advantage over domestic leaders.

IBM's example is undertaken where Sam Palmisano opted to make IBM a global organisation in 2008. To develop worldwide-incorporated enterprise, instead of opting for "one-size-fit-for-all" training programme, organisation came up with tailored leadership training programme for employees working at different level of the organisation. The objective behind this move was to create cross-cultural awareness among workforce operating at difference levels by facilitating them to have access to global resources and giving them knowledge about world issues thus present findings support the work Mendenhall et al., (2013) that cross-cultural awareness is attained through global mindset. However, It doesn't mean that domestic leaders cannot become global leader at any stage because domestic leader can always develop global mindset through interaction with complex attributes in environment whereas global leaders requires skills to embrace host countries' various attributes.

The organisation aimed to enhance cultural intelligence of employees by providing them managerial level training and managers were given opportunity to communicate across the culture however; this does not mean that those employees or managers were dealing

with the complexity that is faced by global managers. Hence, complexity is one consistent feature that determines the effectiveness of global leaders in comparison with domestic leaders as global leaders are performing managerial roles with global mindset to deal with the challenges of cultural diversity and globalization.

As supporting the notion of the study, Gitsham (2012) explains that global leaders are effective when they understand the functionality and procedures of business while operating in local environment. In global consumer e-retail businesses, global mindset enables global leaders to develop comprehensive understanding of local procedures in a constructive manner. However, there is no evidence that domestic leaders are anywhere less effective than global leaders when it comes to understanding local procedures because domestic leaders are more effective due to local mindset to understand the procedures. Competencies and skills are vital for dealing with challenges in operating dynamics.

Despite these arguments, when situation arises where organisation faces flux on regular basis than global mindset which appears to be more effective. In addition to that, consideration of relevant systems operating in region is vital, as organisation requires planning strategic approach to ensure organisational objectives are attained. In other words, the managerial role (Liaison & action role) identified by Mintzberg are likely to be achieved by global leaders through global mindset.

According to the argument of McNulty (2013) in such situations where global leaders are operating in host countries, they must consider regional store formatting in e-retail businesses. The example of Korea's e-retail industry is useful example to explain that regional formatting is essential for global leaders to consider when operating in any other region from home region (Cohen, 2010).

Example of Korea and USA e-retail industry in literature part also reflects that, global leaders have the competency of global mindset that makes them more adaptive when it comes to implementing procedures in local settings. The domestic leader can work as facilitator but knowledge, skills, and abilities of global leader in assessing and scanning environment is more valuable in transforming businesses in contrasting environments.

Domestic leaders are usually commencing traditional operating system when working in specific region (Cohen, 2010). For instance, BMI research report showed Daw lance operating in Pakistan is using traditional operating system to deal with suppliers and wholesalers. Thus, it can be argued that, global leaders are more multi-dimensional in approach in contrast to domestic leaders. For instance, Panasonic operating in Indonesia continuously change their way of interacting

with the local vendors through 'Indosat'. Thus, Cohen's argument is supported by present study that domestic leaders have consistency in approach when dealing with stakeholders whereas global leaders have adaptability.

In addition to that, global leaders demonstrate the role of 'innovator' (Mintzber's role; 1994) when dealing with the issues of context, connectedness, and complexity.

Both domestic as well global leaders require interpersonal skills (McNulty, 2013). However, domestic leaders are more in focus when they are dealing with lower level managers but their expertise are not limited to only sales growth in regional sectors as sales training and customer care is also their area of focus. By considering the example of Payless Pakistan Consumer Electronics where interpersonal skills especially training of employees are more the role of domestic leaders (Miller & Gisham, 2013). On the other hand, the findings of McNulty (2013) are also evident that strategic planning is an area of global leader's prime concern. For instance the case of Ricoh Japanese consumer electronic company demonstrates the global leader was involved in the decision of buying AnaJet, which shows the global leaders' ability to evaluate market dynamics in the situations of multiplicity and flux. The acquiring of Anajet will enhance the number of potentially interacting elements for Ricoh and this is the situation where context is being considered through global mindset.

In addition to that, sustaining presence in market and inventory's availability are challenges faced by domestic as well global leaders (McNulty's, 2013). Moreover, domestic leaders are facing challenges limited to specific region while challenges of similar types become complex due to ambiguous situations for global leaders (Lane & Wallis, 2009).

Global leaders are also performing similar managerial roles so it is not only domestic leaders who only acquire workplace knowledge, ability to coordinate, and skills to make things happen while operating in e-retail business but global leaders are also performing these tasks on broader level. This can be stated that domestic leaders are effective in traditional managerial roles whereas global leaders are more involved in overall strategic management because these tasks are complex requiring high flexibility and adaptability.

Therefore, the challenge of resolving conflicts and issues in e-retail industry require the competency and skills of leaders. These issues and conflicts may require the skills of inferring from the information and at times too much information may overburden the leaders to find a solution. In other words, operating in global environment means large information is available and at times, it is difficult to infer right information to use. It is a situation where leaders in businesses face high level of ambiguity.

Interestingly, Roberto (2002) argued that, global leaders rely on following the best practices that have

already being demonstrated by successful organisations when they face the situation of uncertainty and ambiguity. In order to support his statement Roberto (2002) gave an example of Jack Welch, CEO of General Electronic who altered business procedures of GE that resulted into huge profits. Welch along with his management considered 20 organisations that have increased its productivity in comparison to GE and eventually GE adopted Hewlett-Packard and Chrysler's innovative product development strategy while Wal-Mart's Quick Market Intelligence strategy was also considered (Roberto, 2002). This perspective strongly suggests that global leaders have the tendency to imitate strategic move that is being used by successful firms when come across ambiguous situation. On the other hand, domestic leaders mostly follow the basic methods linked with routine structured tasks. Thus, this strongly reflects that, global leaders are more effective than domestic leaders in situation of ambiguity.

It is evident that in domestic consumer e-retail industry, domestic leader is required to have good relation with vendors and manufactures because communication and negotiation skills are essential for them. This reflects that, action roles (Mintzberg's managerial role) performed by domestic leaders is frequently observed. The similar notion is also supported by work of Leslie et al., (2002) that domestic leaders are involved in action roles. In consumer e-retail businesses, domestic leader more often performs action role. The research report of BMI reflects BECO - Bscharwut Electronics Co Pakistan is an example of action role is performed by domestic leaders.

In the situation of multiplicity where frequency of likely interacting attributes increases. As the organisation grows, the managerial roles are not confined to small number of stakeholders but the numbers of stakeholders multiply at constantly changing rate so decision-making, negotiation, action roles, communication, and even emotional stability are to be ensured by leaders. This is where global leaders have edge over domestic leaders. For example Siemens AG - global engineering powerhouse has multiple stakeholders as it operates in more than 190 countries with more than 400,000 employees. Thus, the multiplicity condition is high for this company and therefore it operates with global leaders because global leaders through knowledge, skills, and abilities in complex environment perform all aforementioned roles (Cohen, 2010).

Remaining competitive and sustaining position in market gives a global leader edge over domestic leaders (Li, 2015). For instance, two e-retailing giants, 'Sony' and 'IBM' decided to stay competitive in business through mutual pacts. This is a decision taken by the global leaders of these organisations as knowledge, expertise, and information is shared thus interdependence is a condition that can be handled by

global leader more often in comparison to domestic leaders.

Moreover, it shows that global leader's role is more dominant when it comes to sustaining competitiveness in global context. In addition to that, the role of mediator in such situations could be effectively played by global leaders however, domestic leader's expertise are valuable to be considered when opting for mutual pacts as they are included in the interdependence condition to certain extent especially in addressing the challenges of drive, communication, and strategies in e- retail industry.

On the other hand, daily routine tasks and quality assurance is domestic leaders' managerial role while similar task is carried out by global leaders in broader spectrum so that quality meet consumer's demand and more than routine task, high level complex tasks are accomplished in strategic manner (Gitsham, 2012). The example of Pakistan Eltron Limited for domestic leadership where regional managers are responsible for quality assurance is assistive to this idea. On the other hand, Circuit City and Heir electronics Chinese e- retailers have included consumer demand quality in strategic roles where global leaders are involved in action role. Thus, when situation of flux arises, especially consumer's demand for quality is constantly changing than it is global leaders more effective in contrast to domestic leaders.

In addition to that, domestic leaders are more effective in handling disturbance and conflicts with manufacturers and vendors in e- retail sector while global leaders are more effective in handling the trends and analysis of entire industry along with interlinked sectors. This indicates that domestic leaders are only focusing on informational role like monitoring, disseminating, and speaking/communicating with concern parties while global leaders' informational role exceed in e- retail industry by using the same role during the vertical production chain not only in the specific region but interlinked setups. However, global leaders heavily rely on domestic partners and leaders' collaboration for successful operations. It is because; domestic environment is affected by global operations therefore global leaders need to ensure that strategic planning is done according to the domestic prevailing environment.

## VI. CONCLUSION AND RECOMMENDATIONS

To sum up, managerial reality has increased in terms of complexity with the passage of time thus previous managerial models became inadequate to deal with increasing complexity. Moreover, four conditions of complex environment include; multiplicity, interconnectedness, ambiguity, and flux respectively. While operating in complex environment, organisations face the challenges posed by these aforementioned

conditions and in order to remain effective, the role and competencies of the global and domestic leaders are contrasting but both have certain advantages as well limitations to e- retail businesses.

Informational role, interpersonal, and decisional roles are carried out by both domestic and global leaders but 'global mindset' is additional attribute of global leader to work effectively in diversified and cross-cultural environment therefore global leaders are more suitable in dealing with issues of complexity, connectedness, and context. There is no denial that in certain areas especially in local setups, domestic leaders have strong advantage over global leaders because they are more familiar with the culture, norms, and traditions in commencing routine structured tasks. However, as organisations decide to move on the scale from local to global platform, things start to become more complex which requires not only knowledge, skills and abilities but also a global mindset of a leader to carry out tasks, especially strategic tasks.

Global mindset enables leaders to be flexible as well adaptive by using contingent approach. Moreover, domestic leaders are effective in routine structured tasks due to limited management scope while global leaders are most suitable when non-routine structured tasks because the scope of management is not limited to traditional functionality. Especially, when number of potentially interacting attributes increases in the environment and there is situations of interdependence than global leaders are more adequate in performing informational, interpersonal, and decisional roles. In addition to that, when procedures and features are interacting constantly in environment and information is available in bulk manner, as per required situation 'suitable practice' is undertaken by global leaders which give advantage to them over domestic leaders to deal with challenges of retail industry.

Global leaders have versatility to work in interlinked setups but the importance of domestic leaders cannot be ignored as they can be significant by being facilitator to global leaders to understand and effectively operate within the environment. Thus both leaderships are effective however in complex environment global leaders have slight advantage over domestic leaders in dealing with various challenges retail businesses.

Based on the aforementioned discussion, following recommendations may improve the chances of consumer e-retail businesses to overcome the complexities and challenges in the e- retail industry through effective leadership:

Embracing rooted cosmopolitanism will be beneficial for global leaders instead of displaying global citizens' image while dealing with complexities in consumer e- retail businesses. Connecting with counterparts and domestic leaders will be effective as it will be a win-win situation for both leadership; domestic

leaders will nurture knowledge, skills and abilities under their wings and in return culture of region will be embraced by global leaders to ensure organisation benefits in long run. In addition to that, global leaders would be more effective in performing their managerial responsibilities when identify host as well home cultures in positive manner because by being global leaders break free from one's roots and emerge everywhere with symmetric attachment.

Only experience is not enough to make leaders effective in global environment therefore development of global mindset is essential requirement. For this purpose, it is essential for global leaders working in consumer e- retail businesses to consider the attributes required to shape global interactions by evaluating cross-country differences and their effects. In order to do so, global leaders should be connected with domestic leaders because domestic leaders have more knowledge about host country's culture. The creation of environment that supports global mindset is essential as it will enable the organisations to overcome the challenges faced by them in operating dynamics.

The competencies of global leaders should not be limited to focusing on cultural differences, as it is essential for the organisations to train their global leaders to understand administrative, economic, and political differences. The awareness about the slow versus fast-growth market, state intervention, etc should be explained to them so that global leaders are familiar with context and connectedness. Thus, domestic leadership should be used by the organisations to facilitate global leadership especially in distinct and unfamiliar context.

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# The Reality of Algerian Universities Doctoral Students Configuration

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**Abstract-** Algerian higher education institutions know rapidly enrolment in institutions of the sector, which was reflected on the relative increase in enrolment in doctoral programs, especially after the adoption of the reform of higher education system in accordance with the Bologna three-cycle approach (License, Master, Doctorate “system LMD”). Therefore, through this article, we will try to provide detailed information about the reform of higher education system in Algeria to focus on reforms affecting doctoral programs. Also we will try to analyze reality Configure of doctoral students at the University of kasdi merbah Ouargla under transition and coexistence with doctoral programs in classical systems (doctorat of science) and new (doctorat LMD) highlighting the most important methods to evaluate, monitor and follow up the progress of the research work of doctoral students at the same University, in order to identify the problems hindering the completion of doctoral theses on time, and at last we will try to build a conceptual model that reflects our workflow system configures doctoral students in the light of our analysis and provide Conclusions, and recommendations will benefit both the Government and decision-makers in higher levels at Algerian universities, and students enrolled in doctoral programs now and later.

**Keywords:** *institutions of higher education, an algerian university, doctoral students, configure doctoral students.*

**GJMBR-G Classification:** *JEL Code: I29*



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# The Reality of Algerian Universities Doctoral Students Configuration

## Conceptual Model for System Configuration of Doctoral Students at the University of Kasdi Merbah-Ouargla

Dr. Imane Bebba<sup>α</sup>, Dr. Abdelhak Bentafat<sup>σ</sup> & Sulieman Ibraheem Shelash Al-Hawary<sup>ρ</sup>

**Abstract-** Algerian higher education institutions know rapidly enrolment in institutions of the sector, which was reflected on the relative increase in enrolment in doctoral programs, especially after the adoption of the reform of higher education system in accordance with the Bologna three-cycle approach (License, Master, Doctorate "system LMD"). Therefore, through this article, we will try to provide detailed information about the reform of higher education system in Algeria to focus on reforms affecting doctoral programs. Also we will try to analyze reality Configure of doctoral students at the University of kasdi merbah Ouargla under transition and coexistence with doctoral programs in classical systems (doctorat of science) and new (doctorat LMD) highlighting the most important methods to evaluate, monitor and follow up the progress of the research work of doctoral students at the same University, in order to identify the problems hindering the completion of doctoral theses on time, and at last we will try to build a conceptual model that reflects our workflow system configures doctoral students in the light of our analysis and provide Conclusions, and recommendations will benefit both the Government and decision-makers in higher levels at Algerian universities, and students enrolled in doctoral programs now and later.

**Keywords:** institutions of higher education, an algerian university, doctoral students, configure doctoral students.

### I. INTRODUCTION

Currently, universities face daunting challenges due to continued growth in national and international competition in the University sector, added to the high demands of stakeholders. In many countries, we note a change in policies of higher education, moving from State-controlled systems historically towards University embrace systems in accordance with the autonomy, accountability and quality assurance based on benchmarking with similar institutions.

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Algeria, the same as if a State is not isolated from the outside world, it must keep pace with changes in their environment, both internal and external. And that the Algerian State had planned to implement a series of reforms which are essential for the path of establishment and evolution of Algerian University Institute in terms of their organizing, and their curricula since independence to the present day. This is evident through the definition of Algerian universities according to regulatory decrees known as follows: ' Algerian University is a public institution of a scientific, cultural, moral nature, and personality and professional financial independence' (law, No 900-5).

With the wave of reforms that have touched the higher education system in Algeria, universities faced many challenges arising from increasing enrollment of students in doctoral programs in recent years. Making the Algerian universities engaged in an initiative to promote graduate programs in various scientific and theoretical fields. This study discusses how Algerian universities dealing with strategies for configuring, monitoring and evaluation of doctoral students to meet the challenges of maintaining quality and improve the timeline for completion of graduate programs. based on above the study problem may be formulated as:

What is the reality of Configuring of the doctoral students in Algerian universities and what problems they face?

The subsidiary questions:

1. What are the strategies should be implemented for the configuration in the doctorate in Algerian universities?
2. What are the problems of doctoral students in Algerian universities and impeding scientific research completed on time?
3. What causes these problems?
4. What are the solutions and proposals to address them?

### II. STUDY METHODOLOGY

#### a) Historical Approach

To track and analyze the major developments and reforms which known by the Algerian university,

focusing on graduate degree (MS, MD, PhD science LMD system).

#### b) *Descriptive Ethnography*

or balathnologia meta we describe and analyse the strategies used to configure and evaluate the progress of research work of doctoral students, the nature of this study we adopt ethnographic approach to that inquiry and research curriculum aim not to reach the ultimate truth about the study, but strive to highlight the problem which can be exacerbated in the future under the steady on doctoral programmes at universities. The researchers will describe the phenomenon, analysis, and tracking patterns and make conclusions, appropriate signs, after diagnosis of the nodes, and problems involving the phenomenon. This curriculum includes the field research idea, done by the alathnologi researcher in the context of his relationship in the field. So the ethnographic researcher duty becomes important as the descriptor and evaluator of habits and behaviors and reactions of people or groups involved in the specific problem, and in certain contexts.

### III. STUDY TOOL

Secondary data was collected through statistics of the Ministry of higher education and University kasdi merbah-Ouargla, primary data through direct observation, interview is not destined for some doctoral students (LMD system) University of kasdi merbah Ouargla anonymously.

During the time we spent at this University, focusing on the period from October 2012 to mid April 2015 we trace the behaviors, practices and discussions and interactions, reactions and automated communications, formal and informal meetings that affect the formation of students PhD (LMD system) in kasdi merbah Ouargla university. So we chose our search methodology should be located between the borders of qualitative research which is considered a benchmark or devising tricky, no hypotheses ready beforehand in the mind of the searcher, but there are certain phenomena in the intellectual format, the path is unclear, unspecified controlled phenomenon largely without prior prediction results And the endings that will reach her and this just to understand the problem and only between procedural and quantitative research designed to understand and participate in the change process of configuring graduate students better, our study supported by some statistics available during the previous and current years.

### IV. PREVIOUS STUDIES

#### a) *A study of ghina traf (2003) titled: 'graduate issues in Syrian universities from the viewpoint of masters and doctoral students*

where the researcher addressed the problem, the importance of study, its methodology and tools, and

provided the most important results of some previous studies Arabic and foreign, in order to answer the study questions, the researcher used a questionnaire which was distributed to a sample of graduate in colleges in four universities (Damascus-Aleppo-Teshreen-Al-Baeth), through analysis of the results she found that the main problems faced by graduate students are:

- Insufficient finance available to student;
- The length of time in choosing a topic;
- Slow administrative procedures regarding the registration of the subject of the study;
- No plan outlining the proposed research topics recorded for masters and doctoral degrees;
- Periodicals to identify address themes of graduate studies abroad, and length of time in completing the study;
- The supervisor does not have the time to meet with students and guide them and lack of research means;
- Government spending less than graduate requirements;
- Lack of graduate management organizational structure;
- Lack of contribution of the private sector in funding graduate studies;
- Poor graduate students in foreign language.

#### b) *Study by Yasmena khednh (2009), entitled ' reality configuration of graduate students at the University of Algeria*

Came about as an attempt to shed light on the configuration of University graduate students at the University of Algeria through case study University of mentouri-Constantine-. Developing the theory explain the problem in detail, various procedural concepts specific to the problem to be resolved, as was the signal to some models of universities in the world, and then address the Algerian League concept and how it has evolved and strategies conduct. In the last chapter the findings were analyzed after compiling 140 questionnaires and last reached the following conclusions:

- Algerian universities through a case study of mentouri University still maturing in terms of development and underscore the programs and courses to graduate students in the first gradient (MA), these programs that will set up an efficient framework that expects him to be a professor or an administrative framework on capacity and efficiency of High scientific and Steering;
- graduate student in the first gradient (MA) at the University of Algeria, seeks to improve the cognitive level, but the circumstances surrounding it does not help him on that (lack of references-social conditions. etc.);
- teaching methods and styles of evaluation followed in Algerian universities through mentouri University



status, still ineffective and historicist to set up efficient framework it fills the minds of students with information and do not leave them much room for creativity and self-reliance and pursuit of creative scientific research and renewed;

- some blur in the application of the processes needed to develop Algerian University University configuration, these processes which are the primarily for teaching methods followed and the applicable evaluation and programs, and still inadequate to catch up with scientific development occurring today in the world.

c) *Study (team of consultants, 2010) on the organisation of doctoral programmes in EU neighbouring countries- Algeria*

This study addresses the realities of organizing doctoral programmes in neighbouring countries of the European Union, and highlight the case of Algeria, have been through this study address feigned decisions and decrees governing doctoral training in Algeria, as well as statistics about doctoral programs provided, Training duration, funding, status of the doctoral candidates, their rights, their acceptance, supervision and monitoring and evaluation. In the latter study found the strongest challenge which will face Algeria for PhD programs is shifting towards new regulations PhD configuration (System LMD) that Algerian universities currently cohabitation parallel models for graduate studies making this configuration a very complex process stage. As the study found that the key to success lies in the ability of universities to set up appropriate administrative procedures and provide faculty members responsible for overseeing future doctoral candidates. Add to that the study shed new problem is how university administrators can control the average time to finish doctoral programs as specified in the legislation (3 years).

