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The Youths and Perceptive Challenges of Cultural Values and Orientations among the Igbo Society of Nigeria

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Abstract

Cultural norms of the people refers to the way of life, the refining and developing, civilization or humanity's diverse mental and physical endowment. Christian youth orientations and understanding of culture is not only important but among the challenging issues of our modern era. This article we will use analytical, expository, explicating, descriptive, discursive and evaluative methods to achieve its meaningful purpose of youth orientations and cultural understanding. How to orientate our Christian youth of today on the need to recognise, cherish and accept the known and authentic traditional set-ups of every backgrounds and heritages existing within and outside their vicinities is a worthwhile venture. Apart from the parental roles, the Church and State are propellers and directors of the youth educational systems through adaptation nurturing and channelling of their various talents to their expected life goals. These include inter alia, teaching them to accept and believe in God the creator of humanity and the whole cosmos; inculcating and helping them to understand of cultural norms, moral values, taboos or sanctions and certain cosmological beliefs. The youth approach to Christian life is essentially efficacious. Youths should equally be made to know that Christianity is an advocate of social justice and this truth cannot thrive in an atmosphere devoid of morality peaceful coexistence and tranquillity of purpose. This write-up is majorly to bring the youths to the lime lights, regarding many of the identities of Igbo-traditional set-ups, the needed formation of due training and their adaptation and the authentic or right cultural approach to these issues. Above all, our aim is to give the youth that quantum of assurance that, those aspects of cultural milieus and identities stemmed from the author of the heavenly universe; and this should not misguide or confuse them rather for their believe in the supreme being and authentic existence.

KeyWords: Cultural-youth Orientations, Igbo-Identies, traditional set-ups and values, faith and Christian life.

INTRODUCTION

African people and their culture are rich in its nature and there is every need not only to Cherish but also to admire our cultural heritage for its essential qualities. There is every need to peruse into the live-styles of our youth orientations regarding their understanding of Cultural norms and backgrounds. The word "culture" in the general sense as Schwarz (1993) put it refers to all those things which go to the refining and developing of humanity's diverse mental and physical endowments. Culture here in the true sense of the word as concerns youth orientation means the type of civilization and attitudinal training or orientation cum values which the society want them to understand and to undergo. There is always need for authentic human development even at the base of multi-cultural areas where one finds oneself ethnically. Youths are engraved in the structures of multi-ethnic problems of the Nigeria nation which is directly and indirectly affecting the Igbo-Folk both in the social and economic welfares.

In a book on the Anthropology of education, Middleton (1990: XIII) has a few cogent thoughts on the formal process by which we attempt to teach and train the next generations. He rejects notion that education is schooling, and instead describes it as the 'learning of culture.' The really significant educational impact must be concerned with "the inculcation and understanding of moral values, certain cultural symbols sanctions and cosmological beliefs. In the youth ministry and renewal in the local Church or the basic Christian community Richards (1985:37) wisely wrote well on the thing that we learn from research on youth culture, young people in fact adopt at times adult culture as their own; adults too often reflect back on those experiences of young people that shape values and commitment. It is very clear, that Igbo land with her folk has a distinguishable rich cultural heritage and socially grounded entity in the geography of this country-Nigeria. This could be envisaged more by its location and language, religion and stylistic type of life. The Igbo folk have their own definable material and non-material culture issues to reckon with.

The two terms-IGBO-IBO are of the Nigerian folk (Igbo- people) and the natural language (Ibo) of the Igbo people which goes to mean both the people and their native language. Even though the people have a macro-culture, but they equally hold micro-cultures as a result of the different sub-cultures that makeup their regional territories. Irrespective of the subcultures the African black race in particular the Igbo people do share a lot of things in common such as title taking and cultural festivals which differ in the sub-cultural areas as result of micro-cultural differences.

Sometimes, traditional or cultural titles and cultural festivities are rooted, as culture which is premised from a religious backdrop to such an extent that everything is weighed against a religious lens. In view of this, Leonard (1978:429) writing about the Igbo folks of African-Nigerian rightly remarked that: they are in the strict and natural sense of the word, a truly and deeply religious people, of who it can be said as it has been said of Hindus, that they eat religiously, drink religiously, bath religiously, dress religiously; the religion of these natives...is their existence and their existence is their religion.

The Igbo people that became Christians are however often torn between the two heritages of traditional religion and Christianity, that is ndi Uka- Na ndi- Na-efe- alusi, (Christians and Pagans).

These afore mentioned traditional cultural fiestas have undergone some enculturation or Christianization to transform it from the shackles of fetishisms and idolatrous acts; and such could be introduced to youths in the aspects of orientations. This type of education is crucial and is always fundamentally a sine- qua- non for the future and growth of the youth. Youth should be made to know and understand, that any culture which does not accommodate eccentricity is moribund and condemned to waste out its life in an orgy of indent and can only look forward to a succession of mediocrity, nonentity, and finally of unreasonable wild generation.