## V. STUDY VARIABLES

a) *Higher education definition*

The first definition: tertiary education provided by universities, or any other recognized circular Foundation, leads to a diploma (or) BSc (Bachelor's degree), or higher level qualification.

The Second definition: higher education means each style of composition or configuration for search offers post secondary education level by institutions of higher education, formerly ensures higher education higher configuration: higher gradient of composition (BA long, short range); higher configuration Beyond the gradient (MS, PhD), and contributes to the ongoing configuration. Since the year 2008 became the Algerian higher education in higher configuration ensures very clear legal studies in three phases.

b) *University Definition*

The first definition: a higher education institution, a number of different disciplines and faculties which normally granted degree (BA – Bachelor – master – doctorate), academic courses with high standard. Some universities also offer vocational education and training courses.

The Second definition: public institution of a scientific, professional, and cultural moral nature, with a personality and financial independence, established by Executive Decree upon the proposal of the Minister of higher education, and placed under guardianship, this Decree also specifies the number-based constituent colleges and institutes and competence. The University holds higher configuration task, and scientific research and technological development.

University is a scientific institution of higher education with a mission of scientific research and providing service to the community and the environment, have legal personality and financial autonomy, composed of colleges, institutes and various departments. At the end of first class degrees and postgraduate degree certificates.

c) *University Student*

The first definition: Registrar for degree in accordance with the regulations adopted by the institution of higher education.

The Second definition: a student, every candidate for a certificate of higher education (diploma) systematically recorded in an institution of higher education, which require enrollment at least bachelor. Students benefit from education, research and the dissemination of knowledge and of cultural and sports activities.

Thus we can say that undergrad is everyone managed to pass the test at end of high school and fulfills scientific competence by this certificate goes to College, according to his specialty. Student can be defined as that of university educational process inputs which are expected to be high quality outputs correspond to the labour market.

d) *Reality*

Wright defines reality as a sociological imagination which connects facts ideas creative link within the dialectical process allows the seeker – simultaneously – approach and avoids the phenomenon of study.

Marxist thought looking at reality as a holistic concept is to detect relationships between things that may seem far apart and Marx referred that reality is man made and that this fact must accommodate the dual role of man, as a product of life.

e) *Configuration in the Doctorate*

The configuration in the doctorate is a configuration in research and search includes

deepening in knowledge in a basic course, an introduction to the techniques of thinking and experimentation necessary for professional activities in research, and allows for high scientific level competencies. Period of configuration in the doctorate considered as professional experience in the sector of research and innovation, so that the holder at the end of configuration has gained not only scientific and technical competencies in the field of research, but also other skills necessary to lead a project independently.

In this study the configuration refers to a series of practices or adopting changes or modifications to the system in accordance with the specific approach in order to change the current situation to the situation foreseen in advance. As the evaluators must have (members of the composition of Scientific Council members, PhD) Creative intellectual patterns, and functional leadership skills enabling them to contribute to the implementation of the reform process of the Algerian system of higher education which is currently living with two organizational models (doctor Classic system-LMD system).

## VI. HISTORICAL BACKGROUND ON HIGHER EDUCATION IN ALGERIA

Although the Algerian State in the year 1962 was in reconstruction, but they had a package of reforms focused on expanding access to higher education for students, and the need to refine the institutional image without giving up valuable traditions, and this was among the most important major objectives that was based on the development of higher education since 1962: democratization and the butchery and localization. In addition to the scientific and technical orientation adopted being the choice has significant impact in importance to the decision process in the economic and social development, and manufacturing effort, and valorization of the natural and human resources and we can mention these successive reforms in four phases as follows (Ministry of Higher Education and Scientific Research, Algeria, 2014):

*First Phase:* was the establishment of the National University, where the higher education institutions in the beginnings of national building and stationed in limited areas of the home.

*Second phase:* this phase began after the actual appearance of the concept of the Algerian League with the creation of the Ministry of higher education and scientific research year 1970 which led to the launch of major reform of higher education system in the year 1971 (restructuring), which focused on four main axes: rework Configuration software, new pedagogical planning study, intensify development in higher education, a comprehensive reorganization of the University structures. And strengthening and

repositioning of higher education through University 1982 year mapping and updated year 1984.

*Third Phase:* support system and rationalize in line with shifts in both society and the economy. This has been initiated through the enactment of law No 99-05 of 4 April 1999 and which includes the law of higher education which included several articles that will open the future prospects of demographic development and infrastructure level.

*Fourth Phase:* which is the most important stage is designed to improve and enhance the quality of teaching culture through a proactive approach in the global system, system master degree, PhD, who proceeded to apply year 2004 and circulated to all academic disciplines except medical specialties.

After the reforms of Algerian University Institute University functions are selected and organized by Algerian special rules, and functioning in reference texts within the Executive Decree number 03-279 dated 23 dated 2003 amended by Decree number Executive 06-343 dated 27 September 2006.

The aforementioned reform process can be seen as a synthesis of the different changes that aim to develop higher education and enhance teaching quality since 1962 to this day, which we will show clear results in subsequent paragraphs through development in the University Network teaching structures enumeration, Registered students in different specialties and academic stages, and professors in various academic grades, the quality of research output.

We can also say that the overall reform processes and even partial certainly it led to significant changes in the job description for University leaders, through authorized expanded authority, put on extra responsibilities and higher demands by various stakeholders from within and outside the University. This applies not only to University Presidents, but also applies to the deans and department heads.

### a) Higher education in Algeria in figures

According to the statistics issued by the Ministry of higher education and scientific research of Algeria (MESRS), Algerian University network includes in 1961 only Algeria University, and its causing all of Oran and Constantine, in the year 2014 Ministry of higher education includes (97) institution of higher education, spread over forty eight (48) mandate via National territory. These institutions are distributed in the form of forty-eight (48) universities and, ten (10) University centres, four (4) extensions, and twenty (20) top national school, seven (7) high schools for teachers, and ten (10) preparatory schools, and three (3) preparatory schools. It was divided into three according to areas firmly in line with social and economic fabric preparation of students. According to the latest statistics issued by the Ministry of higher education and scientific research (MESRS) in

2015, the total number of students enrolled in higher education in Algeria is 1 340 000 students.

Apparent rapid expansion in the number of Algerian students year after year it has been numbered by census year 1961 does not exceed 1317 students enrolled, and the number has doubled to about 1000 times in early 2008 total 1200 000 students, and rose up to 2013 year number 1 254 635 students, Make MESRS

anticipates that up to 2 000 000 students total student year 2020 if it continues growing enrolment in this fast pace (French Ministry of Foreign and European Affairs ).

As for the available configuration offers is 6881 Bachelor and master (341 professional degree 179 master and 3359 Bachelor and 3002 master Academy) and 591 display in PhD.

*Table 1:* Number of students enrolled in the gradient and post gradient in the Algerian universities

	1962\1963	1969\1970	1979\1980	1989\1990	1999\2000	2009\2010	2010\2011
Number of students enrolled in the gradient (BA classic)	2725	12243	57445	181350	407995	1034313	1077945
Number of students enrolled in post graduation (MBA, PhD science)	156	317	3965	13967	208464	58975	60617
Total	2881	12560	61410	195317	428841	10932288	1138562

Source: Ministry of Higher Education and Scientific Research, Algeria  
Available at: <http://www.mesrs.dz>, (accessed on 20 /19/2014)

The table above shows the growing rise in student enrolment in tertiary education in various stages, also led to increased attention to strengthening the material and financial means and even manpower for student service.

Professors in the Algerian education institutions increased from 298 Professor in 1962 to 40000 in 2011 and bringing the number to 52 824 Professor in 2014/2015.

In terms of financial resources in the year 2013 the budget for higher education and research sector from the State budget 264 582 513 000 dinars (€ 2 462 486 720) equivalent to 6.1%. (In the year 1990 was 3.4%, the year 1999 was 4.8%, year 2006 amounted to 9%, 2011 reached 10%, year 2012 retreated 6%.

In 2008, the Government Decree allowed the establishment of private universities. As a result, higher education in Algeria available legally by higher education institutions in the public and private sectors alike. But at the moment there is no indication that there are offers for higher education or for doctoral studies by private universities.

#### b) Graduate Studies in Algeria

The reforms have touched all levels of higher education, including most notably higher configuration beyond the gradient over four (4) stages too:

*Phase 1:* started by the issuance of Decree 76-43 of 20 February 1976, entitled 'creating and organizing the first stage of study beyond the gradient ' because the year 1976 is the beginning of organizing study after graduation in Algeria, the legislator has been limited at this stage to regulate only the first phase. Master degree in various divisions, except medical sciences. Article 2 of the decree that the second phase would be '

doctorate of science ', but not 87-70 Decree naming the second phase ' doctorate '.

*Phase 2:* after 87-70 Decree of 17 July 1987 titled ' gradient post studies, where added to the first stage, second stage and call it ' doctorate of state ' plus another diploma known as ' specialized ' postgraduate diploma based wave of institutions Social and economic at the same time aims at improving human resources and competencies.

*Phase III:* he Executive Decree number 98-254 dated 17 out 1998 on ' configuration in post-PhD, and specialized tertiary rehabilitation gradient '.

*Phase IV:* this phase was initiated by law no 08-06 of 23 January 2008, containing the law for higher education, and organization of higher education in the field of higher configuration according to three phases (Bachelor, master, doctorate) had launched the system in the field, Gradual, starting from the academic year 2003-2004.

Currently post high composition gradient, which offers by institutions of higher education in Algeria had set out basic provisions in law 99-05 of the year 1999, as well as Executive Decree 98-254 of 17 dated 1998 until the demise of this system. Either higher configuration for Bachelor and masters and doctorate is organized by Executive Decree No 265-08 dated 19 Oct 2008 year. The basic law guarantees the rights and duties demonstrates PhD, shown in the Executive Decree 231-10 dated 2 October 2010 year, decisions no 191 of 16 July 2012, number 354 of 17 October 2012, resolution No 329 of 5 April 2014, which determines the Organization In the third phase composition of Phd (team of consultants within Technopolis Group, 2010).

In 2014 the thesis Charter was issued which is a reference guide codifies the agreement between doctoral student, supervisor of the thesis, and Chairman of the configuration in PhD and Director of laboratory support configuration.

There are about 70 Doctoral School in Algeria. It also considered the University of Oran, which includes 16 Doctoral School University that hosted the largest number of doctoral schools in the country. Add to that, one of the most important and largest doctoral schools in Algeria is a French doctoral school established in cooperation with the French Ministry of Foreign Affairs. Also, it should be noted that the Organization of PhD programs in accordance with current doctoral school model is not at all universities because there are some universities that offer doctoral programs without hosting a school doctor. As he is entitled to all universities and university centers to host doctoral programs.

Through sharing the chainsaws and regulatory decrees and decisions related to the configuration in the PhD that we tried to mention briefly in the previous paragraphs, we can say that these texts as long as the issue of top legal legislative State applicable as they craft In effect. Therefore, our objective in this paper, not criticize them as a graduate-being organized for promotion of graduate students and improve the quality of higher education in Algeria, but we should track how the actual application of these rules in the configuration process after graduation And strategies of the handle in Algerian universities.

c) *University configuration at university of kasdi merbah Ouargla*

Ouargla kasdi Merbah University is a State University, like any higher education institution, whose mission is to provide higher education and research, and providing services to the community. The first establishment goes back to University of Ouargla, since establishment of high school of teachers (ENS) in the year 1987 under Decree No 88-65 of 22 March 1988. In 1997, it was upgraded to university status Decree 97-159, dated March 10, 1997 and was among the five institutes (Institute of agricultural engineering, exact Sciences Institute, Institute of law and political science, Institute of Arts and languages, Institute of Economics and social sciences). In 2001 through Executive Decree number 01-210 dated 23 July 2001 was upgraded to include three university faculties and three directorates. Since 5 September 2005 the university became marked under the name ' University kasdi merbah Ouargla. In the year 2009 was a ministerial decision to restructure six faculties include 21 departments, broke through the Executive Decree number 09-19 dated 17 February 2009 (Faculty of science and technology, Faculty of natural sciences, life and Earth Sciences, Faculty of Arts, languages, Faculty of Humanities and social sciences,

Faculty of science Economic, trade and Management Sciences, Faculty of law and political science).

According to applicable legislation and Executive Decree number 13-100 dated 14 March 2013 and supplementing Executive Decree 01-210 containing create University of Ouargla year 2001, University of kasdi merbah-Ouargla today consists of 10 colleges; 24 departments, grouped in three large university college campuses are the main structure of the university institutes and University extension to add.

What proves the actual orientation of the University towards the concept of quality is to establish quality assurance cell at University of Ouargla on November 13, 2011 under Ministerial Decree No 167 dated May 31st 2010 and included establishing a National Committee for the implementation of quality system in higher education and scientific research, which was designed to (Ministry of Higher Education and Scientific Research, Algeria, 2014):

1. Disseminate and entrench a culture of quality in the University;
2. Enhance the quality of higher education in the University;
3. Review the educational programs of the University;
4. Promotion of scientific research in College;
5. Contribute to the development of various educational aspects of University Management;
6. Evaluation of the quality of the outputs of the University;
7. Creation of a comprehensive system of quality assurance in University;
8. Focusing efforts on responding to the needs of the market.

According to the statistics of 2013-2014 academic years the number of students enrolled at the University of Ouargla during this period is called 25601 students distributed at different levels according to what is shown in the table (2).

Table 2: Number of students (enrolled in the academic year 2013/2014)

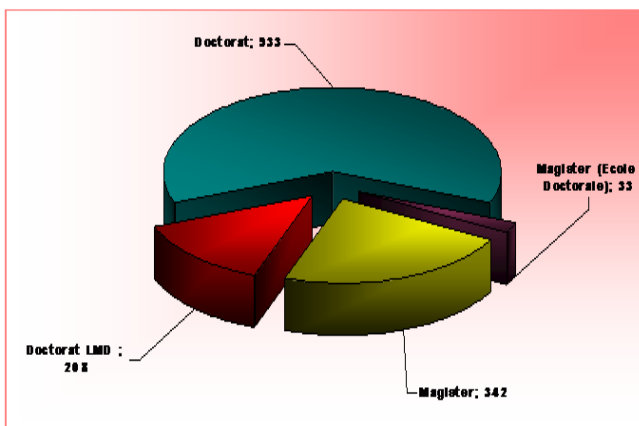
The total number of students enrolled in University of kasdi merbah Ouargla.	25601	
New entrants ' 2013 ' BAC	4400	
Enrolled in the phase I-bachelor	18604	
Enrolled in the phase II-master	5669	
Enrolled in the phase III-PHD	208	
Enrolled in the classical system	352	
Enrolled in master	375	
Enrolled in PHD	933	
Foreign enrolled in university studies (11 nationalities)	115	
Enrolled in the certificate in legal profession (CAPA)	1200	

<http://www.univ-ouargla.dz/index.php/fr/accueil/presentation-de-l-universite/l-universite-en-chiffres>

d) *Organization of graduate programs at the University of kasdi merbah-Ouargla*

University of Ouargla started to apply configuration program later gradient to students graduating in 1997 in limited disciplines where the number of students enrolled in the masters in the same year only 14 students either outcome studies after graduation (PhD) the number was initially estimated at about 59 only recorded, to adapt with the changes in the environment of higher education at the local, national and even global, The University multiply this number relatively fast pace during the school year a total of 2013-2014, the number of students enrolled in programs of studies after graduation 1516 student, enrolled in 39-party program distributed to 342 students registered in master, 933 registered in the doctoral science, 33 students recorded Doctoral School, and 208 registered doctor LMD system. Total graduate students can be observed through:

Figure 1: Number of students enrolled in graduate studies at the University of kasdi merbah-Ouargla

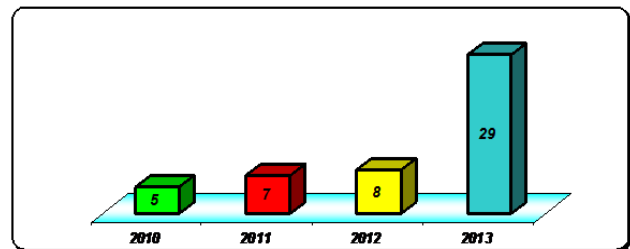


<http://www.univ-ouargla.dz/>

Note by the relative circuit that most graduate students are enrolled in the classical system (MA, PhD, PhD School) or 86.30% unlike the ratio of graduate students in LMD (doctor of phase III) which amounted to 13.70 percent. This can be explained by the novelty of

the new system which has been applied since the year 2004.

Figure 2: Number of doctoral theses that have been discussed in University of kasdi merbah-Ouargla (2010-2013)



<http://www.univ-ouargla.dz/>

We seek through counting the scientific outcome of graduate researchers, scientific output in theses that have been discussed and published scientific articles to University of kasdi merbah Ouargla meant it created for constructive criticism and objective from official statistics and facts registered And notes that evaluated through practical application of strategies used in configuration in post Grad University kasdi merbah Ouargla, focusing exclusively on scientific days for doctoral students in advanced years, which considered them as a strategic plan for managing change on the formation of the students After graduation in the University and the difficulties that delayed delivery of timely research and promote a culture of sustainable scientific research output increase which of course reflected on the performance of the University Foundation.

e) *Procedures for configuration of graduate students at the University of kasdi merbah-Ouargla*

i. *PhD Programs in General*

With the introduction of the Algerian Government (2004) of reform process aimed at transforming higher education system gradually to tertiary structure according to the Bologna process. Reform has been fully implemented at the level of Bachelor, master. The new system is implemented at the doctoral level in 2010.

As a result of the introduction of the reform process, PhD programs offered in Algerian universities are organized in accordance with two organizational models (Classic system-system of LMD). But the former model is usually the PhD level.

General Regulation and supervision system of doctoral programmes in various universities in Algeria is the competence of the Ministry of higher education and scientific research. Doctoral programs overseen by the Directorate within the Department of graduate studies and research and training. There are three centers regional deliberations (East, West and Centre) under the auspices of the Ministry, which is responsible for relaying information and coordination of higher education at the regional level. These deliberations centres are also responsible for approval, and directing the accreditation of higher education institutions to the Ministry.

Ministry of higher education and scientific research is also responsible for the adoption of the doctoral programmes organized by doctoral schools. This work is done through 'accreditation comitte' directly related to the Ministry. Even diplomas awarded upon completion of all levels of higher education (graduation and graduate) are accredited by the Ministry of higher education.

ii. *Conditions for the admission of students in doctoral programmes*

Configuration in the classical system after graduation as two phases. The first stage is the stage of configuration to get master degree or equivalent certificate (top can also enrol without contest) this phase lasts two years and culminating in the finals and then discuss theses of master in public before the Committee made up of three to five members who assess the content of the theses masters with note (acceptable, nearby, good, very good) qualifies the student to move into phase 2 (Ph). Admission in PhD programs is open to all master's degree holder note good, very good, nearby good only or a diploma equivalent to a master's degree recognized, admission on a competitive basis and each higher education institution is responsible for regulating the procedures for admission to the doctoral schools. Students wishing to enrol in doctoral programs must first submit a written application and then undergo an oral examination.

In the new system (LMD system) admission to the student in a PhD program (phase III) on a competitive basis and the higher education institution is responsible for regulating the procedures for admission to the doctoral schools. Opens the configuration in tertiary enrolment through national competition where the winning candidate student study masters or diploma recognised equivalence. After the written test is performed for the accepted candidates their files, and every student is successful in a competition doctor

tertiary subject to a three-year composition according to the following procedures: in the first year-that can regulate the form of doctoral schools-research subject are determined by agreement with the supervisor To have higher education professor or lecturer and could help partner in framing and pursued doctoral thesis editing delivery since the first year until the third year, the evaluation is done at the end of each hexagon (January, June), based on the percentage of student's progress in completing his research, which should be discussed before the end of the Third academic year.

iii. *Number of candidates admitted to the doctoral schools*

The number of candidates admitted to the doctoral schools every year decided by the Ministry of higher education and research on the proposal of the higher education institutions. The number of candidates tied to the size and capacity of each school doctor and every specialty needs, according to the capacities of the higher education professors. Perhaps the last reason given the critical importance of effective scientific supervision process under high numbers attending doctoral programs can be realized, as this may lead to delays in finishing the complete thesis on time because the professors will be burdened with an excessive workload.

iv. *Attract members of configuration for the doctorate*

The University is attracting academics with high-efficient to supervise doctoral students and followed them during their formative period. This constituent is required to be higher education professor or lecturer, and attract foreign universities professors to benefit from their expertise while configuring doctoral students.

v. *Configuration process in doctorate*

As previously noted, the regulatory texts to register under the classical system science PhD and even existing ministerial decisions under the MLD system configuration planning PhD does not include any dumping of mandatory lessons. Because this stage recognize the scientific value and even the public to take lessons. This is reflected through explicit thesis Charter paragraph' is a composition in the doctorate of professional experience in the sector of research and innovation, so that the holder at the end of configuration has gained not only scientific and technical competencies in the field of research, but also other skills necessary to lead a project with all Independence'.

Through these configuration process set out above clearly shows the complete transformation of the traditional configuration techniques in the new configuration of students of phase III (doctorate of LMD) which is in the form of seminars, symposiums, discussions, field trips, visiting foreign lecturers, workshops Doctor and detective work. These methods

will give the best practical learning experience for improvement in the quality of doctoral graduates.

University is also organizing seminars, conferences and forums, both national and foreign, and the participation of the doctoral candidates is open and available to all interested in it.

vi. *Establishing configuration committee of doctorate in faculty*

All evaluation activities and guidance to doctoral students should be in the hands of a team of highly qualified faculty and experienced for best results. This Committee sets on her doctoral training in the Commission and is charged with (Charter of the thesis, 2014):

- Ensuring respect for the Charter of the thesis and applying decisions taken, and to walk during works well up and evaluation of doctoral students Doctoriale;
- Ensures that doctoral students access to information relevant to program configurations;
- Doctoral students must know career prospects for configuration;
- Must schedule training and educational activities (meetings, days of doctoral students)
- Monitor and evaluate the doctoral student;
- Demands to subjecting all operations to be performed, (pedagogical, scientific, and administrative) by all the scientific bodies of the Department and College (head of Department, Dean).

All Committee members giving attention to two main activities especially in the first year of registration:

- Seminars for doctoral students, these seminars are very important especially when the students in their research problems development phase before final supervisors are being allocated;
- Mini defenses hearings about research proposals prepared in advance by students. The popular belief among various enrolled in PhD's decision to return to the search in the same field of study (master), the modern trends of scientific research topics should be approved by the Commission in accordance with the requirements, and this shouldn't graduated PhD students research topics Expected by the College.

Here is the main objective of this Committee shows through reducing cases of asking students to research subjects don't report them or subjects not searchable or not serve economic and social development in Algeria.

vii. *Synthesize all research topics*

Before this effort to synthesize scientific research, there was no trace of any organized database where the researcher or registered in doctorate finds all areas discussed above, the absence of this action previously lead to duplication or reproduction of the

same research work, and That's what might sign some enrolled in PhD in floundering and someone's trying to change his research field or topic of study in whole or in part. Today illustrated compilation and filing of completed research work at the University of Kasdi Merbah Ouargla in paper and electronic library in various research laboratories of the faculty to be displayed to the students easily.

viii. *Supervision System*

Each supervisor on a thesis Director is responsible for the supervision of doctoral candidates, and the work they do. According to resolution 250, supervisor of the doctoral candidate must have higher education professor or qualified researcher to supervise doctoral dissertations, research teams and projects. In addition, the supervisor may appoint an assistant supervisor to help him oversee registered PhD.

Legally, the supervisor can supervise two to three doctoral candidates at once. However we may find there to supervise four doctoral candidates, and that in the absence of qualified supervisors to oversee the doctoral candidates. In addition to their supervision of doctoral candidates, supervisors shall also supervise the gradient students (Master students). As a result, you may find the same supervisor supervise eight candidates at one time. And the lack of qualified supervisors now considered among the major challenges facing doctoral programs. However, there are also qualified supervisors and even higher education professors and researchers who qualify often but they refuse to supervise doctoral candidates. This rejection can be explained by the heavy workload and the inadequate compensation associated with this type of work. As doctoral school managers ' supervisors (qualified) often lack the necessary motivation or interest to do supervising thesis. '

ix. *Providing University Financial Grants*

Usually, the University financial Grants provided based on financial need for each student and these grants provided to cover the costs of University research through years of regular registration in the PhD, in this case each student recipient of University financial grant that does not use it for personal needs but exploited in scientific research only.

The University also offers, in some cases, short term grant for doctoral students (LMD) to facilitate scientific posts in such kinds of activities outside the University after the submission of an updated file before date of at least 20 days Forum, an opportunity transfer doctoral students abroad after grant Arrival based on the letter of the University or research laboratory hosting in accordance with conditions specified by the University. In addition providing grants to complete the configuration in doctorate abroad on scientific merit of the student (team of consultants within Technopolis Group, 2015).

x. *International cooperation and mobility of doctoral students abroad*

The international cooperation between Algerian and foreign universities seen at doctoral level is evident through the French-Algerian cooperation, this is primarily historical, political and linguistic links between two countries, add to this that most projects that facilitate student mobility abroad came to contribute to the implementation of The Algerian higher education system reform under the Bologna three-cycle model of higher education (Bachelor, master, doctorate), which facilitated the mobility to and from Algeria to the student and teacher alike.

It also allows French-Algerian scholarship programs for student financial aid (60% from the French Government and 40% from the Algerian Government) for studies in France.

Add to that the opening of the European Union Tempus programme in 2002, coinciding with the growing reform process-start thinking about adopting reform Algeria-especially in French-speaking countries where three-phase system was introduced. It was as a catalyst for change in the curriculum, governance, quality assurance and institutional restructuring, Tempus projects also helped overcome some of the barriers between higher education and the economic sector.

*Table 3:* The number of projects involving a single institution or several institutions in the country (as Coordinator, contractor or partner)

	TEMPUS IV					TEMPUS	TEMPUS
	2012	2011	2010	2009	2008	2002-2004	1990-1999
Joint projects	4	3	5	4	3	16	—
Integrated projects	0	0	0	0	0	0	—
Tempus III structural measures and complementary Tempus IV structural measures	1	0	1	2	0	8	—
Total	5	3	6	6	3	24	—

- **TEMPUS**  
Since 2002, Tempus projects have worked to promote the following activities:
- Participate in the development of international cooperation between national institutions of higher education, and higher education institutions in the EU countries and those institutions located in the South of the Mediterranean;
- Monitor and support implementation of courses reform of higher education which saw the introduction of tertiary gradient to BA, PhD, particularly in designing undergraduate courses;
- University institutional partnerships;
- Establishment of a distance-learning floors and train teachers in the delivery of distance education;
- A system of balances is comparable with the European system for the transfer and accumulation of credits (ECTS);
- Training of administrative staff to assist them in the management system of Bachelor, master and doctorate;
- Encourage mobility of staff and students;
- Rethinking about the establishment of a system of quality assurance in higher education.

the national level, international level 25 with 7 Countries) with: University of Paris 10 Nanterre, the Jordanian Yarmouk University, Mohamed v University in Rabat, Morocco, Mohamed I University, Oujda, Morocco, Tunisia, Manouba University Arabic Academy opened in Denmark, the University of Strasbourg – France, University of applied sciences– Finland, University information technology won – Finland).

xi. *Track the performance of students and supervisors during the search*

This process is designed primarily to address falling in the least commitment by PhD or at least commitment by the supervisor or the burden of a supervisor. The strained relationship between doctoral students and supervisors will lead to failing during completion of the thesis or dissertation in delayed completion deadlines. At the moment, students and supervisors, but after the introduction of the new system (doctor LMD) and in accordance with the Charter of the thesis currently charged to the student and the supervisor must submit a progress report at the end of each Hexagon shows the toll offer research work with prospects, and in cases where someone is unhappy about the other, it is allowed to student to change his supervisor, and the supervisor allowed to abandon overseeing student based on these reports.

xii. *Handling procedures in case of delayed completion of the work*

For the duration of the completion of the graduate program in classical system, the first graduate

Regarding the University of Ouargla kasdi merbah has held several exchanges and cooperation agreements with several academic institutions and foreign research represented on: two projects within the programme of Tassili (France), Tunisian-Algerian cooperation projects, cooperation agreement 49 (29 on



level (masters) ends within a period not exceeding two years, and postgraduate level II (doctor of science) in three. Doctorate programmes either for the length of the regular preparation of the thesis is three consecutive academic years.

But in practice, the students will take two and a half years to get a master's degree, and five years for PhD. as the study team of consultants within Technopolis Group (2010) that 20 per cent of doctoral candidates in the Doctoral School of Nano-science articles, And nanotechnologies, wenanomitiring Oran University had graduated after spending four years and 20 per cent spent five years and the rest of the graduate programs usually take the candidates have six years to complete the thesis. Doctoral School of environmental science, University Houari Boumedienne, takes up most of the doctoral candidates six years to complete the thesis.

PhD student who is work late consuming supervisor time and deprives him of his opportunity to supervise a group of other students or depriving other students of his choice as a supervisor on their research. Therefore, we find that there are two actions are taken when a student is late in completing the thesis, the first procedure is the extension of one or two years on an exceptional basis if still within the time limit prescribed for graduating. The second measure is the removal of the PhD program PhD research theme draws record Central theses features.

Recently, the length of doctoral programs and delayed completion rates candidates thesis on time considered among major challenges within doctoral programmes in Algeria. There are many reasons why repeated in official meetings and informal encounters with PhD students of advanced years, University kasdi merbah Ouargla and regard it as the cause of their inability to complete the graduation thesis during the official three years which including:

- The fact that the doctoral candidates must publish an article in a specialized scientific journal before they can discuss this thesis. This obligation usually delays the completion of the thesis doctoral candidate hampers discussion in just three years.
- doctoral students are not much different from putting students enrolled in the gradient (Bachelor, master) except for the fact that they are eligible for the monthly grants which are relatively high and benefit from overseas training scholarships in addition to using the PhD charters to recognise the fundamental rights and duties Doctoral candidate was adopted only recently.

Teaching process besides research is not mandatory for the PhD student during the PhD programs and institutions of higher education, and is not claim to provide teaching for doctoral candidates. However, in some cases, universities offer doctoral

candidates the possibility to teach specific classes within six to eight hours per week only.

It is noted that in some specialists, there are students of PhD even under the new system actually receive teaching positions at the University level, there are students in the masters and engaged in teaching at the University and in such cases, the doctoral student's educational activities not directly related to his thesis.

#### xiii. *Doctoral thesis and viva*

After you finish editing the thesis once the student gets approval from supervisor and publish an article in a scientific journal, and after completion of the third academic year of the PhD program the PhD student becomes eligible to defend his thesis and then can apply for thesis viva. Once you apply for a thesis viva, doctoral schools to designate members of the viva, the moderator of the latter usually specifies by Scientific Council of Doctoral School, after consultation with the Scientific Committee in the third phase, upon the consent of the Director of the PhD school are configured A viva of four to six members should be experts in the field, the majority of the faculty members of the University. It must be one or two members of the viva from outside the host higher education institution for the PhD program. The Director of the thesis (supervisor) as rapporteur for the viva. After you set the viva members, thesis is distributed among the members of the viva. This body must submit a written report about the thesis within sixty days. Members of the viva were to hold a meeting to discuss the thesis project and it gives the viva agreeing to discuss the thesis, or condition the debate with some modifications, or deny the discussion. Doctoral candidate has no right to appeal against the decision of the viva. If the viva gave its consent for thesis, doctoral candidate must prepare himself and make an oral presentation on the date specified for discussion after discussion with the doctoral candidate, members of the viva is deliberating behind closed doors. Usually a candidate is given the degree of supervisor. Thesis is usually open to the public.

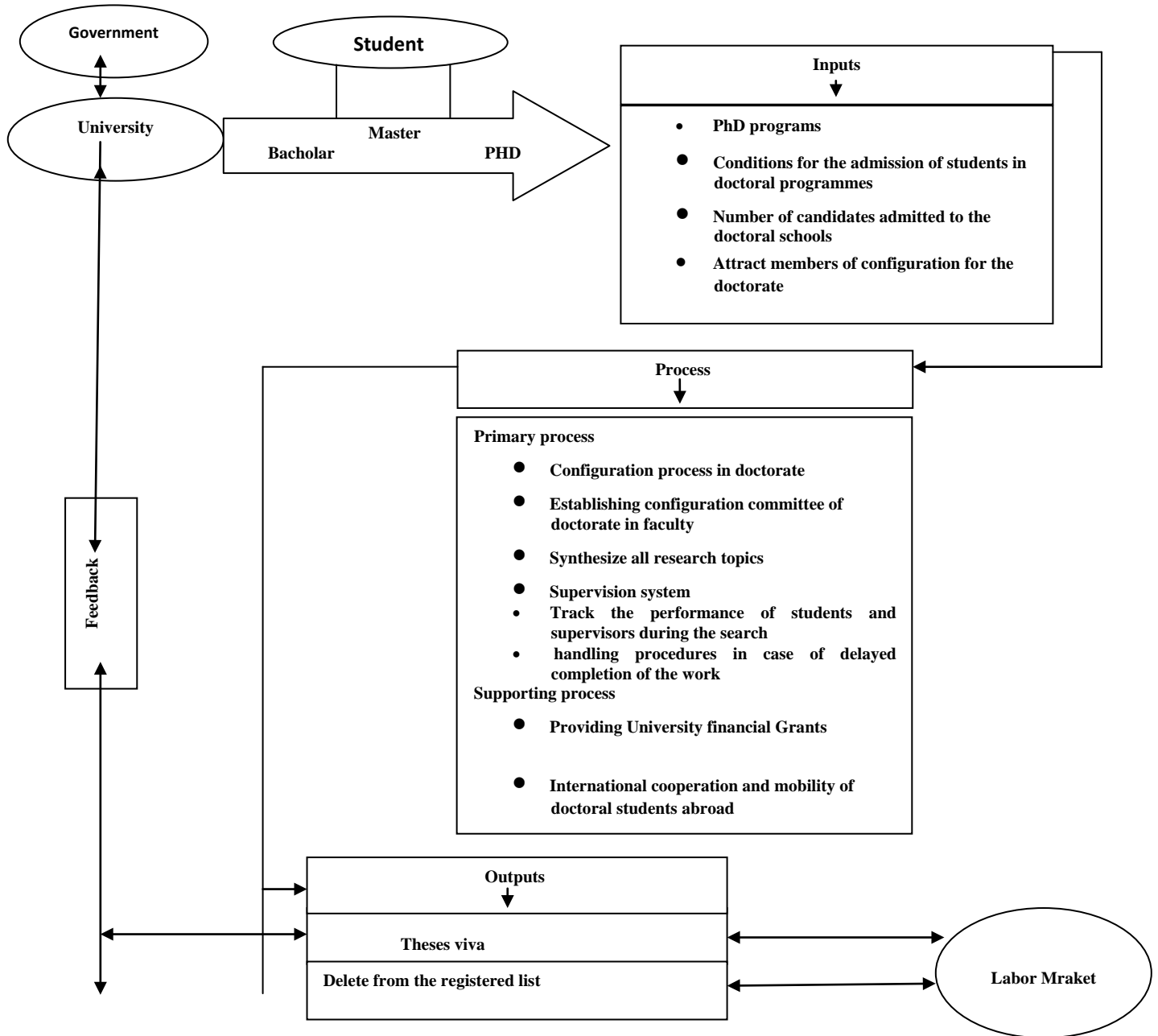
#### xiv. *Career options after graduation*

Holder of PhD qualified to work in public and private sector alike, but generally known that most PhDs in favour of work as professors in higher education institutions in Algeria and even beyond. This does not negate the existence of the category you prefer non-academic career options such as managerial positions within universities or outside the University or even creating special projects, but the decision about what is the path that will be taken after completing doctorate differs from one individual to another. Because the selection of career usually linked personal ambitions, and presentations are available in the labour market, and primarily the original reason that pushes students to pursue higher studies.

Through the analysis of the reality of Algerian universities doctoral students configuration under the higher education system reform and tertiary system we could reach a conceptual model building as a system of input, and key and supportive processes to obtain positive outcomes in the thesis in time, Or negative

outputs represent the core of the problem that we are trying to solve it is the length of time to complete the doctoral program leading to the decision to write off student registered list. System components also interact in a dynamic environment where control needs of the labour market.

Figure 3: Conceptual model for system configuration of doctoral students at the University of kasdi merbah-Ouargla LMD system



Source: prepaid by authors

## VII. CONCLUSIONS AND RECOMMENDATIONS

Through the process of monitoring the reality of Algerian University doctoral student's configuration

focusing on University kasdi merbah Ouargla we can offer the following conclusions and recommendations:

a) *For Governments*

- It is important for Governments to reconsider its goal to encourage doctoral enrolment, Governments must carefully monitor whether these high ratios in doctoral programmes will lead to the desired results or will they burden whittling him sacrifice of generations of candidates PhD if a delayed their completion of scientific researches;
- Current expansion in the number of universities and their student enrolment will require substantial human and financial resources to cover the shortfall in private and to supervisory process configuration in doctoral programs and supervise doctoral students must submit by the specialized frames and qualified to do so;
- Governments must ensure quality assurance also in doctoral programmes, especially at this stage of coexistence between the two systems and also under increased demand for doctoral programs which may influence the quality vs quantity.

b) *For senior management in universities*

- Decision makers should be at senior management levels with more open with students of doctoral programs with regard to extrusion rates of and provide clear information about the careers of doctorate degree holder, especially for graduates who aspire to work in traditional academic positions Only;
- Decision makers at higher levels in the universities must believe that the doctoral level is the most important level in University and configuration stages is an investment benefit the rest of future levels especially contribute to solving the problem of supervision.

c) *Students Enrolled in PhD Programs*

- Students should take into consideration whether the doctoral program he has chosen is really suitable for personal goals, interests and aspirations of the labour market;
- They must believe in the research time because the most effective way to complete your dissertation on time especially enrolled in the new system (three years);
- PhD student should be aware that obtaining a doctorate is a serious commitment in time and effort, with no guarantee of a career or future profits by doing this research.

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# The Internet of Things and Printed Electronics: Case Studies of Innovation by SME Manufacturers

By Peter Warrian & Travis Southin

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This paper examines the firm and industry-level innovation dynamics enabling Canadian manufacturing SMEs to harness printed electronics (PE) in order to enhance the value chain positioning of their traditional product offerings via Internet of Things connectivity. Case studies of intelligent packaging, intelligent clothing, and medical wearable SMEs highlight how firm-level IoT innovation capabilities are enhanced by partnering with supply chain actors at the industry-level, as well as through participation in government research consortia. As integrators of PE technology into traditional products, these firms are able to successfully shift their positions and value propositions in their respective value chains. The findings of this research illustrate the potential role of both government and industry consortiums in enabling SME manufacturers to capitalize on the emerging opportunity of IoT through integration into Global Production Networks (GPNs) and Global Innovation Networks (GINs).

*GJMBR-G Classification: JEL Code: L19*



THE INTERNET OF THINGS AND PRINTED ELECTRONICS CASE STUDIES OF INNOVATION BY SME MANUFACTURERS

*Strictly as per the compliance and regulations of:*



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# The Internet of Things and Printed Electronics: Case Studies of Innovation by SME Manufacturers

Peter Warrian<sup>α</sup> & Travis Southin<sup>σ</sup>

**Abstract-** Recent discussions of the Internet of Things (IoT) are usually dominated by high level industrial policy discussions like Industry 4.0 or the next stage of machine-to-machine interaction in advanced manufacturing systems. It can also have dramatic impacts on manufacturing processes and business models of traditionally low value industries such as packaging and apparel.

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## I. INTRODUCTION

This paper employs semi-structured qualitative interviews to analyze three case studies of Internet of Things (IoT) product innovation by Canadian Small-Medium Enterprises (SMEs). Part I will contextualize this paper's case studies with reference to the literature on the unique challenges faced by SMEs engaging in collaborative open innovation (OI) partnerships, which are increasingly seen as necessary to carry out IoT product innovation. This literature informs the research questions of this paper: What partnering strategies do SMEs employ to overcome knowledge gaps to innovate in IoT products? What is the role of innovation intermediaries (government and industry associations) to facilitate this flow of knowledge? Part II will lay out the case studies of intelligent packaging, intelligent clothing, and medical wearable SMEs who have successfully harnessed printed electronics (PE) in order to enhance the value chain positioning of their traditional product offerings via Internet of Things connectivity. Part III analyzes the firm-

to-firm OI partnering strategies employed by the three case study firms to facilitate knowledge flows. The IoT case studies exhibited an orientation towards upstream partnerships with suppliers, contrary to the expectation of downstream partnerships with clients in the literature on OI in SMEs. Part IV will then analyze the network-enhancing role of printed electronics innovation intermediaries, specifically an industry association and a government lab. The engagement dynamics reported by the IoT case studies corroborate many aspects of the literature on OI in SMEs, including the network-enhancing potential for different types of innovation intermediaries to enable SMEs to bridge knowledge gaps. In sum, this paper's findings contribute to the literature on OI in SMEs in two ways: 1) extending the OI in SME literature into the context of IoT product innovation yields observations of distinct upstream firm-to-firm partnership orientations; 2) the case studies reinforce the literature's emphasis on the network-enhancing role of intermediaries by providing a more granular, detailed treatment of the role of innovation intermediaries than is typically garnered by survey-based analysis.

## II. LITERATURE ON BARRIERS TO SME INTERNET OF THINGS PRODUCT INNOVATION

This section contextualizes this paper's case studies with reference to the literature on the unique challenges faced by SMEs engaging in IoT product innovation. This literature informs the research questions of this paper: What partnering strategies do SMEs employ to overcome knowledge gaps to innovate in IoT products? What is the role of innovation intermediaries (government and industry associations) to facilitate this flow of knowledge? Innovating new products that are IoT enabled has been shown to require deeper collaboration and partnership strategies than traditional product innovation (Leminen, Rajahonka, & Westerlund, 2015). This stems from the underlying nature of IoT technology as compared to non-connected manufactured products. Specifically, embedding sensors and connectivity into products that previously were not connected to the internet requires differentiated skill sets and knowledge bases than those possessed

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by non-IoT manufacturers (Kim, Lee, & Kim, 2016). This leads to the necessity for firms to adopt a more collaborative orientation when pursuing product innovation within the IoT ecosystem (Kim et al., 2016). Research on IoT business models indicate that “software & app developers, launching customers, hardware partners and data analysis partners are the most important partnerships types”, as firms typically do not have these competencies in house (Leminen et al., 2015, p. 677). From a business model perspective, Leminen et al.’s survey results found that “incorporating IoT products in the product portfolio is a specialization that is (partly) acquired by outsourcing” and that often times “it is not possible to build your solution alone and IoT companies will have to outsource also crucial activities to partners” (Leminen et al., 2015, p. 677).

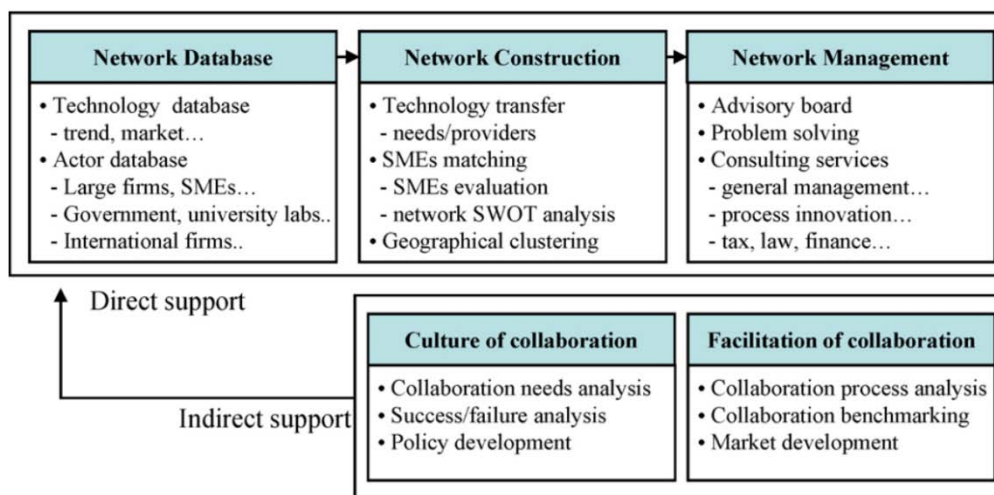
This imperative to collaborate speaks to a broader trend outside of the IoT sector, where the dynamics of firms engaging in collaborative innovation strategies have increasingly been studied within the Open Innovation (OI) literature. Open innovation has been characterized as follows:

“Valuable ideas can come from inside or out of the company and can go to market from inside or outside the company as well. This approach places external ideas and external paths to market on the same level of importance as that reserved for internal ideas and paths to market during the Closed Innovation era” (Chesbrough, 2003, p. 43).

The literature on OI is primarily focused on large firms in high-tech industries (Hossain & Kauranen, 2016). Therefore, this study’s focus on SMEs who leverage OI to innovate in traditionally low value sectors such as manufacturing and garments serves to fill a gap in the literature on OI in SMEs. The literature on SME participation in Open Innovation has identified barriers which function to impede SME adoption of OI (Bigliardi & Galati, 2016; Hossain & Kauranen, 2016). Bigliardi & Galati’s survey of 157 Italian SMEs identified these barriers to SME adoption of OI to include ‘knowledge’, ‘financial and strategic’, and ‘collaboration’ and ‘organisational’ barriers (2016). SMEs possess limitations, such as resource scarcity, unstructured innovation processes, and unstructured internal capabilities (Hossain & Kauranen, 2016; Lichtenthaler, 2008). On the other hand, SMEs have unique traits that enable OI, such as specialized knowledge and more flexibility in their decision making (Christensen, Olesen, & Kjær, 2005). These SME-specific barriers and traits speak to the fact that “building absorptive capacity – firms’ ability to sense, value, assimilate, and apply new knowledge – is a prerequisite for sourcing innovation from external sources” (Hossain & Kauranen, 2016, p. 63). Furthermore, comparisons between OI in large firms and SMEs have found SMEs to be more dependent on OI than large firms (Spithoven, Vanhaverbeke, &

Roijakkers, 2013). The literature has shown that SMEs prefer to collaborate more with customers than with suppliers (Hossain & Kauranen, 2016; Theyel, 2012). Hossain and Kauranen’s literature review on OI in SMEs has identified a gap in the literature relating to understanding partnership strategies of SMEs vis-à-vis the pros and cons of collaboration with customers and suppliers (Hossain & Kauranen, 2016, p. 69). Therefore, this paper’s first research question addresses this gap in the literature by analyzing what partnering strategies SMEs employ to overcome knowledge gaps to innovate in IoT products.

Another gap identified by Hossain and Kauranen’s literature review on OI in SMEs relates to understanding the role of intermediaries in enabling OI in SMEs: “although intermediaries play pivotal roles in removing hurdles for SMEs’ efforts to adopt OI, they have received limited attention in the current literature (Hossain & Kauranen, 2016, p. 69). Lee et al. examine open innovation in the context of SME by suggesting a network model that emphasizes the role of intermediaries in linking SMEs to knowledge networks (2010). Their research results “support the notion of open innovation in SMEs, by proposing intermediation as one way of facilitating this strategy, and by suggesting an intermediated network as an effective model to enable their collaboration and specialization” (Lee, Park, Yoon, & Park, 2010, p. 291). The intermediated network model is a conceptualization of the role of innovation intermediaries as consisting of three direct activities (see figure 1).



Source: Lee et al. 2010, p. 293

Figure 1: Conceptual Framework of an Intermediary's Role in the Intermediated Network Model

First, intermediaries create a network database to “identify appropriate collaborative partners” (Lee et al., 2010, p. 294). This is achieved by the intermediary assisting its SME members in their partnership search processes through the maintaining of a database of relevant technology and partners. Secondly, intermediaries can assist in the network construction stage by constructing a network structure that enables appropriate firm matching support for the purpose of effective technology transfer. Finally, intermediaries engage in network management in supporting the ongoing process of collaboration (Lee et al., 2010, p. 294). Lee et al.’s intermediated network model augments these three direct activities with two indirect supports to SMEs’ networking efforts, one designed to develop the culture of collaboration and the other to facilitate collaboration.

These activities of an intermediary can shift the conventional collaboration model (based normally on reliance on larger firms or outsourcing to other SMEs) towards a more open structure. As SMEs often focus on specific niches, “involvement in a network may be an effective way to successfully enter wider markets and acquire complementary resources, and of increasing core competencies to improve their chances of competing against their large competitors” (Lee et al., 2010, p. 293). Echoing Lee et al.’s intermediated network model, Breznitz and Cowhey identify a “networked solution” systems role for intermediaries in assisting SMEs to participate in networks for innovation. Intermediaries perform this role when they “bridge traditional segments within an industry...” and when they “bridge traditional industries and the new technologies and skills needed to operate them, thereby infusing these industries with new knowledge, ideas, and the skills to act on them” (Breznitz & Cowhey, 2012, p. 147). This brokering role enables new partnership

formation between firms from previously unrelated industry sectors. Finally, these ‘networked solution’ intermediaries focus on “solving problems and creating technical capabilities (such as lab testing for quality) for the network by engaging members of many organizations in the network” (Breznitz & Cowhey, 2012, p. 147).

Industry associations are another type of intermediary that has been shown to enable SME innovation (Dalziel, 2006). Industry associations help small and medium firms build cooperative ties and compensate for limited trust between network members (Lee et al., 2010).

Survey-based research of over 2000 Canadian firms indicates that “industry associations are valuable contributors to the ability of firms to innovate, and that “industry associations appear to outperform governments and universities as innovation enablers” (Dalziel, 2006, p. 297). Dalziel uses this survey research to construct a theoretical perspective on the innovation enabler role often performed by industry associations. Dalziel describes how industry associations enable innovation as follows:

“Organizations that perform innovation enabler roles (enablers hereafter) impact a focal firm’s ability to innovate by shaping the networks and markets in which the firm engages in four ways: (1) they identify and legitimize agents; (2) they facilitate the creation of ties between agents; (3) they increase access to resources through network brokerage; and (4) they facilitate joint action through network closure” (Dalziel, 2006, p. 299)

In relation to other intermediaries, “the contributions to innovation of industry associations are strong because their activities are driven by the needs of their clients and because they have specialized knowledge of the context in which technology is applied



and new products developed” and because “their heterogeneity mirrors the heterogeneity in the population of firms that are their clients” (Dalziel, 2006, p. 299). In sum, the literature on innovation intermediaries (both government and industry associations) informs the second research question of this paper: What is the role of innovation intermediaries (government and industry associations) to facilitate this flow of knowledge?

### III. THREE CASE STUDIES INTERNET OF THINGS PRODUCT INNOVATION BY SMES

Part II will lay out the case studies of intelligent packaging, intelligent clothing, and medical wearable

SMEs who have successfully harnessed printed electronics (PE) in order to enhance the value chain positioning of their traditional product offerings via Internet of Things connectivity.

	Packaging	Wearables	Medical Wearables
<b>Product Innovation</b>	<ul style="list-style-type: none"> <li>Intelligent Packaging for Pharmaceuticals (conductive inks on cartons and NFC chips on pill compliance blisters)</li> </ul>	<ul style="list-style-type: none"> <li>Uses conductive yarns to measure biometric data (heartrate) in athletic wear</li> <li>Uses printed electronics to create Electro Luminescent athletic wear</li> </ul>	<ul style="list-style-type: none"> <li>Uses printed electronic pressure sensor to measure pressure at the bottom of the foot, preventing diabetic foot ulcers</li> </ul>

Figure 2: Three Case Studies of IoT Product Innovation

#### a) Packaging

This Ontario-based packaging firm is a family-owned SME primarily producing pharmaceutical and food packaging. The firm employs around 250 employees, with annual revenue of approximately \$90 million. They have developed pharmacy packages and compliance cards that use printed electronics to connect to smart phone apps (internet of things). One partnership with a federal research lab has yielded smart compliance card packaging that could log when medications are taken and provide notifications to a patient reminding them of their next dosage. Embedding IoT connectivity into packaging adds value to the firm’s offerings to their clients: “the marketing teams can do [a lot] with some of the digital technology, the amount of data collection they can get for consumer profiling and behaviour profiling, they pay a lot more money to do that with other outside services where we can potentially build some of this functionality into the packaging” (interview A). Avoiding commoditization of their core product has been the main driver behind this business model reorientation towards OI partnerships: “there’s been a real paradigm shift in our industry where...we were driving each other down in price to the point of really hurting ourselves... as we look at these partnerships, it’s one of our key strategies moving forward is partnerships to get us out of that area” (interview A). The firm noted that the commoditization pressure “really pushed us and we’ve actually dedicated staff, time, resources to this and have a whole department that focuses our energy on trying to figure out the next generation of packaging, what are the next things we have to do” (interview A). The essence of this

firm’s use of PE is a strategy to blend an industrial commodity (packaging) with IoT technology to create a service environment layer. This functions to blur the distinction between manufacturing and services, in line with the John Zysman’s description of the ‘services with everything’ trend in creating value through digitization of traditional products (Breznitz & Zysman, 2013).

#### b) Wearables

This is an 80 employee company based in Ontario that creates garments with both active technology (transmit and receive signals) and passive technology (embedded technology that does not transmit and receive). The active technology they are researching is “a shirt that has sensors or electrodes knitted in using conductive silver or any kind of conductive element and then you can pick up the heartbeat and it goes into your device that you clip on and then sends a remote...wirelessly to your phone for example” (interview B). Their staff is very technical because they do most of their own R&D: “we’re not your typical manufacturer. Manufacturers usually have a very small team and production is bigger. But because we do R&D we do are development. It’s probably we have less on the production floor and we have much more in the engineers, designer side of things” (interview B). They have 60 patents, in technologies such as printed sensors and lights and weaved functional electric textiles. Their typical customer is licensing and white label R&D partnerships with US garment companies. They also have their own brands, such as printed electronic electro luminescent lights on active wear. A main challenge reported is the lack of a sufficient supply chain, causing them to have to vertically integrate their

operations. The essence of this firm’s use of PE and related IoT products (conductive yarn sensors) is to use the sensor technology to produce data streams and other novel functionalities to garments. This adds value compared to non-IoT competitors in the garment/textile sector.

c) *Medical Wearables*

This 10 employee, Alberta-based firm was originally founded in 2010 out of research conducted in the founder’s medical school residency. The first-of-its-kind product uses printed electronic pressure sensors to measure pressure at the bottom of the foot. The goal of this product is preventing the development of diabetic foot ulcers for people who are neuropathic. Over the course the disease, about 50% of Diabetics will develop neuropathy. Consequences of diabetic foot ulcers can be amputation of limbs, and it is the number one cause of hospitalization of Diabetics. The product utilizes PE in order to create a pressure sensor that is thin enough to work in conjunction with patient’s existing orthotics. Once the sensor detects a build-up of pressure, the user gets a notification to a paired device which alerts them to relieve the pressure on their feet in order to prevent the formation of an ulcer. The product has successfully entered health systems in Canada and the US.

IV. FIRM-TO-FIRM PARTNERSHIP DYNAMICS IN IOT PRODUCT INNOVATION

Part III analyzes the firm-to-firm OI partnering strategies employed by the three case study firms to facilitate knowledge flows. The OI in SME literature holds that SMEs tend to build networks with customers over suppliers (Theyel, 2012). In contrast, the IoT case studies exhibited an orientation towards upstream partnerships with suppliers, contrary to the expectation of downstream partnerships in the literature on OI in SMEs (see figure 3). As the descriptions below illustrate, these partnerships are mutually beneficial. The supplier firm gains a demonstrator of a tangible use case for their printed electronics while the case study firm gains the ability to leverage the IoT connectivity in extracting more value from their downstream clients than their non-IoT product category would allow. Also, common themes emerge regarding firm-level challenges in searching out appropriate partners (searching) as well as integrating PE into their product and production (absorptive capacity).

	Packaging	Wearables	Medical Wearables
<b>Firm-to-Firm Upstream Vs. Downstream Partnership Orientation</b>	<p><b>More Upstream</b></p> <p>Upstream: partnerships with conductive inks suppliers and printed NFC suppliers.</p> <p>Downstream: offering customizable ‘a-la-carte’ menu of connected packaging options</p>	<p><b>Both Upstream and Downstream</b></p> <p>Upstream: pressuring yarn suppliers to innovate.</p> <p>Downstream: white label solutions to suppliers</p>	<p><b>More Upstream</b></p> <p>Upstream: integrator of PE tech, works with suppliers of conductive inks to develop proprietary solutions</p>

Figure 3: Upstream vs. Downstream Orientation of Firm-to-Firm Partnerships

a) *Packaging*

This firm has engaged in multiple upstream partnerships with suppliers of printed electronics in order to add digital functionality to their line of packaging products. The first firm-to-firm partnership was with a US supplier of conductive inks. The resulting product was a cardboard package with an invisible code that can convey information to a smartphone. The use case for the technology in this instance is to convey that the package is authentic, as well as to convey product information to the consumer. This has the potential to add value to downstream clients whose products are often counterfeited (such as pharmaceuticals). In terms of absorptive capacity challenges, the main issue was reported as “learning and modifying our own manufacturing processes to deal with electronic conductive ink, which we didn’t know a

lot about before but now we’ve got a pretty good idea about it” (interview A). The knowledge brought by the upstream partner is described as follows: “where [the ink supplier] came in was app development and things along those lines, not our core competency, we don’t want to get into that” (interview A). This upstream partnership enables the firm to add value to downstream clients: “we want to be able to provide that conduit and you know I can get the SDKs for this stuff to provide to our customers to build it into their own apps; many of our customers already have apps” (interview A). In terms of the search process in finding this collaboration partner, the connection as made through mutual membership in a global packaging industry association: “our CEO and the Chief Marketing Officer for [ink company] at that meeting, meeting together, they knew we were playing with [their conductive inks]; they

accelerated the partnership to make it happen even faster. So it was having some in's at the high levels that really pushed this along" (interview A).

The second partnership was with an upstream supplier of printed Nearfield Communications (NFC) tags from Europe. This partnership yielded a more technically advanced product in terms of IoT connectivity. NFC chip and antenna inside "actually knows and has two different states as to whether it's been opened or closed" (interview A). This 'factory sealed and authenticated' information can be communicated via a consumer facing smartphone app, along with other product information and coupon offers. On the business facing side, the same chip offers enhanced logistics traceability, as it "can do things like serialization where you can track items down to the item level because each one has a unique serial number" (interview A). In store and after point of purchase, "we can gain some consumer profile data from that; if we can convince you and incentivize you somehow to keep scanning at home then the brand owner can learn what your behavior patterns are with the particular product and so we're really doing a lot of things with one piece of technology" (interview A). These business facing benefits of the technology are what position the firm to avoid commoditization of their product vis-à-vis downstream clients. In terms of the search process in finding this collaboration partner, both were speakers on a smart packaging panel for a global packaging trade show.

For this firm, partnerships are identified as a central to strategy going forward in order to access competencies that are not present in-house: "we know that we can't do it all ourselves, we are simply too small a company to try and achieve that and I think that more importantly it's more of a strategic decision; we don't want to go too far off our core competency. That's the reason for it, so we think partnership makes a lot of sense" (interview A). Increased partnerships required a reorientation in the business model of the firm: "we realized that if we really want to add new functionalities, specifically digital mobile functionality, we knew we would have to move into the world of actually working with partners and going outside. So it's been an interesting challenge because generally speaking we haven't worked that way in the past" (interview A). In dealing with upstream partnerships, the firm's expertise in the use case of packaging is valuable to their PE supplier because it makes the PE technology more tangible, providing a pathway to the market:

"So when you look at our partnerships, what do we bring to the table versus what do they bring to the table? Well, they bring us technologies and knowledge and know how that we simply don't have. We don't have programmers on staff, we don't have engineers on staff, we have specialists in certain areas but really we're focused on manufacturing something. They bring all that

good tech; what do we bring? We bring the fact that we actually have products we manufacture that sell and we have channel partnerships...we basically bring them commercial opportunity and in a way we can make their products more palatable. When you start talking about NFC, if you don't really show a use case, it doesn't make a lot of sense, so that's kind of what we kind of bring to the table is that piece of know how" (interview A).

Downstream, their customers began asking for innovative solutions in their RFPs. This, plus the commoditization pressure caused them to take a more innovative approach to adding value to their packaging. As a result of their various upstream technology partnerships, the firm is able to offer their clients an 'a-la-carte' menu of intelligent packaging options: "we really do approach it kind of like when we go out to customers an a la carte style menu of you want these functions, then you go to [conductive ink]; you want these functions, then you go with [NFC]." Preliminary feedback indicates that their printed electronics intelligent packaging is being recognized as more innovative by customers than the offerings of larger global competitors. One of their customers who is a top five drug company recently commented to them that although they represent ten percent of their spend in this category and (ninety-percent is going to giant multi-national conglomerates), "the funny thing is that all the innovation and good ideas on technology are coming from the little tiny Canadian company and not the giant companies that have offices all around the world" (Interview A).

#### b) *Wearables*

In terms of upstream partnerships, this firm collaborates with suppliers in a manner that pushes them to offer more innovative solutions: "in terms of changing relationships with providers is we push people to think outside the box and we push them to put money in R&D and invest in new development because we have a need" (Interview B). An example of this dynamic is in working with yarn suppliers to enable their knitted sensors into garments:

"There is conductive yarns but primarily they are for antimicrobial. There's not a lot of people - lucky for us - that are doing knitted sensors into garments. So yes it's still silver but it's the wrong combination or the wrong yarn for the function that we need it to be. So we will work with those yarn suppliers who develop something that would work better for our product, thus improving them, because we're not the only ones looking at this kind of technology. We believe it is the future. But at the same time we're not going to start buying yarn companies and expand our lab that way, it doesn't make sense. We also look for strategic partners in that kind of situation where we can have a joint effort in product development. It benefits both people if we can find new innovations that help optimize products" (Interview B).

In terms of downstream partnerships, most of this firm's collaborative partnerships are limited to white label licencing of their solutions to brand name garment firms: "it's appealing to companies that want to create products under their brands with our technology" (interview B). However, the firm notes that "it's still early because these companies are not ready for wearable tech but they know that it's the next big thing so they're actively testing" (interview B).

#### c) *Medical Wearables*

This firm integrates printed electronic technology into their product through upstream partnerships: "ultimately we're technology integrators and we're consumers of printed electronics in terms of the solution we're offering...it's kind of fundamental to our product right now and so without it you couldn't actually create the product" (interview C). This upstream collaboration with PE suppliers involves a back and forth process of tailoring available technology to meet their specific needs: "we work with printed electronics firms to evaluate the technologies and to develop solutions that meet our particular needs. The development of proprietary inks. And the application of those inks and design" (interview C). Reflecting the literature on OI in SMEs, this firm has dedicated a lot of effort into the search stage of identifying appropriate collaboration partners:

"A big part of our business has been finding suppliers capable of producing those products that meet our specifications and to work with to develop those proprietary solutions...We buy technology from companies that are all over the world and that includes Canada...Those partnerships, they come about through attending trade shows in Canada and talking to the consortium of Printed Electronics and doing things like Internet searches. It's kind of a mixed bag of how you make these connections and meeting with people" (Interview C).

This firm does not currently engage in many downstream OI partnerships: "in terms of partners, if you're saying white-labelling of technology, that's not something we've done yet" (interview C). Nonetheless, the firm notes that it is something they are open to in the future: "we're always looking at potentially licensing or white-labelling our technology for other companies who feel what we have may be of value to them or something they want to incorporate into their product of their offering" (interview C).

## V. THE ROLE OF INTERMEDIARIES

This section analyzes the network-enhancing role of printed electronics innovation intermediaries, specifically an industry association and a government lab. The engagement dynamics reported by the IoT

case studies corroborate many aspects of the literature on OI by SMEs, including the network-enhancing potential for different types of innovation intermediaries to enable SMEs to bridge knowledge gaps.

#### a) *Role of Government Intermediary*

The main government printed electronics research lab is the National Research Council's Printed Electronics Consortium. Established in 2013 with a 5 year \$40 million federal commitment (\$16 million from industry), the Ottawa-based NRC PEC allows members to "collaborate with leading members of the Canadian Printable Electronics industry to conduct product-driven applied research. They gain access to comprehensive PE solutions, both from NRC and through other consortium members, securing a significant competitive advantage." PEC's fee-for-service offerings also enable non-members to access their expertise and equipment. NRC PEC has over 16 members including PE suppliers as well as end use firms such as packaging companies.

#### b) *Packaging*

This firm's project was to develop an intelligent packaging compliance card that harnesses printed electronic sensors for tracking compliance to pill regimens in conjunction with smartphones. This collaboration began after the NRC approached them:

"So that's you know it just happened to be from a timing perspective the NRC approached us at that point in time about getting involved in intelligent and smart packaging and that's something we were already looking at and we had some thoughts behind it, so we entered into the consortium to try and develop and push smart packaging in the Canadian market space...the NRC approached us – they had the print electronics profile and they realized that smart packaging was an area that really probably made the most sense in terms of pushing printable electronics to the consumer level and so they approached us with the idea that – hey, you're in the healthcare space, you want to do more with your packaging, why don't you join up and they have different tiers of membership level" (Interview A).

This intermediary functioned in line with Lee et al.'s description of network database (identifying appropriate partners) and network construction (actively matching SMEs with appropriate technology) (2010). This intermediary also reflected the literature's focus on intermediaries bridging traditional industries with new technology industries (Breznitz & Cowhey, 2012, p. 147). Also significant is the networking within the members of the consortium. Since the company opted for tier one status, they could direct their own team of researchers, as well as access the research projects of other tier one members:

Tier one being a management committee member, which we are; tier two and three members have to be invited into projects, so being a tier one member allowed us a few different key advantages. One is we got to set our own project; we got to look at what we actually wanted to achieve and said that, tier two members don't have that capability, they just get invited in. The other thing as a tier one members we have different types of licensing options in terms of the intellectual property...that aren't necessarily related to packaging but some of the components I may be able to take and implement in packaging and at a better, more favourable licensing option" (interview A).

Finally, the firm's reasoning behind the decision to join reflects the literature's emphasis on intermediaries serving to augment SME product knowledge with access to advanced technological knowledge and facilities that were not available in house nor through firm-to-firm collaborations:

"we manufacture boxes, we're a carton manufacturer, we're a label manufacturer, getting into print electronics was a very new space for us and very difficult in the sense that it's not something where everybody just knows how to do it and it's not even something where you know you can find kinds coming out of school who actually know anything about it. So, you know, that were the NRC scientists really made a big difference because they obviously had the capability of doing that..." (interview A).

#### c) *Wearables*

Their project is to have NRC researchers assist them in characterization of their IP, which makes the patenting process easier: "we have a project with them where they characterize some of our IPs. So we can build our own intellectual property a little bit better and stronger without having to take the time to analyze everything we do. We can outsource that" (Interview A). Similar to the packaging case study, this firm's experience reflects the literature's focus on the network-enhancing role of intermediaries. Specifically, intermediaries network SMEs into knowledge networks, help facilitate firm-to-firm collaboration, and provide physical resources and research expertise:

"why we get involved [in NRC] is that we believe that they can help us facilitate and they have resources - they facilitate companies working together. They also have resources that we don't have like people, expertise, for example NRC has equipment and scientists and a lot of expertise that we can't hire full-time. It doesn't make sense of us to. So we can give them a project, they can handle it themselves, and then other people can share those same resources without the heavy investment in capital" (Interview B).

#### d) *Medical Wearables*

While this firm is not a member of NRC Consortium, they were reached out to by the NRC and are currently assessing whether to join. They view the consortium as useful for precisely the network enhancing reasons identified in the literature:

"The good thing about what that specific consortium was doing I think is the idea of bringing together companies that potentially have complimentary needs, so the printed electronics manufacturers with people who are consumers of printed electronics. And that's part of the reason they reached out to us, was I think they were very heavy on the ...heavier on the manufacturing side and not didn't have enough people on the application side. And so kind of getting that balance of people who consume it from people who just make it" (interview C).

In deciding to get involved in NRC or academic partnerships, this firm discussed concerns over IP leakage that is core to the product:

"In terms of what makes our decision to engage with different people...The issue for companies like us in dealing with whether it's the NRC or it's universities is...because there's always a question of IP and IP ownership and IP leakage, and what is core to your business and what is not core to your business. And so those are all things that we have to weigh out depending on who we're dealing with and what's going on. So the hard part for us is we really need to as a company we need to decide is this our core IP or isn't it" (interview C). This firm also has also engaged in a provincial program functioning as an innovation intermediary connecting SMEs with European firms for R&D partnerships. The partnership has yielded a 'smart bandage' for the prevention of bedsores. The program was described as follows:

"That program was designed to connect small SMEs in Alberta and Germany. The way the program works is you would define a joint project with your German partner that you found and the Alberta Government would share up to a maximum amount, but basically 50% of your costs on the project on the Alberta side. And then your German partner would get funded from their German equivalent" (interview C).

The firm's description of the government's intermediary role reflects the findings of the literature's emphasis on SMEs engaging with intermediaries to facilitate access to the benefits of OI collaborations. Specifically, the government intermediary's support assisted in brokering an introduction, which reduced the risks of investing in OI R&D collaboration:

"The big benefit of that was in many ways sharing the risk and sharing the cost of development of products...it gives you more of a willingness to take some additional risk in terms of project or maybe push that technology envelope a little bit further. That again is something that having some people share the

technology risk with you definitely increases the appetite to assume risk, especially when you're a small startup like we are" (interview C).

#### e) *Role of Industry Association*

The Canadian Printable Electronics Industry Association (CPEIA) is Canada's main PE industry association. Established in 2014, CPEIA has grown to 63 members as of Aug. 1, 2015. CPEIA "brings together key Canadian and international players in industry, academia and government...to facilitate growth through networking, stimulate R&D and investment, build a strong supply chain and drive the broad adoption of Printable and Organic Electronics by end customers in a range of Canadian industries, including Intelligent Packaging" (Canadian Printable Electronics Industry Association, 2017). The association makes efforts to have a heterogeneous membership base that spans both producers of PE as well as end users. For example, CPEIA and PAC Packaging Consortium have jointly formed IntelliPACK in September 2015, to "unite leading organizations across the packaging value chain, to collaboratively explore, evaluate and mobilize innovative SMART PACKAGING solutions" (IntelliPACK, 2017). A similar organization was created for intelligent buildings.

#### f) *Wearables*

This firm hopes to gain exposure and enhance their network through the association. They also won an award for product innovation at the association's annual conference. Reflecting the OI literature, this firm noted that the association is helpful as a platform for networking, helping partnerships to form:

"like I said there's a lot of product out there or there's a lot of tech but they don't actually put them in a product that can be commercialized to the end-user...I believe the role of these industry associations to facilitate conversations amongst like minds and to create exposure for companies, because there is a lot of talent in Canada, but unless you look for it or unless somebody tells you, you're not going to know they exist, so these industry associations help with that. They create a good platform for networking and opportunities for strategic partnerships to form. Like the NRC provide a lot of tools and resources so that we can develop successful and innovative product" (interview C).

This firm's perspective reflects the literature's findings on the unique effectiveness of industry associations in facilitating innovation for SMEs due to their facilitation of networking and OI collaborations within its heterogeneous membership base (Dalziel, 2006).

#### g) *Medical Wearables*

This firm's perspective also reflects the literature's conception of industry associations as an OI intermediary for SMEs. This firm described the value of

the industry association as laying in linking users and producers of PE and giving a united voice to the industry:

"Part of the value of having a consortium - would it be a matchmaker - I kind of view them as champions - having some group that represents...sort of championing or bringing to the forefront about why an industry is important and working with municipal, provincial and federal governments, whatever it is to create tax incentives or programs that help foster innovation in those areas, I think it's something that's incredibly valuable...being that sort of champion and point of contact and matchmaker across borders would be something I think would be incredibly valuable that small companies or startup companies don't have the time or the resources to do" (interview C).

Finally, this firm viewed the network enhancing role of the association as particularly needed due to the geographic size of Canada: "I think given the number of companies and companies in Canada you almost have to put them together in sort of this consortium to get a critical mass of technology companies" (interview C).

## VI. CONCLUSION

This paper has examined three case studies of SMEs who have introduced IoT innovations: a packaging firm, a wearables firm, and a medical wearables firm. Analysis of these examples suggests possible differences in firm-level innovation in IoT as compared to OI product innovation in other technologies. Specifically, IoT product innovation demands OI collaboration by SMEs who want to innovate, but in a different way than OI in other technological contexts. In terms of firm-to-firm partnerships, the case studies in this paper demonstrated more upstream collaboration as compared to the literature's characterization of other sectors, where OI in SMEs tends towards a focus on downstream partnerships. In terms of intermediaries, the case studies illustrated the network-enhancing role of printed electronics innovation intermediaries, specifically an industry association and a government lab. The engagement dynamics reported by the IoT case studies reflected the literature's emphasis on intermediaries functioning in a network-enhancing role to enable SME partnerships that bridge knowledge gaps. These findings contribute to the literature on OI in SMEs in two ways: 1) extending the OI in SME literature into the context of IoT product innovation yields observations of distinct upstream firm-to-firm partnership orientations; 2) the case studies reinforce the literature's emphasis on the network-enhancing role of intermediaries by providing a more granular, detailed treatment of the role of innovation intermediaries than is typically garnered by survey-based analysis. Future research should expand upon the limited sample of

cases to interrogate whether other firms engaging in IoT product innovation exhibit similar firm-to-firm and intermediary partnership dynamics.

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# The Nexus between Motivation and Employees' Job Satisfaction: Special Reference to the Base Hospitals in Ampara District

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**Abstract-** The study will be useful to understand motivation and employees' job satisfaction in hospitals. The main objective of this study is to examine the relationship between motivation and job satisfaction of doctors and nursing staff in base hospitals in Ampara. For this study purpose, two base hospitals in Type- A and Type-B in Ampara District namely Ashraff Memorial Hospital (Kalmunai South Base Hospital) and Ninthavur Base Hospital were selected. Sample size of this research was 158 hospital staff (Doctors and Nurses) which was selected by using simple random sampling method. Structured questionnaire used to get the primary data collection. The findings of the study indicated that there is a significant and positive relationship between Motivation and employees' job satisfaction. Further, The results of this study show that level of the motivation of doctors and nursing staff in base hospitals is moderate level where the motivation variables namely Recognition, Work itself, Professional Growth Opportunities, Responsibility are moderate level and other motivation variables namely Opportunities for Advancement, Good Feelings about Organization, Clarity of Mission are high level. Level of job satisfaction experienced by doctors and nursing staff in base hospitals is high level. Some recommendations are suggested to improve the motivation and job satisfaction of hospital staff (Doctors and Nurses).

**Keywords:** *motivation, job satisfaction, clarity of mission.*

**GJMBR-G Classification:** *JEL Code: J28*



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# The Nexus between Motivation and Employees' Job Satisfaction: Special Reference to the Base Hospitals in Ampara District

Ambalam Pushpanathan<sup>α</sup> & Atham Gany Imam Mohamed Ithrees<sup>σ</sup>

**Abstract-** The study will be useful to understand motivation and employees' job satisfaction in hospitals. The main objective of this study is to examine the relationship between motivation and job satisfaction of doctors and nursing staff in base hospitals in Ampara. For this study purpose, two base hospitals in Type- A and Type-B in Ampara District namely Ashraff Memorial Hospital (Kalmunai South Base Hospital) and Ninthavur Base Hospital were selected. Sample size of this research was 158 hospital staff (Doctors and Nurses) which was selected by using simple random sampling method. Structured questionnaire used to get the primary data collection. The findings of the study indicated that there is a significant and positive relationship between Motivation and employees' job satisfaction. Further, The results of this study show that level of the motivation of doctors and nursing staff in base hospitals is moderate level where the motivation variables namely Recognition, Work itself, Professional Growth Opportunities, Responsibility are moderate level and other motivation variables namely Opportunities for Advancement, Good Feelings about Organization, Clarity of Mission are high level. Level of job satisfaction experienced by doctors and nursing staff in base hospitals is high level. Some recommendations are suggested to improve the motivation and job satisfaction of hospital staff (Doctors and Nurses).

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## I. INTRODUCTION

I ncreasing the productivity or performance of the organization has been a major concern for all organizations both in the public and private sectors, great and small alike in the world. However, most of the organizations are paying attention to improve the productivity or performance of the organization, most organizations still face problems in retention of employees because of the counter-productive behaviors of employees in many organizations such as absenteeism, theft, wasting resources, verbal abuse and procrastinating etc. These negative behaviors of employees affect their performance and the performance of the organization as a whole.

Beck (1983) identified that happy employees tend to be more motivated and will be faithful to a

company. They will conduct themselves and work on the assignments assigned to them more enthusiastically and passionately and consequently yielding higher quality output. As a result, it is important for organizations to be more concern about the welfare of workers. Most employees need motivation to feel good about their jobs and perform optimally. Some employees are money motivated while others find recognition and rewards personally motivating. Motivation levels within the workplace have a direct impact on employee productivity. Workers who are motivated and excited about their jobs carry out their responsibilities to the best of their ability and production numbers increase as a result (Ganta, 2014). Many researchers and practitioners had taken interest in the topic that explain motivation and employee satisfaction.

Job satisfaction can be considered as one of the main factors when it comes to efficiency and effectiveness of business organizations. In fact the new managerial paradigm which insists that employees should be treated and considered primarily as human beings. When analyzing job satisfaction the logic that a satisfied employee is a happy employee and a happy employee is a successful employee. A nation's growth does not only depend on its income or natural resources but also on social services such as improvement in healthcare delivery. Health care is conventionally regarded as an important determinant in promoting the general physical and mental health and well-being of people around the world. Without good healthcare, people cannot exercise their right to work, "health is a fundamental human need" Health workers occupy a crucial position in any health care facility. They heal and care for people, relieve them of their pain and suffering and prevent diseases. Therefore, they must be motivated and supported.

### a) Statement of the Problem

Many countries currently experience a shortage of qualified health workers specially doctors and nurses. Health care professionals in developing countries are migrating to developed countries that affect the healthcare system in developing countries and, hence, the health of the population. At current levels, wage differentials from country to country are so large. In the

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past history of Sri Lanka, health workers specially doctors and nurses went on strike to demand the Government on salary issues, reinstate their right to import tax-free cars and other benefits. And also the healthcare workers including doctors, nurses, medical technicians and minor staff are suffering by heavy workloads, extended working hours and time-related pressure. Based on the above issues, the health workers can experience poor motivation that lead to less satisfaction in their job. Poorly motivated health workers can have a negative impact on individual facilities and an entire health system. Therefore, keeping health workers satisfied and motivated helps the entire health system work smoothly.

Based on the problem statement, the researcher interested to do this research proposing the issue that the motivation significantly and positively relates to employees' job satisfaction in base hospitals. This study focuses on addressing the following research question.

Is there a significant relationship between motivation and employees' job satisfaction?

## II. LITERATURE REVIEW

Motivation means the willingness of an individual to do efforts and take action towards organizational (Dobre, 2013).

Luthans (2011) stated that motivation is a process that starts with a physiological or psychological deficiency or need that activates a behavior or a drive that is aimed at a goal or incentive.

Smerek and Peterson (2007) developed the motivators such as Recognition, Work itself, Opportunities for advancement, Professional growth opportunities, Respectably, Good feelings about organization and Clarity of mission.

Job satisfaction is a result of employees' perception of how well their job provides those things that are viewed as important. It is generally recognized in the organizational behavior field that job satisfaction is the most important and frequently studied employee attitude (Luthans, 2011).

Job satisfaction is the employee's opinion that how much they are satisfied with their job. It is positive and emotional state resulting from evaluation of one's job. Existence of enterprises and their success are affected by quality of human resources (Zafar et al., 2014).

Velnampy (2009) indicated that there are three generally accepted dimensions to job satisfaction. (i) Job satisfaction is an emotional response to a job situation. It cannot be seen; it can only be inferred. (ii) Job satisfaction is often determined by how well outcomes meet or exceed expectations. For example, if organizational participants feel that they are working much harder than others in the department but are

receiving fewer rewards, they will probably have a negative attitude toward the work, the boss, and/or coworkers. They will be dissatisfied conversely if they feel they are being treated very well and are being paid equitably, they are likely to have a positive attitude toward the job. They will be job satisfied.(iii) Job satisfaction represents several related attitudes.

Luthans (2011) indicated that through the years following five job dimensions have been identified to represent the most important characteristics of a job about which employees have affective responses.

Satisfaction is considered as most important attitude in motivating people in the Organisations. Hence today's organisations are taking much interest in satisfying employees through various strategies. Congenial working environment and pleasurable work situation will lead to the inspiration of the people which will help to the achievement of individual and organizational goals (Velnampy2009).

Job satisfaction is very essential to employees to perform their duties effectively and efficiently. A person with higher level of Job Satisfaction, perform their duties effectively than the employees who has less job satisfaction or high job dissatisfaction. So office worker's job satisfaction is very important because the employees are the decision makers, in the organization and direct the organization in to a success (Jayathilaka, 2014).

Rajan (2015) made a study in hospital where he concluded in his study that adequate motivation is essential to keep them satisfied and improve their performance in order to enhance satisfaction, safety and quality of the service in the hospital.

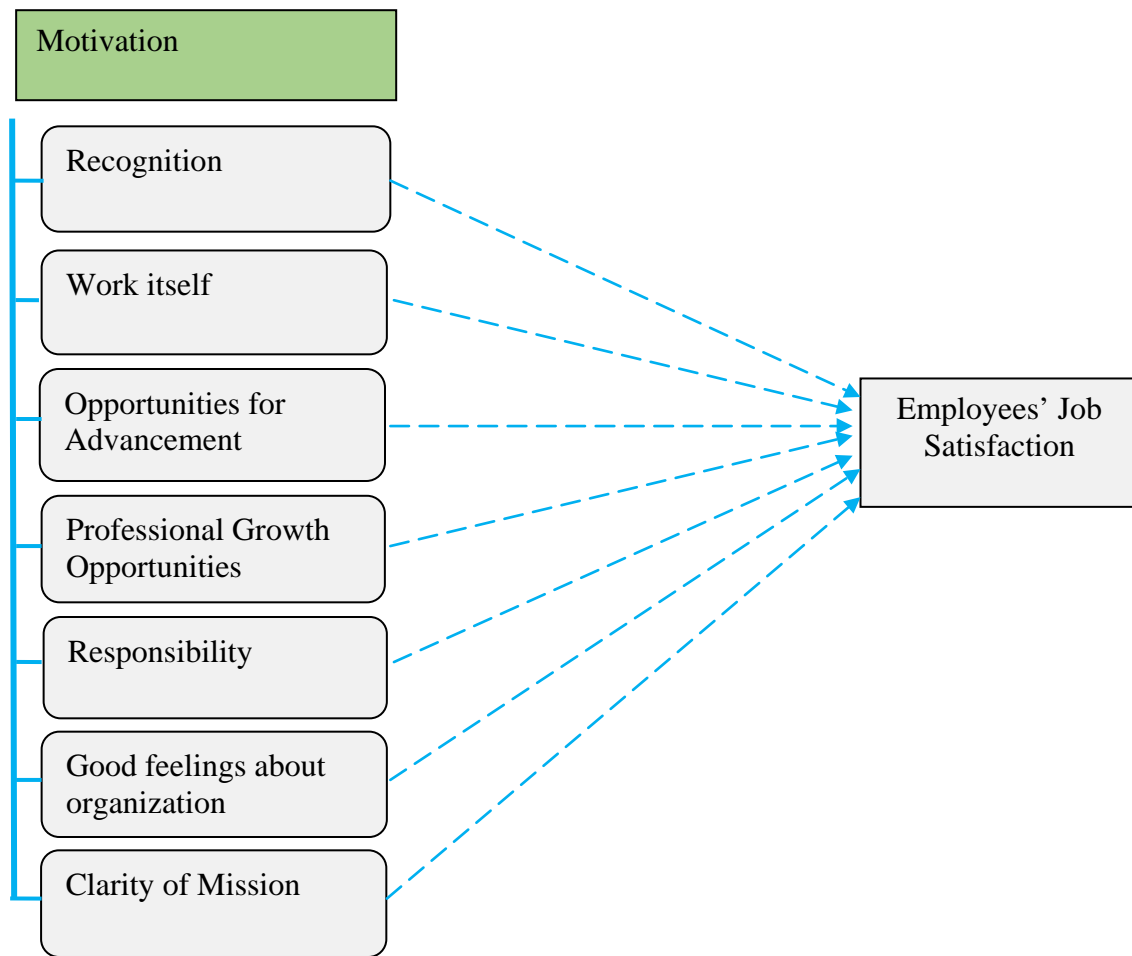
Job satisfaction describes how satisfied an individual is with his or her job. Job satisfaction is not the same as motivation but it is related to motivation also (Mallikarjuna, 2012).

Motivation and job satisfaction are like two sides of the same coin. Both of them have direct impact on job performance, morale, commitment and productive contribution of the employees. Motivated and satisfied employees will utilize the resources at optimum level, respect the co-workers, seniors, superiors and patients in a well manner, extend adequate cooperation to other staffs in the own department and other department, take part in the team work well, be discipline, follow the ethics of the organization and profession, show high performance in the work, obey the rules and regulations of the hospital properly and utilize their ability fully (Rajan, 2015).

## III. METHODOLOGY

Here focused on how this research study has been carried out scientifically. It explains the research conceptual framework, hypotheses and survey methodology, composition of the sample and method of

analysis adopted to achieve the stated primary objective of the research: to examine the relationship between motivation and employees' job satisfaction in base hospitals in Ampara district.



(Source: Smerek and Peterson, 2007)

Figure 3.1: Conceptual Model

a) *Hypotheses of the Study*

A hypothesis can be defined as a logically conjectured relationship between two or more variables expressed in the form of a testable statement. Relationships are conjectured on the basis of the network of associations established in the conceptual framework formulated for the research study. By testing the hypotheses and confirming the conjectured relationships, it is expected that solutions can be found to correct the problem encountered (Sekaran, 2003).

The following hypotheses were tested to examine the relationship between motivation and employees' job satisfaction in base hospitals in Ampara district.

- $H_1$ : There is a relationship between motivation and employees' job satisfaction
- $H_2$ : There is a relationship between recognition and employees' job satisfaction.

- $H_3$ : There is a relationship between work itself and employees' job satisfaction.
- $H_4$ : There is a relationship between opportunity for advancement and employees' job satisfaction.
- $H_5$ : There is a relationship between professional growth and employees' job satisfaction
- $H_6$ : There is a relationship between responsibility and employees' job satisfaction
- $H_7$ : There is a relationship between good feelings about organization and employees' job satisfaction
- $H_8$ : There is a relationship between clarity of mission and employees' job satisfaction.

IV. DATA ANALYSIS

The basic idea of this study is to understand the relationship between Motivation and Employees' Job Satisfaction with Special Reference to Base Hospitals in Ampara District. In this study, relationship between

motivation and employees' job satisfaction was analyzed and interpreted based on the methodology.

The main statistical analysis of Descriptive analysis and Correlation analysis were used in this study and the response patterns under the descriptive analysis were analyzed by using mean and standard deviation. Under the correlation analysis, the relationship of independent variable with the dependent variable was analyzed.

a) *Descriptive Analysis*

Based on the result of descriptive analysis, the systematic level of each variable of motivation and job satisfaction of hospital staff are shown in table 4.1 below.

Table 4.1: Results of Measurement of Motivation and Job Satisfaction of Hospital Staff

Variables	Mean	Standard Deviation	Level
Motivation	3.9627	.47294	moderate
Employees' Job Satisfaction	4.0332	.42851	high
Recognition	3.7519	.67094	moderate
Work itself	3.9778	.59146	moderate
Opportunities for Advancement	4.1614	.85682	high
Professional Growth Opportunities	3.5620	.62848	moderate
Responsibility	3.7430	.66086	moderate
Good Feelings about Organization	4.0937	.57492	high
Clarity of Mission	4.4494	.45835	high

b) *Correlation Analysis*

This section is focused on examining the relationship of the independent variable with the dependent variable. Based on the result of Correlation analysis, the relationship between variables of Motivation and Job Satisfaction of hospital staff are shown in table 4.2 below.

Table 4.2: Results of Measurement of Relationship between Motivation and Job Satisfaction of Hospital Staff

Variables	Correlation (r)	Pvalue
Relationship between Motivation and Employees' Job Satisfaction	.779**	.000
Relationship between Recognition and Employees' Job Satisfaction	.905**	.000
Work itself and Employees' Job Satisfaction	.415**	.000
Opportunities for Advancement and Employees' Job Satisfaction	.452**	.000
Professional Growth Opportunities and Employees' Job Satisfaction	.503**	.000
Responsibility and Employees' Job Satisfaction	.913**	.000
Good Feelings about Organization and Employees' Job Satisfaction	.424**	.000
Clarity of Mission and Employees' Job Satisfaction	.383**	.000

V. RESULTS AND DISCUSSION

According to the correlation analysis, the relationship between variables of Motivation and Job Satisfaction of hospital staff are analyzed and further hypotheses were tested by using correlation. The following table provides a snapshot view of whether the formulated hypotheses are accepted or not.

Table 5.1: Hypotheses Testing

Hypotheses	Analysis	Results
H <sub>1</sub> : There is a relationship between motivation and employees' job satisfaction	Correlation Analysis	Accepted
H <sub>2</sub> : There is a relationship between recognition and employees' job satisfaction.	Correlation Analysis	Accepted
H <sub>3</sub> : There is a relationship between work itself and employees' job satisfaction.	Correlation Analysis	Accepted
H <sub>4</sub> : There is a relationship between opportunity for advancement and employees' job satisfaction.	Correlation Analysis	Accepted
H <sub>5</sub> : There is a relationship between professional growth and employees' job satisfaction	Correlation Analysis	Accepted
H <sub>6</sub> : There is a relationship between responsibility and employees' job satisfaction	Correlation Analysis	Accepted
H <sub>7</sub> : There is a relationship between good feelings about organization and employees' job satisfaction	Correlation Analysis	Accepted
H <sub>8</sub> : There is a relationship between clarity of mission and employees' job satisfaction	Correlation Analysis	Accepted

As it can be seen from the table 5.1, Motivation was found to significantly correlated with Employees' Job Satisfaction ( $r = .779^{**}, p=.000$ ), implying that there is a strong positive relationship between Motivation and Employees' Job Satisfaction. Hence H<sub>1</sub> of Hypothesis-1 is accepted.

Recognition was found to significantly correlated with Employees' Job Satisfaction ( $r = .905^{**}, p=.000$ ), implying that there is a strong positive relationship between Recognition and Employees' Job Satisfaction. Hence H<sub>1</sub> of Sub Hypothesis-2 is accepted.

Work itself was found to significantly correlate with Employees' Job Satisfaction ( $r = .415^{**}, p=.000$ ), implying that there is a positive relationship between Work itself and Employees' Job Satisfaction. Hence H<sub>1</sub> of Sub Hypothesis-3 is accepted.

Opportunities for Advancement was found to significantly correlate with Employees' Job Satisfaction ( $r = .452^{**}, p=.000$ ), implying that there is a positive relationship between Opportunities for Advancement and Employees' Job Satisfaction. Hence H<sub>1</sub> of Sub Hypothesis 4 is accepted.

Professional Growth Opportunities were found significantly correlate with Employees' Job Satisfaction ( $r = .503^{**}, p=.000$ ), implying that there is a positive relationship between Professional Growth Opportunities and Employees' Job Satisfaction. Hence H<sub>1</sub> of Sub Hypothesis-5 is accepted.

Responsibility was found to significantly correlate with Employees' Job Satisfaction ( $r = .913^{**}, p=.000$ ), implying that there is a strong positive relationship between Responsibility and Employees' Job Satisfaction. Hence H<sub>1</sub> of Sub Hypothesis-6 is accepted.

Good Feelings about Organization was found to significantly correlate with Employees' Job Satisfaction ( $r = .424^{**}, p=.000$ ), implying that there is positive relationship exist between Good Feelings about Organization and Employees' Job Satisfaction. Hence H<sub>1</sub> of sub hypothesis-7 is accepted.

Clarity of Mission was found to significantly correlate with Employees' Job Satisfaction ( $r = .383^{**}, p=.000$ ), implying that there is positive relationship between Clarity of Mission and Employees' Job Satisfaction. Hence H<sub>1</sub> of sub hypothesis-8 is accepted.

## VI. CONCLUSION

Primary objective of this study is to examine the nexus between motivation and employees' job satisfaction of doctors and nursing staff in base hospitals in Ampara. The results of this study show that motivation has significant positive relationship with employees' job satisfaction since the motivational factors such as Recognition, Work itself, Opportunities for Advancement, Professional Growth Opportunities, Responsibility, Good Feelings about Organization, Clarity of Mission are significantly and positively correlated with employees' job satisfaction.

The first specific objective of this study is to identify the level of the motivation for doctors and nursing staff in base hospitals. The results of this study show that level of the motivation of doctors and nursing staff in base hospitals is moderate level where Recognition, Work itself, Professional Growth Opportunities, Responsibility are moderate level and Opportunities for Advancement, Good Feelings about

Organization, Clarity of Mission are high level. The second specific objective of this study is to identify the level of job satisfaction experienced by doctors and nursing staff in base hospitals. The results of this study show that level of job satisfaction experienced by doctors and nursing staff in base hospitals is high level. The third specific objective of this study is to explain how motivational factors should be improved to increase the job satisfaction of doctors and nursing staff in base hospitals. Based on the results of descriptive analysis, Recognition, Work itself, Professional Growth Opportunities and Responsibility are moderate level.

Inferential statistics reveal that there is a significant positive association between motivation and job satisfaction. Hence, it can be inferred that job satisfaction can be improved if organizations pay attention more on motivational factors.

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## Effect of Compensation on Basic School Teachers' Job Satisfaction in the Northern Zone: The Case of Ghana

By Josephine Pepra-Mensah, Luther NtimAdjei & Albert Agyei

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**Abstract-** The issue of compensation is a very essential one for organizations. Whether an organization attracts high quality or retains them highly depend on its compensation package. This study was motivated by the desire to find out about teacher perception of compensation and whether compensation affects teacher job satisfaction at the basic level since they laid the foundation for the future leaders of a country, which means that their ability to give off their best went a long way to affecting the caliber of persons that are brought up in our society. A convenience sampling procedure was used to select 100 basic school teachers for the study. Primary data were gathered through the administration of questionnaires. Statistical tools employed to analyze the data were frequencies, means and standard deviation. Pearson correlation and regression analysis were also adopted for hypotheses testing. The results revealed that teachers have a negative perception about compensation practices of the service and also revealed that compensation dimensions of Base pay, Incentives and benefits significantly correlated with teachers' job satisfaction. As a result of the findings, it was recommended that policy makers and management put in place effective compensation policies and include teachers in major compensation decisions that affect them.

**Keywords:** *compensation, job satisfaction, base pay.*

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# Effect of Compensation on Basic School Teachers' Job Satisfaction in the Northern Zone: The Case of Ghana

Josephine Pepra-Mensah<sup>α</sup>, Luther NtimAdjei<sup>σ</sup> & Albert Agyei<sup>ρ</sup>

**Abstract-** The issue of compensation is a very essential one for organizations. Whether an organization attracts high quality or retains them highly depend on its compensation package. This study was motivated by the desire to find out about teacher perception of compensation and whether compensation affects teacher job satisfaction at the basic level since they laid the foundation for the future leaders of a country, which means that their ability to give off their best went a long way to affecting the caliber of persons that are brought up in our society. A convenience sampling procedure was used to select 100 basic school teachers for the study. Primary data were gathered through the administration of questionnaires. Statistical tools employed to analyze the data were frequencies, means and standard deviation. Pearson correlation and regression analysis were also adopted for hypotheses testing. The results revealed that teachers have a negative perception about compensation practices of the service and also revealed that compensation dimensions of Base pay, Incentives and benefits significantly correlated with teachers' job satisfaction. As a result of the findings, it was recommended that policy makers and management put in place effective compensation policies and include teachers in major compensation decisions that affect them.

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## I. INTRODUCTION

Throughout the 20th century until now, organizations' view of people has changed dramatically. People - human resources - who work in organizations today unlike in the past, are considered one of the most valuable assets an organization can acquire, maintain and develop in order to attain competitive advantage (Dessler, 2013). Thus, the most successful organizations are those who are able to acquire, develop and maintain high quality employees. Research suggests that high quality employees remain with organizations when they experience satisfaction on the job (Gupta & Shaw, 2014). This is because satisfied employees form a bond with the company and take pride in their organization membership; they believe in the goals and values of the organization therefore, these employees display high levels of performance and productivity. On the other hand, dissatisfied employees display characteristics of low productivity, absenteeism, and turnover. These traits

are highly costly for organizations as such, an organization's ability, to keep its best assets – human resources- therefore, depends on sustainable people-oriented systems like attractive compensation schemes (Greene, 2014) that would encourage employees and lead to their satisfaction on the job, so as to maximize their full potential as well as the success of the organization.

Thus, compensation management, as suggested by Osibanjo, Adeniji, Falola and Heirsmac (2014) would lead to satisfaction on the job that in turn, naturally results in a happy employee who would be enthused about staying with the organization and being productive to helping his or her organization achieve its goals. Consequently, compensation management, as a human resource management practice, has been expressed by many (e.g., Adeoye & Fields, 2014; Gupta & Shaw, 2014; Ibojo & Asabi, 2014) as one of the ways to accomplish organizational goals due to its influence on satisfaction. For example, Greene (2014) indicated that compensation management is a useful instrument in the hand of management to contribute to the organizational effectiveness and can impact positively on the behavior and productivity of employees. Dessler (2013) also stated that it determines the hiring and retention of employees to attain the objectives of an organization, and is the basis of involvement of individuals to reinforce the performance of employees.

Employee satisfaction has been simply, defined as how content employees are with their jobs. Compensation, on the other hand, as defined by Salisu, Chinyio and Suresh (2015) is "the reward workers receive for their service or contribution to the organization" (p.282). Thus, it is assumed that an employee will experience contentment (Satisfaction) when he or she has been rewarded (Compensation) for the service they render or the contribution they make to the achievement of organizational goals.

For most people, pay is a primary reason for working. According to Osibanjo, Adeniji, Falola and Heirsmac (2014), compensation is a primary motivator for employees. People look for jobs that not only suit their creativity and talents, but compensate them in terms of salary and other benefits accordingly. As expressed in Maslow's (1958) theory of human needs cited in Omotayo, Pavithra, and Adeniji (2014),

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individuals are goal-oriented whose needs can influence their behavior. As such, unsatisfied needs influence behavior but satisfied needs do not act as motivator. More so, scholars (Omotayo, Pavithra&Adeniji, 2014) assessing this theory have suggested that most needs at the physiological level could be satisfied fully, if the worker receives adequate compensation, so as to provide for those needs. This makes the issue of compensation very important.

According to Gupta and Shaw (2014), the design and implementation of compensation systems not only can affect employee motivation, but also can be harnessed to improve safety, quality, creativity, innovation and a myriad other outcomes critical in a successful workplace. And that's exactly, what is needed from teachers to build a lasting educational foundation for children. By extension, what Gupta and Shaw mean to say is that any employee (teacher) who benefits from a properly designed compensation system is likely to give off their best to ensure a successful and effective performance. And it should not be overlooked that people look for jobs that not only suit their creativity and talents, but compensate them in terms of salary and other benefits accordingly (Osibanjo, Adeniji, Falola & Heirsmac, 2014).

It has been said that a nation's prosperity cannot be better than the quality of the teachers. And quality to a large extent depends so much on the motivation and satisfaction of the teacher. Teachers are fundamental to the success of any nation, of which Ghana is not an exception. It has also been indicated that the foundation upon which Ghana's educational superstructure is built is at the Basic level of education (Adentwi, 2005). Hence, the need to ensure that teachers at that level are kept motivated and satisfied in order to help build a proper educational foundation. In spite of the numerous studies conducted in the area of job satisfaction, compensation which is at the core of any employment relations exchange and serves as a defining characteristic of any employment relationship seems not have received much emphasis, especially in educational institutions. Even those studies that touched on compensation are few; hence the plea by some (Gupta & Shaw, 2014) for more research to be carried out on this all-important human resource practice. More interestingly, the few that have been conducted are found in other contexts other than the Ghanaian context and also focused on industry rather than the educational sector. And further, the few conducted on the sector placed emphasis on teachers at the Secondary or tertiary levels (Bozeman & Gaughan, 2011; Muguongo, Muguna&Muriithi, 2015). Since most studies (Mugongo, Muguna&Muriithi, 2015) in the area laid much emphasis on tertiary and few on secondary levels, it is not very clear, the state of the Ghanaian employee, (especially, at the basic school level), in respect of whether compensation plays a role in their satisfaction on the

job. This study therefore, is poised to assess compensation at the Basic level of education, in the Ghanaian context, to assess teacher perceptions about compensation practices and to determine whether compensation, in its various forms influence the satisfaction of teachers, with a view to establishing the real state of affairs.

### *Hypotheses*

The study sought to test the following hypotheses.

*H1:* There is a significant relationship between Base Pay and Basic school teachers' job satisfaction.

*H2:* There is a significant relationship between Benefits and and Basic school teachers' job satisfaction.

*H3:* There is a significant relationship between Incentives and Basic school teachers' job satisfaction.

## II. LITERATURE REVIEW

### *a) Compensation*

Compensation is the human resource management function that deals with every type of reward individuals receive in exchange for performing organizational tasks (Ivancevich, 2006). It is considered the major cost incurred by a business organization. However, today the human resource is considered as human capital and compensation hence is not cost but rather investment (Armstrong, 2010). Heathfield (2012), defines compensation as a fixed amount of money paid to an employee by an employer in exchange for a productive work performed. Thus, if individuals believe they are not compensated well, a state of emotional dissatisfaction develops. This is because people trade labor and loyalty for financial and non financial compensation with business organization. Thus, poor compensation management may lead to absenteeism, turnover, job dissatisfaction, psychological withdrawal, poor mental health and so on. An ideal compensation strategy, therefore, should encourage employees to work harder with more determination and dedication to their duties (Khan, Shah & Zaman, 2013). It is a systematic approach to providing monetary value to employees in exchange for work performed. Compensation may achieve several purposes; assisting in recruitment, job performance, and job satisfaction (Yamoah, 2013). According to Aslam et.al (2015), compensation is a broad term that defines payments and rewards given to workers in order to persuade them to keep working for a company. Compensation is not just about regular rewards for work done but also attempts made by employers to retain employees. It goes beyond salary and transcends this boundary to include benefits and other incentives. Examples of such are salaries, wages and bonus payments (Scott, et al, 2007). Simply put, compensation management is a general policy, designed to help an organization maximize the returns on available talent. Thus, the

ultimate goal is to reward the right people to the greatest extent for the most relevant reasons.

b) *Types of Compensation*

i. *Direct Compensation*

According Dessler (2013), direct compensation is usually limited to the direct cash benefits that the employees receive on monthly, bi-monthly or weekly basis for the services they render as employees of a particular organization. It could also be in the form of stock bonus compensation, where employees of the organization are given the opportunity to own shares in the organization they work for and at the end of every year they have the opportunity again to gain some dividend in the form of equity on their shares. Ivancevich (2006) states that direct compensation includes Base and variable. Base Pay refers to the basic compensation that an employee receives, usually as a wage or salary. Base pay may be hourly and salaried, which are identified according to the way pay is distributed and the nature of the jobs. Hourly pay is the most common means of payment based on time while people paid salaries receive consistent payments each period regardless of the number of hours worked. Variable Pay, another type of direct pay is compensation linked directly to individual, team, or organizational performance. The most common types of variable pay for most employees take the form of bonuses and incentive program payments.

ii. *Indirect Compensation*

Dessler (2013) refers to indirect compensation as the indirect financial and nonfinancial payments employees receive for continuing their employment with the company which are an important part of every employee's compensation. Other terminology such as fringe benefits, employee services, supplementary compensation and supplementary pay are used. According to Armstrong (2009) indirect compensation or Employee benefits are elements of remuneration given in addition to the various forms of cash pay. They also include items that are not strictly remuneration such as annual holidays. Management uses it ostensibly to facilitate its recruitment effort or influence the potential of employees coming to work for a company, influence their stay or create greater commitment, raise morale, reduce absenteeism in general and improve the strength of the organization by instituting a comprehensive programme in this area (Khan et al., 2013). Byars and Rue (2008) mentioned Paid Holidays, Workers' Compensation, retirement and pension plans, and paid vacations as some of the more popular indirect compensations.

From the ongoing discussions, it could be concluded that compensation packages entail some basic features that tend to make employees satisfied on their job amongst which includes salaries, bonuses,

incentives, allowances, promotion, recognition (Werner, 2001; Martineau, Lehman, Matwa, Kathyola and Storey, 2006). And as indicated by Yamoah (2013), all these have significant impact on employees' performance. However, as indicated by Osibanjo et al., (2014), to avoid wrong perception and controversy by employees, compensation system must be clearly communicated to employees with job measurement which will drive the much needed performance in the employees. Osibanjo, Adeniji, Falola and Heirsmac (2014), indicate that compensation package must be attractive enough to prevent employees from becoming dissatisfied and looking elsewhere for better salary, career development opportunities, fringe benefits, bonuses and incentives. Thus, an organization's compensation package could be referred to as a total rewards program and includes all the methods (cash, equity, and benefits) used by employers to pay employees for the work they provide for the organization. An effective compensation package or total reward package therefore, includes a variety of components that attract and retain employees who have skills needed by the organization. Because people have different needs, based on their individual circumstances, the components included in the package should be sufficiently varied to address the different requirements of people at different stages in their lives. For example, employees with young children may be looking for benefits that help them raise their children such as day care or time off to attend to school activities. Though the review discusses compensation in its various forms, the study will focus more on monetary compensation.

iii. *Job Satisfaction*

Locke (1976) defined job satisfaction as an enjoyable and exciting emotional condition which someone get in their work. Job satisfaction is important for reducing turnover rate and increase motivation. Prior studies identified that there are different instruments for managing job satisfaction like pay, recognition and working environment (Mathauer et al., 2006). People will be more committed and more productive doing their job if they are more satisfied (Al-Hussami, 2008). According to Hashim and Mahmood (2011), job satisfaction is an affective reaction to an individual's work situation. It is an overall feeling about one's job or career and can be related to specific outcomes, such as pay, work environment, job security promotion opportunities among others. Job satisfaction simply explains the attitude of employees toward their job. In other words, it describes the level of happiness of employees in fulfilling their desires and needs at work. It is considered to be the pleasurable feelings that result from an employee perception of achieving the desire level of needs. Satisfaction and dissatisfaction not only depend of the job but also depend upon employee's expectation about job (Hussami, 2008). Job satisfaction is considered to be the most important element in the

organization as such organisations who want to succeed must keep their employees satisfied (Wubuli, 2009). Job satisfaction is actually a mixture of job role, job responsibilities, incentive and rewards. It is a combination of extrinsic and intrinsic job satisfaction. When an employee is satisfied he will perform well in the workplace. Thus, to satisfy employees, an organization needs to provide different facilities to employees. For example, providing good working condition, fairness on the job, giving promotion and rewards to employees because these are the elements which contribute to employee satisfaction (Parvin&Kabir, 2011).

### c) *Compensation and Satisfaction*

The concept of employee compensation cannot be discussed in a vacuum. Several researchers (Adeoye& Fields, 2014; Greene, 2014; Gupta & Shaw, 2014) have established that compensation and job satisfaction are positively associated with each other. And job satisfaction can bring about motivation which in turn affects employee job performance and organizational commitment. Kuria (2011) contended that employees are the most satisfied and highly productive when their job gives them security from economic strain, recognition of their effort, clean policy of grievances, opportunity to contribute ideas and suggestions, participation in decision making and managing the affairs, clean definitions of duties and responsibilities and opportunities for promotion, fringe benefits, sound payment structure, incentive plans and profit sharing activities, health and safety measures, social security, compensation, communication, communication system and finally, atmosphere of mutual trust respect. This calls for strategic moves and actions by organizations and their management to ensure that such factors as spelt out by Kuria and others are present. Bozeman and Gaughan (2011) indicated that the perception of being paid what one is worth predicts job satisfaction. They further state that there is a positive significant relationship between compensation and job satisfaction. In another study conducted by the Society for Human Resource Management (2012), it was indicated that compensation and benefits would affect employees' job satisfaction. Based on the survey report, compensation has remained one of the top three job satisfaction aspects most important to employees. Therefore, it could be concluded that the influence of compensation on employees' job satisfaction is significant and obvious. This phenomenon is perhaps explained by the fact that money is very instrumental in fulfilling several important needs of the individual and therefore serves as an enticing element for anybody seeking for a job. According to Hashim and Mahmood (2011), psychologists divide human beings' basic needs into five levels that match Maslow's hierarchy of needs. From that perspective and that of personnel psychology, compensation can satisfy physiological, safety and

security needs, which comprise the first two levels, and also an employee's needs for social interaction, self-esteem and self actualization. Tsai (2004) suggested that if these needs can all be satisfied; employees will work at ease. Therefore, in order to enhance employees' job satisfaction, effective rewards (e.g., a full attendance reward and bonus) can be adopted to reduce employee absence and increase job performance.

According to Chang (1996), the significant and positive correlation between compensation design and employee satisfaction indicate that compensation is an important function in human resource management. It suggests, therefore, that if the design and management of a compensation system are appropriate, employees are likely to be motivated to give off their best. Also, in a study conducted on Secondary school teachers in Kenya, it was concluded that teachers were highly dissatisfied with all aspects of compensation they received and established that basic pay, allowances and work environment affects teachers' job satisfaction to a great extent (Muguongo, Muguna&Muriithi, 2015). The discussions above, thus provide a strong evidence to prove the relationship between compensation and employee job satisfaction.

### d) *Methodology*

The target population for the study consisted of all Basic school teachers in the Northern sector of Ghana. But one hundred (100) respondents (teachers) made up the sample for the study. The participants were selected based on convenience. Thus, a convenience sampling technique was used. A self-designed set of questionnaire was used to gather data. The set of items was structured using the Likert format with a four-point response scale and few open-ended items. These options served as the quantification of the participants' agreement or disagreement on each item. Below are the designated quantifications used in the questionnaire: 1=strongly agree, 2=agree, 3=disagree and 4=strongly disagree. The questionnaire aimed at measuring the following key independent variables: compensation package (salary, benefits and Incentives). Job satisfaction was the dependent variable. For demographic factors, respondents were asked to indicate their age (in years), tenure (in years), sex, position on the job and education level. Thirteen items were used for determining the types of compensation; fifteen items for perception of teachers about compensation package; and fifteen items on the effect of compensation of job satisfaction. These were adapted and modified from the Heneman and Schwab (1985) Pay Satisfaction Questionnaire.

### e) *Analysis of the Data*

The quantitative analysis involving frequencies, percentages, mean and standard deviation was used in the analysis of data. For the purpose of effective analysis, simple percentages were derived and used for

the assessment of the main issues of the study. Thus, the Statistical Package for Social Sciences (SPSS) software was used to group the data into frequencies and percentages, means and standard deviation. The data were presented in Tables. Besides, to measure the relationship between the independent variable and dependent variable, the Pearson correlation and regression analysis were used. In using the four-point Likert scale, the researcher used the reverse order of numbering for the weightings that were put on each response. The following responses were used: Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D). The weightings for the responses were as

follows: SA – 1, A –2, D – 3, SD – 4. However, this scale was converted to a two-point scale for the purpose of analysis and to enable the researcher draw clear-cut distinctions in the response item by item. As such the responses SA and A were put together as positive responses while the responses of SD and D were also put together as negative responses. A mean of greater than two, interpreted as a negative score, demonstrated the under-representation of the variable. A low mean signified the extensive presence of a particular variable. The Pearson correlation test and a regression analysis were employed in testing hypotheses.

#### *Teachers' Perception about Compensation Practices in the Ghana Education Service*

*Table 1: Teachers' Perception about Compensation Practices in the Service*

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
Adequate Compensation	5 (5%)	3 (3 %)	72 (72%)	20 (20 %)
Equitable Compensation	1 (1%)	14 (14 %)	70 (70 %)	15 (15 %)
Compensation is Motivating	1 (1 %)	10 (10 %)	60 (60%)	29 (29 %)
Compensation is periodically updated and communicated	3 (3%)	17 (17 %)	58 (58%)	22 (22 %)
Participate in compensation decisions	5 (5%)	3 (3 %)	72 (72%)	20 (20 %)
Payment is based on performance	5 (5%)	11 (11 %)	44 (44%)	40 (40 %)
Compensation is capable of retaining employees	5 (5%)	8 (8 %)	51 (51%)	36 (36 %)
Compensation is able to provide self interest	0 (0%)	8 (8%)	67 (67 %)	25 (25%)
Evaluation of compensation packages	2 (2%)	11 (11%)	58 (58 %)	29 (29%)
Compensation relates to experience and qualification	3 (3%)	15 (15%)	33 (33 %)	49 (49%)
Pay system has positive effect on employee satisfaction	3 (3%)	14 (14%)	49 (49 %)	34 (34%)
Understands retirement benefit calculations	1 (1%)	14 (14%)	53 (53 %)	32 (32%)
Benefit is good compared to private institutions	10 (10%)	13 (13%)	50 (50 %)	27 (27%)
Pay is comparable to what it should be	4 (4%)	7 (7%)	47 (47 %)	42 (42%)
Need to review pay structure	59 (59%)	17 (17%)	17 (17 %)	7 (7%)

Source: Primary Data 2016

For adequate compensation, 72% of the teachers disagreed with this assertion, 20% strongly disagreed, 5% strongly agrees and 3% agreed. Seventy percent (70%) of the teachers disagreed with the statement that their compensation is equitable with only 1% agreeing to this statement. Majority of the teachers (60%) and 29% disagreed and strongly disagreed respectively with the statement that their compensation packages are motivating. With regard to the statement 'Compensation is periodically updated and communicated', 58% disagreed while 22% strongly disagreed meaning teachers are highly dissatisfied with this statement. In addition, majority of the teachers (72% disagreeing and 20% strongly disagreeing) disagreed to the statement that they are involved in decisions concerning their compensations. Only 5% and 3% of the teachers supported this statement. To the statement 'Payment is based on performance', 5% strongly agreed, 11% agreed, 44% disagreed while 40% strongly disagreed. This implies that greater number of the teachers disagreed on this statement. On the part of the claim that 'Compensation is capable of retaining employees', 5% strongly agreed, 8% agreed, 51% disagreed while 36% strongly disagreed. Furthermore, 8%, 67% and 25% agreed, disagreed and strongly disagreed to the claim that compensation is able to provide self interest while 2%, 11%, 58% and 29% strongly agreed, agreed, disagreed and strongly agreed that their compensation packages are usually evaluated. When it comes to whether compensation relates to experience and qualification, 3%, 15%, 33% and 49% strongly agreed, agreed, disagreed and strongly disagreed respectively. In addition, 32% of the teachers strongly disagreed that they understand the calculations of their retirement benefit while 53%, 14% and 1% disagreed, agreed and strongly agreed respectively.

Perception influences the way we behave. Teachers expressed unfavourable opinions about the compensation system in place. For example, majority of them have the belief that their compensation level is inadequate and on issues concerning its communication and implementation, majority of respondents indicated their disapproval of the way it is handled, others saw it as not equitable and incapable of retaining them. Not being satisfied with a compensation package is one thing, but perceiving it as inequitable (both internally and externally), demotivating and not understanding the way it is implemented is more worrying since employees could ascribe negative connotations and perceive management as having something to hide. It is of no wonder that respondents were strongly of the view that a review of the pay structure was needed (refer to table 1). This negative perception could go a long way to disrupting the whole system since feelings of inequities could lead to dissatisfaction and teachers finding various strategies to

balance the inequity. As indicated by Meyer and Smith (1997), to avoid wrong perception and controversy by the employees, compensation system must be clearly communicated to employees with job measurement which will drive the much needed performance in the employees. Moreover, most experts agree high salaries are not essential, but good and fair salaries. For example, Higginbotham (1997) found that 'good' and 'fair' salaries correlated strongly with intention to stay, indicating that as long as compensation is competitive, financial rewards are not the primary factor in retention. Eby, Freeman, Ruch, and Lance (1999) confirmed this when they indicated that it could be rationalized that pay satisfaction is caused, in part, by perceptions regarding the equity of one's pay. Pay satisfaction can be seen as a surrogate for fairness and justice, which in turn has a direct impact on employees' motivation and therefore their job satisfaction. Further, as expressed in Maslow's (1958) theory of human needs cited in Omotayo, Pavithra, and Adeniji (2014), individuals are goal-oriented whose needs can influence their behaviour. Thus, teachers' need for equity, understanding of pay policies and others could lead to counter-productive behaviours, if not carefully addressed.

#### f) *Effect of Compensation on Teachers' Job Satisfaction*

To analyse this and to test for the hypotheses, correlations between the variables of the study were first of all, obtained. Pearson correlation analysis was conducted in this study to determine the relationship between the demographic variables, independent variable and the dependent variable since this was a requirement for performing regression analysis. The correlation table and its interpretation is shown in table 2.

Table 2: Pearson Correlation between Compensation variables and Job Satisfaction

	1	2	3	4	5	6	7	8	9
1. Age	1.00								
2. Gender	-.375**	1.00							
3. Educ.	.205*	-.037	1.00						
4. Years Served	.438**	-.130	.017	1.00					
5. Job Satisfaction	.009	-.021	-.065	.149	1.00				
6. Compensation	-.091	.037	-.085	-.154	.093**	1.00			
7. Base Pay	.096	-.134	.013	.117	.520**	.135	1.00		
8. Benefits	-.046	.013	-.035	.146	.940**	.109	.369**	1.00	
9. Incentives	.024	-.012	-.090	.128	.960**	.036	.384**	.847**	1.00

Source: Field survey (2016)

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

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

Table 2 depicts that, all the demographic variables, were non-significant with compensation and job satisfaction. However, compensation related positively with job satisfaction ( $r=.093^{**}$ ,  $p<.01$ ). This result suggests that as compensation increases, job satisfaction tend to increase and vice versa. Base pay positively related with job satisfaction ( $r = .520$ ,  $p < .01$ ) and the correlation is also significant implying that as teachers' base pay increases, their satisfaction level with their teaching job increases and vice versa. Moreover, the results indicate that teachers become satisfied with their jobs when their benefits increases. This is indicated by a positive correlation coefficient of .940 with a p value of less than 10% significant level. In addition, incentives correlated positively with job satisfaction with a correlation coefficient of .960 and a p-value of less than 10% significant level. This is an indication that there is a tendency for teachers' job satisfaction to increase if their incentives are increased. This means that as each of these compensation components increases, teachers' job satisfaction can be predicted to increase. This significance makes sense because compensation in all its forms is of great concern to employees. Various scholars (Adeoye & Fields, 2014; Greene, 2014; Gupta & Shaw, 2014) also confirm that compensation impacts on workers' job satisfaction. In a related study by Osibanjo,

et. al., (2014) findings showed that there are positive significant relationships among salary, bonus, incentives, allowances and fringe benefits and job satisfaction. The study further computed a variable called average compensation by averaging all the responses on the compensation items and then regressed it with averages of teachers' job satisfaction. A summary of compensation as independent variable and job satisfaction as dependent variable is shown in Table 3.

Table 3: Summary of Regression

Model 1	B	Std. error	Beta	T	Sig.
Constant	2.279	.586		3.891	.000
Teachers Job Satisfaction	.168	.181	.293	.928	.000

Source: Field survey (2016)

From the results the proportion of variation in the dependent variable (job satisfaction) that was explained by compensation was 0.086 ( $0.293^2$ ). This implied that 8.6 percent of the variation in job satisfaction can be explained by compensation variables in the model. The sig. (or p-value) is .000 which was below the .05 level; hence, it is concluded that the

overall model was statistically significant, or that the variables had a significant combined effect on the dependent variable. Compensation, therefore, significantly and positively predicted teachers' job satisfaction ( $\beta = 2.279, p < .05$ ).

### III. CONCLUSION AND RECOMMENDATIONS

The objectives of the study were to find out the perception of teachers about the compensation practices of the service and to determine the effect of compensation on Job satisfaction of teachers. The study revealed teachers have a negative perception about the compensation practices of the Service. Teachers perceived compensation as inequitable, demotivating, and implementation procedure not clearly communicated. Compensation was also found to significantly and positively predict Teachers' job satisfaction. The major reason for keeping contented and satisfied employees is to benefit from the dedication, loyalty and commitment. And one of the ways managers can keep good employees is to offer them attractive and adequate compensation package which matches their needs, preferences and performance. This is to say that, the degree to which an individual is satisfied and committed to their employer can be enhanced by an individual's perception of how they are rewarded for their inputs. Thus, it is recommended that educational policy makers take a second look at the current pay structure, revise it to be commensurate with teacher's contributions and ensure that the compensation package is a combination of the other dimensions of compensation, like benefits and incentives. Also, management must communicate to teachers the elements of their compensation and how they are calculated since they would want compensation systems that they perceive as fair and in line with their expectations and finally, management must as far as possible, involve teachers in compensation decisions that affect them so they can understand the reason why they are paid a certain amount and ensure fairness so as to enhance teachers' satisfaction and commitment to organisational goals. This will likely resolve many of the problems associated with wrong perceptions of inequity.

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# A Systematic Review of the Benefits and Challenges Associated with the Hybrid Collaboration of Cloud with Specific Reference to Small and Medium Businesses (SMB'S)

By Shartaj Fatima

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**Abstract-** There has been an Upsurge in the use of Cloud Services in Businesses and Small and Medium Sized Enterprises are using Software Services as well as Infrastructure Services Provided by Professional Information Service Companies. These Companies Provide the Msmes (Micro, Small and Medium Scale Enterprises) with Services Such as Data Storage, Document Sharing, E-Mail Domains and Other Computer as well as Management Information Systems as Public Resources in Order to Support their Business Processes Management. However, There is a Limitation in the Services One Vendor can Supply, and Thus These Businesses Need to Simultaneously use Services from Different it Platforms and Conduct their Business. Cloud, Called as The 'Future of Information Technology', Plays a Crucial Role in this Regard. Hybrid Collaboration of Cloud, In Simple Words can be Explained as the Integration of Public and Private Cloud Services. The Purpose of this Study is to Summarize with a Systematic Review, The Previous Researches on Hybrid Collaborations in Cloud and How Msmes use these Applications for their Benefit.

**Keywords:** *cloud computing, hybrid, business, management, collaborations, communication.*

**GJMBR-G Classification:** *JEL Code: M19*



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## I. INTRODUCTION

Cloud computing has become a hugely popular phenomenon that has mostly eradicated the use of ledgers, booking registers, expense reports as well as has revolutionized the communication businesses have with their clients as well as partners [1]. The emergence of cloud has revolutionized the way services are invented, provided, developed and maintained for the customers by the companies. It has enabled companies to cut down on paper transactions, as it eliminates the need to prepare spreadsheets, expense reports, proposals and plans online [2]. There is a great paradox in computing though, where on one side the computers and their technology are on the rise with technology becoming more powerful and the cost per unit computer decreasing, and on the other side the complexity of this technology due to its pervasiveness increasing the cost of the services that are being provided through this platform [3]. The cloud computing

facilities have provided a diverse functionality portfolio of services, and have decreased the cost of transactions manifold. However, the increased cost of deploying these services has deterred many organizations from using these cutting-edge technologies in their day to day routines [4].

Cloud computing today represents the confluence of the two major trends that can be seen in IT- and those trends are efficiency of information systems where computers are more efficient in utilizing the resources that have been provided in terms of hardware and software, and the dexterity by which this efficiency is being used to provide a competitive product/service for increased productivity, processing and analysis [5]. The efficiency of cloud computing enables the businesses to increase their development process, processing of orders, perfecting business and sales analytics as well as customizing interaction with clients for a more customizable relationship with better communication, feedback and reviews. The concept also helps the companies adopt the idea of green computing where the resources are used efficiently as well as having the advantage of accessing data from remote places, without the compulsion of being rooted in one office of a particular geographical area [2].

Thus, computing through cloud, and hybridizing various cloud computing software for ensuring the achievement of business needs of the MSMEs has become a great way to conduct financial another transactions. Even though cloud computing is not a very new concept, however it has been catching up in the business models for the past decade [6]. Due to the proliferation of internet and social media, the use of services through cloud in computers, mobile devices and tablets have increased. This can also be attributed to the fact that there is an improved service in relation to bandwidth and speed. However, it has also been noticed that some MSMEs are still hesitant while opting for these services since it involves sharing a public server [7]. These enterprises may opt for cloud computing and hybridization by keeping in mind the cost reduction, convenience, sharing ease, reliability and increased security, but are also hesitant as they

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encounter security hacks, lack of connectivity in remote areas, lack of acceptance within the organization or society as well as increased cost for accessing these services [7], [8].

## II. AIM OF THE STUDY

The aim of this study is to assess the benefits and challenges of using hybrid collaboration of cloud in small and medium businesses (SMBs), and to address the challenges and provide recommendations for improving the use of cloud computing.

## III. LITERATURE REVIEW

The main benefit of using cloud services is that it helps the enterprises to improve their resource utilization, as the enterprises have to pay for only those services that they use. This model is known as subscription model, and it combines with the business through resource pooling to help bring down the cost of services to an affordable price. The firms can customize plans according to their needs, and pay for what they use, thus increasing the frequency of small and medium enterprises to save huge costs [9]. The services also provide first month free service with cancellation at any time without any added costs, motivating small and medium business enterprises to subscribe to the services that they want and benefit from [10].

The cloud service providers have increased their encryption levels to save the end users from theft, data loss risk and decreased espionage. The cloud services are linked to the mail, and the person can change the way other employees can view the information. For example, Google Docs has the option of 'can view' and 'can edit', and also an option that lets the person who has the link view the content [11]. Also, there has been initiatives where the site sends One Time Password to the e-mail or phone number registers when one tries to access the content [12]. The cloud computing lets the businesses store sensitive information online, decreasing the risk of spread of sensitive information through paper theft, photocopying, or memorization by negative elements.

The increased complexity of technology has had an inverse effect on geographical boundaries. The complex web of internet has simplified transactions, communication and availability across geographical borders [6]. Use of cloud computing has led business had the ease of accessibility from around the world. The businesses need not have a formal office space, as employees can have the liberty to work from home [9]. The increased access enhances the chances of adaptability of the services. Businesses can employ freelance workers as well as interns for work, while employers can oversee the progress of the employees without having to keep a team leader or manager and increasing the workforce [13]. The services that have

increased adaptability include online financial operations, data accessibility, increased communication and decreased use of physical space [14].

Inversely, the main challenge of cloud computing is the lack of control of the business in question, as the main control is in the hands of the cloud service provider or the vendor. The business managers cannot be assured of the prices or the quality of the cloud services in the future [9]. The vendor might increase rates, and the business manager may need to comply if the company relies heavily on their service. Also, the lack of control in accessing own information in terms of fault in payment keeps the small and medium businesses from choosing these services. Protection and control of data is a major concern for the MSMEs, because once the cloud service providers get hold of company data, then the MSME may not have control over their own assets and entities [15].

According to the State of the Cloud report from RightScale [16], the lack of resources and expertise has become a new and top challenge that looms over the cloud computing services for small and medium enterprises. The study surveyed 1,600 technical professionals, and the results showed that around 32% of those professionals were of the opinion that lack of resources presented a big challenge in cloud computing services, surpassing security issues [16]. This challenge is serious as the cloud services are being taken up by many companies, and the service providers are lagging behind in developing their skill set to take care of the increased demand. This lack of expertise and resources is risky, especially as cloud adoption increases. Contract management in hybrid cloud deployment models involve interaction with third party cloud providers, and required skills of handling increased demand and supply orders [17]. Thus, the service providers need to invest more to reap better profits and increased progress in the future.

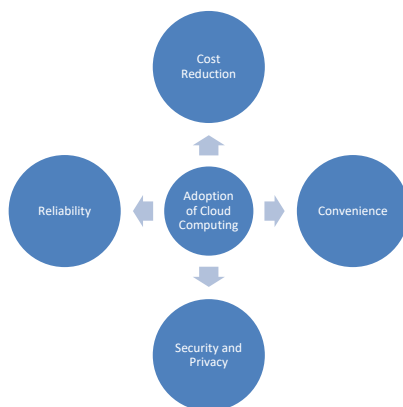
The internal challenge of introduction of cloud services are not less, as organizations might have to convince their own employees of going online. The employees as well as managers of the company might have cultural or technological barriers and inhibitions to try an online service for work purposes [18]. The main benefits of hybrid cloud services occur when the process is centralized, and the business that perceives itself as a distinct entity with different IT requirements may find it hard to adopt these services. Also, the employees might not be able to trust a service developed and maintained by a third party easily. Also, some stakeholders might adopt the service without sufficient knowledge and diligence, and might find it hard in the future to adapt well in the new technological sphere [12].

Another challenge that enterprises face through hybrid cloud computing is the execution management of transition of data to cloud. Many MSMEs have their

plans, proposals, and transactions done in paper, and transitioning it into a digital format may require time and energy. If the enterprise is old, the employees may need to put in more efforts to streamline the process. Also, the businesses that have digitalized their transactions might face compatibility issues in the software of their existing files and the updated versions that are available on the cloud format, creating a problem while transitioning the data [17]. Thus, all the benefits and challenges need to be analyzed thoroughly to understand the effect of hybrid cloud computing on the small and medium business enterprises, so that the transition into an online business does not become a serious problem.

#### IV. METHODOLOGY AND DISCUSSION

The conceptual framework has been developed by reviewing the literature and the factors are grouped as independent and dependent variables, which have been analyzed for this research study. Adoption of hybrid cloud computing by small and medium businesses (SMEs) leads to cost reduction (in terms of economical cost saving by employing digitalization of data storage); low capital expenditure for scalability and management of resources; convenience (as cloud computing makes the businesses technology savvy and helps them increase their accessibility and availability across geographical borders for more customer visits); reliability, as the cloud services provide backup and least outage when the company requires, as well as decreased risk of data loss through theft or unnatural disaster; Sharing and collaboration, as the companies can create, manage and distribute promotional content easily; and Security and privacy as the content of the company is secured through encryption and cannot be accessed without relevant credentials.



Collaboration with private and public cloud computing services has become need of the hour as there are many services that a company needs, but all services may not be provided by the same cloud service provider. The ability of a product or service to be flexible and customized according to the need and demand of the customer is desirable, and the company needs to

find solutions that help cater to the market opportunities and the changing business requirements of the ever changing dynamic of the market. To innovate and develop products and services with agility and speed, the companies do need to use different services, and collaboration of cloud comes into the picture.

There are different cloud solutions for predicting customer demand, responding to that demand, identifying market opportunities, understanding and responding to the regulatory needs, and being aware of competitor moves[14]. These solutions come from many sources, and the SMEs need to understand the rules and regulations, clauses and benefits and limitations of each to cohesively tie it for the progression of the company[19]. To understand and move according to the market dynamics, there is a need for SMEs to collaborate with their organization managers as well as with the ecosystem partners to cost-effectively address the rapidly shifting business requirements. The advent of social media and mobile devices has increased the level of collaborations startups and small companies have with their employees and customers [20]. The use of cloud computing allows these companies to allow the stakeholders of the company to share information and data over the internet in a fast and secure way. The services include emails, shared web-links, instant messengers etc. [13]. Cloud services like Google Apps, Dropbox and Jive are good examples where sharing and collaborating has become easier for small and medium enterprises. These all hybrid cloud technologies are enabled via the cloud [21]. However, this type of openness due to collaboration of cloud computing services increases risks of data loss to the SMEs, which is a serious matter.

[15] identifies that cloud computing and its collaboration helps business growth of an SME by leveraging a correct amount of business with the balance of cost control, efficiency, agility and new business capabilities with unparalleled levels of collaboration. In terms of cost control, service providers have reduced the cost of entry for small and medium enterprises that want to use business analytics [15], and can be seen from the 70% cost reduction by Amazon Web Services, which acts as the cloud vendor for small businesses [14]. It has also been noted by [22]that AWS has decreased their cost of service even though there is no competition involved. European SMEs have used this as an opportunity to grow as they are observed to be less risk averse than their American counterparts, which has resulted in lowering the entry barrier for these SMEs into the large enterprise categories [23]. Also, [24] cites the example of Salesforce.com which has provided a per use revenue models of small and medium business enterprises that has helped them afford the application of Customer Relationship Management. This comes at a time when the trend has started to see software as a hardware commodity, and lack of a good open source

software package. The decreased pricing for cloud services as a resultant of good competition has allowed the small businesses a chance to adopt services at an affordable cost [25], resulting in a widespread use of cloud computing. Startups and small and medium sized enterprises have started to buy services like ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), SFA (Sales Force Automation) and SCM (Supply Chain Management) due to economical fees [26].

According to [27], cloud collaboration is also seen to improve business agility and allows the SMEs to rapidly adapt to changing business conditions through on demand, self-service and elastic access to information technology (IT) resources. The employees of small business routinely work away from the actual office location, and need a software that can increase the ease of access to the data. Thus, this need of employees to have remote access necessitated the use of services such as cloud storage, online transactions and instant communication software [9], [13] from either a public or a private cloud storage provider. Here, [20] observes that the only limitation is the risk of IT shadowing or loss of control due to finance problems between SME users and service providers. Further, [28] observed that Canadian SMEs are moving from a PC based accounting system to a cloud based one, decreasing the need of continuous updates of software and hardware, and also decreasing the need of constant maintenance of many machines in the office, but this trend needs to be followed with care as the collaboration sometimes increases risk of loss of information or technical defaults.

Collaboration of cloud computing software enables the user to innovate by using different types of solution according to the need, and also lets the companies introduce new products through new line of marketing, thus enabling the formation of new markets for these upcoming organizations [29]. Cloud collaboration has the benefit of changing the traditional way of business processes, includes better collaboration chances with partners and customers, increases efficiency in collaborating with all the stakeholders involved and scale up IT services according to the need of the company [30]. On the other side, however, there is a great risk to security and compliance as the adopted cloud services have a variety of suppliers which frequently include public cloud service providers. The risks that the SMEs face the most are the implications of sharing scarce resources with unknown collaborators, non-compliance with regulations that a market or a country may have for the particular service rented, lack of control in terms of the data procurement and storage [31]. Out of all, the major risk that an SME faces is lack of control of resources and data, as these are the only factors that can lead to the company's success.

The lack of control leads to serious implication for SMEs. The security of data using the public cloud at standard services can be a great risk, as the companies do not have enough funds to afford a premium service [32]. The availability of increased encryption can reduce the security risk for the SMEs, and increases the reliability of the online system. A reliable software system is a system with reliable security [33], [34] in a highly secure cloud system is very important. IT shadowing is another problem through cloud collaboration, as employees as well as employers can access the public cloud center to access key documents without having to gain access from the in-house IT staff [9], [35].

## V. CONCLUSION

The paper has focused in detail all the variables that can affect the small and medium business enterprises in terms of hybrid cloud computing. This study analyzed the importance of cost reduction in terms of cloud computing in small and medium enterprises, and found it to be an important factor. The reduction of cost has increased the frequency of small and medium businesses, and is one of the three most crucial factors for initiating the move of SBE and MBE into using the cloud service. Apart from cost reduction, the other two main important factors are security and privacy of the present solutions offered by the cloud, and the ease of use and convenience in using the cloud. The providers of this cloud services need to focus on improving the reliability of their solutions, and this would result in a better and secure cloud environment for people to conduct business. The factor of sharing and collaboration has been observed to have a slight negative impact on adoption of hybrid cloud services as the stakeholders of SMEs hold it as a negative cause of security. The players that are in the industry to provide these hybrid computing services need to focus on a secure and highly functioning cloud service, as they need to make cloud and online services as a default choice for startups to work on. This may help the small and medium sized enterprises rely on cloud services for normal business exchanges, rather than just in cases of emergency and disaster. The future of cloud services being adopted relies heavily on how the service providers build the faith, trust and belief of these startups and SMEs so that they may be confident in using the reliable tools of these services.

There is no doubt that small and medium sized enterprises are experimenting with hybrid cloud computing, and using these tools to build their business strategies and strengthen their customer base. However, these companies are also quite wary with the offers the service providers are providing. Also, the small and medium enterprises of different geographies have different perceptions towards hybrid cloud computing,

as the ease of use and convenience weighs heavily on the decision of adopting the services of cloud. Thus, it can be said that even though the SMEs are finding hybrid collaboration of cloud an easy and convenient method of doing business, they also have their reservations in terms of privacy when sharing and collaboration is concerned.

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**(C) If these two are not convenient, and then email the paper directly to dean@globaljournals.org.**

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# PREFERRED AUTHOR GUIDELINES

## MANUSCRIPT STYLE INSTRUCTION (Must be strictly followed)

Page Size: 8.27" X 11"

- Left Margin: 0.65
- Right Margin: 0.65
- Top Margin: 0.75
- Bottom Margin: 0.75
- Font type of all text should be Swis 721 Lt BT.
- Paper Title should be of Font Size 24 with one Column section.
- Author Name in Font Size of 11 with one column as of Title.
- Abstract Font size of 9 Bold, "Abstract" word in Italic Bold.
- Main Text: Font size 10 with justified two columns section
- Two Column with Equal Column with of 3.38 and Gaping of .2
- First Character must be three lines Drop capped.
- Paragraph before Spacing of 1 pt and After of 0 pt.
- Line Spacing of 1 pt
- Large Images must be in One Column
- Numbering of First Main Headings (Heading 1) must be in Roman Letters, Capital Letter, and Font Size of 10.
- Numbering of Second Main Headings (Heading 2) must be in Alphabets, Italic, and Font Size of 10.

**You can use your own standard format also.**

### Author Guidelines:

1. General,
2. Ethical Guidelines,
3. Submission of Manuscripts,
4. Manuscript's Category,
5. Structure and Format of Manuscript,
6. After Acceptance.

### 1. GENERAL

Before submitting your research paper, one is advised to go through the details as mentioned in following heads. It will be beneficial, while peer reviewer justify your paper for publication.

### Scope

The Global Journals Inc. (US) welcome the submission of original paper, review paper, survey article relevant to the all the streams of Philosophy and knowledge. The Global Journals Inc. (US) is parental platform for Global Journal of Computer Science and Technology, Researches in Engineering, Medical Research, Science Frontier Research, Human Social Science, Management, and Business organization. The choice of specific field can be done otherwise as following in Abstracting and Indexing Page on this Website. As the all Global

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## 2. ETHICAL GUIDELINES

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- 2) Drafting the paper and revising it critically regarding important academic content.
- 3) Final approval of the version of the paper to be published.

All authors should have been credited according to their appropriate contribution in research activity and preparing paper. Contributors who do not match the criteria as authors may be mentioned under Acknowledgement.

Acknowledgements: Contributors to the research other than authors credited should be mentioned under acknowledgement. The specifications of the source of funding for the research if appropriate can be included. Suppliers of resources may be mentioned along with address.

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## 3. SUBMISSION OF MANUSCRIPTS

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Manuscript submission is a systematic procedure and little preparation is required beyond having all parts of your manuscript in a given format and a computer with an Internet connection and a Web browser. Full help and instructions are provided on-screen. As an author, you will be prompted for login and manuscript details as Field of Paper and then to upload your manuscript file(s) according to the instructions.



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Complete support for both authors and co-author is provided.

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Based on potential and nature, the manuscript can be categorized under the following heads:

Original research paper: Such papers are reports of high-level significant original research work.

Review papers: These are concise, significant but helpful and decisive topics for young researchers.

Research articles: These are handled with small investigation and applications

Research letters: The letters are small and concise comments on previously published matters.

#### 5. STRUCTURE AND FORMAT OF MANUSCRIPT

The recommended size of original research paper is less than seven thousand words, review papers fewer than seven thousands words also. Preparation of research paper or how to write research paper, are major hurdle, while writing manuscript. The research articles and research letters should be fewer than three thousand words, the structure original research paper; sometime review paper should be as follows:

**Papers:** These are reports of significant research (typically less than 7000 words equivalent, including tables, figures, references), and comprise:

- (a) Title should be relevant and commensurate with the theme of the paper.
- (b) A brief Summary, "Abstract" (less than 150 words) containing the major results and conclusions.
- (c) Up to ten keywords, that precisely identifies the paper's subject, purpose, and focus.
- (d) An Introduction, giving necessary background excluding subheadings; objectives must be clearly declared.
- (e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition; sources of information must be given and numerical methods must be specified by reference, unless non-standard.
- (f) Results should be presented concisely, by well-designed tables and/or figures; the same data may not be used in both; suitable statistical data should be given. All data must be obtained with attention to numerical detail in the planning stage. As reproduced design has been recognized to be important to experiments for a considerable time, the Editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned un-refereed;
- (g) Discussion should cover the implications and consequences, not just recapitulating the results; conclusions should be summarizing.
- (h) Brief Acknowledgements.
- (i) References in the proper form.

Authors should very cautiously consider the preparation of papers to ensure that they communicate efficiently. Papers are much more likely to be accepted, if they are cautiously designed and laid out, contain few or no errors, are summarizing, and be conventional to the approach and instructions. They will in addition, be published with much less delays than those that require much technical and editorial correction.



The Editorial Board reserves the right to make literary corrections and to make suggestions to improve brevity.

It is vital, that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

## Format

*Language: The language of publication is UK English. Authors, for whom English is a second language, must have their manuscript efficiently edited by an English-speaking person before submission to make sure that, the English is of high excellence. It is preferable, that manuscripts should be professionally edited.*

Standard Usage, Abbreviations, and Units: Spelling and hyphenation should be conventional to The Concise Oxford English Dictionary. Statistics and measurements should at all times be given in figures, e.g. 16 min, except for when the number begins a sentence. When the number does not refer to a unit of measurement it should be spelt in full unless, it is 160 or greater.

Abbreviations supposed to be used carefully. The abbreviated name or expression is supposed to be cited in full at first usage, followed by the conventional abbreviation in parentheses.

Metric SI units are supposed to generally be used excluding where they conflict with current practice or are confusing. For illustration, 1.4 l rather than  $1.4 \times 10^{-3} \text{ m}^3$ , or 4 mm somewhat than  $4 \times 10^{-3} \text{ m}$ . Chemical formula and solutions must identify the form used, e.g. anhydrous or hydrated, and the concentration must be in clearly defined units. Common species names should be followed by underlines at the first mention. For following use the generic name should be constricted to a single letter, if it is clear.

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*Abstract, used in Original Papers and Reviews:*

### Optimizing Abstract for Search Engines

Many researchers searching for information online will use search engines such as Google, Yahoo or similar. By optimizing your paper for search engines, you will amplify the chance of someone finding it. This in turn will make it more likely to be viewed and/or cited in a further work. Global Journals Inc. (US) have compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

### Key Words

A major linchpin in research work for the writing research paper is the keyword search, which one will employ to find both library and Internet resources.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy and planning a list of possible keywords and phrases to try.

Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and near) that enable you to expand or narrow your affords. Tips for research paper while preparing research paper are very helpful guideline of research paper.

Choice of key words is first tool of tips to write research paper. Research paper writing is an art. A few tips for deciding as strategically as possible about keyword search:



- One should start brainstorming lists of possible keywords before even begin searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

*Acknowledgements: Please make these as concise as possible.*

#### References

References follow the Harvard scheme of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

References to information on the World Wide Web can be given, but only if the information is available without charge to readers on an official site. Wikipedia and Similar websites are not allowed where anyone can change the information. Authors will be asked to make available electronic copies of the cited information for inclusion on the Global Journals Inc. (US) homepage at the judgment of the Editorial Board.

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*Tables: Tables should be few in number, cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g. Table 4, a self-explanatory caption and be on a separate sheet. Vertical lines should not be used.*

*Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.*

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Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. Please give the data for figures in black and white or submit a Color Work Agreement Form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

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*Figure Legends: Self-explanatory legends of all figures should be incorporated separately under the heading 'Legends to Figures'. In the full-text online edition of the journal, figure legends may possibly be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should notify the reader, about the key aspects of the figure.*

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Upon approval of a paper for publication, the manuscript will be forwarded to the dean, who is responsible for the publication of the Global Journals Inc. (US).

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(Free of charge) from the following website:

[www.adobe.com/products/acrobat/readstep2.html](http://www.adobe.com/products/acrobat/readstep2.html). This will facilitate the file to be opened, read on screen, and printed out in order for any corrections to be added. Further instructions will be sent with the proof.

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#### TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

**1. Choosing the topic:** In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

**2. Evaluators are human:** First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

**3. Think Like Evaluators:** If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

**4. Make blueprints of paper:** The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

**5. Ask your Guides:** If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

**6. Use of computer is recommended:** As you are doing research in the field of Computer Science, then this point is quite obvious.

**7. Use right software:** Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.

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**9. Use and get big pictures:** Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

**10. Bookmarks are useful:** When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

**11. Revise what you wrote:** When you write anything, always read it, summarize it and then finalize it.





**12. Make all efforts:** Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

**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 through 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.



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<i>Discussion</i>	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
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring





# INDEX

---

---

## **A**

Autonomous · 7, 8

---

## **B**

Boumedienne · 55  
Bschawrut · 32

---

## **C**

Cohabitation · 43  
Colorado · 37

---

## **D**

Debilitating · 12  
Deprivation · 8  
Diversionary · 15

---

## **E**

Elktron · 33  
Essandoh · 116  
Ethnicities · 1

---

## **F**

Freinuman · 5

---

## **H**

Hazucha · 23, 35  
Hexagon · 54

---

## **I**

Inhibitions · 110

---

## **L**

Lichtenthaler · 63, 79  
Luminescent · 68

---

## **M**

Mathauer · 96  
Monetizing · 116

---

## **S**

Symposiums · 50

---

## **U**

Upsurge · 108  
Usurpation · 1

---

## **V**

Velnampy · 83

---

## **W**

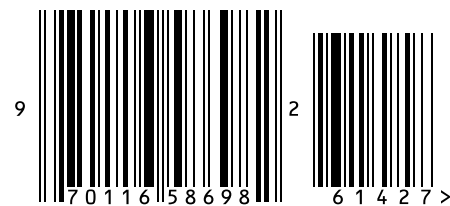
Whittling · 58



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