On explicating the orientations of youth and their understanding of culture or by bringing-up of those is based on happenstances and phenomena of understanding of the modus-operandi ET vivendi of the Igbo folk-lores, Arts and cultural milieus. These goes down to create to the youth's awareness, the ancient pragmatic observances and customs, ideologies, believes and traditions unhealthy antiquities, superstitions and prejudices of the common people especially the young people in our society. Then, meaningfully and convincingly, let the youth of the present society know how man should be abreast with the science of the survival of the issues of all these archaic beliefs and customs and bye-laws in our modern age. This for their welfare and happy livelihood.

YOUTH AGE AND ATMOSPHERIC TEMPERATURE IN IGBO-NIGERIAN TRADITIONAL SET-UPS

Youth age in the Nigerian (Africa) Igbo traditional set-ups and their cultural milieus is multi-dimensional. This is because Nigeria as one family where the youths grow up, like any other developing country, do take their normal systems of livelihood; take their time out, rest, celebrate and worship God to review their life. Nigerian nation is made up of many cultures and ethnic groups having rich histories and traditions. The youth life or growth takes a gradual procedural set-up, actually, their life is but majorly at stages in most different regions or states in Igbo land but in all at the full ripped maturity age between ca. 16-27 years. Nigeria is made up of many peoples, cultures and ethnic groups. The Igbo youths have their own particular and peculiar ways and systems of doing things with every vigour and vitality.

This implies that youths of Nigeria require special training and formation for adaptation and administrative skills. This will tantamount to a challenge, to be courageous in order to salvage the pluralistic society of our youth and nation.

For instance, regarding adaptation or integration strategy, the U.N.O estimated the yearly growing rate of the Nigerian populace within over 5 per cent. And regarding the weather conditions, there are two well-marked seasons, namely, the rainy season which lasts from April to October, and the dry season which lasts from November to March. The atmospheric temperature is often times high at the level of over 26 oC to 31 oC in the many regional parts of the country and actually there is nothing like winter or snow in this part of African continent.

Averagely, it rains more in the south region of the country than in the Northern region because of the high degree of humidity. Nigeria however lies also wholly within the tropics, and its climate varies from typical tropics at the coast to sub-tropical further inland.

It is also witnessed and observed that, the temperature variations is most often in and out of this season stable in South- Eastern part of the globe often steady from between 20 oC to 28 oC yearly and winter seasonal cycle does not exist. However, there is that eminent special experiential cold atmospheric periodical time called "harmattan" season and this starts equally from November to early month of March every year and of course with never an atom of snow-fall and no heat, rather it is more of moderate windy and mild-cold, dusty and equally a strong time in the seasonal variation. Often time's some outsiders ask what the meaning of this Harmattan is all about. Harmattan is one of the seasons in Nigeria. It is a dry and dusty West African trade wind from the coast of Sahara desert. This cold wind blows south from the south of Sahara into the Gulf of Guinea within the four and half month's interval. There are so many challenges one could face during this harmattan period like cracking of lips or breaking of lips, cold, dry skin, catarrh, cough and a lot of more cold problems associated with it. The cold weather and heavy amount of foggy dust in the air can limit visibility and block the sun for few days, comparable to a heavy fog which shows that the Harmattan has come back again.

The Harmattan period also shows that some patients suffering from asthma, pneumonia and other people prone to respiratory diseases often suffer much because of excess cold and dust.

It is advisable to cover oneself well and wear warm clothes during this cold period or season so as to keep one's body warm and protect oneself from cold. The dry, cold and dusty wind associated with Harmattan also triggers sickle cells crises in affected individuals. Although it does not generate heat but the unhealthy wind and dust that goes with it causes or hampers ones health and strength. Very many youths feel-good and bubbles with life properly in various States of the nation being well blessed with large and minor rivers, as well as arable land-areas and streams which provide in the country and its people with rich vegetations and fishing opportunities.

The Igbo youths with lots of energy and talents are called upon to prepare themselves responsibly as the hopeful prime mover of the nation. To be precise, the youths have an almost disillusioned citizenry, a depressed economy in which as Middleton (1990: XIII) put it that youth period is an era where more of their numbers are not in gainful employment in spite of self-employment schemes recently introduced, a galloping inflation and a real threat of famine in parts of the country which may necessitate large scale migrations never experienced in the country before, and to grapple rights with their leadership role. There is no pretence that the list is exhaustive but it is enough to show that the youths have onerous responsibilities, which they are being called upon in contemporary Nigeria to shoulder, certain responsibilities for which the society has not prepared them. Youths need good and pious people to follow. There is fundamental question about who are to form, train and educate the Nigerian youths. His Holiness Pope John Paul II (1985:5) has here in his Apostolic Letter on the occasion of International Youth Year in the recent past asserted that the future belongs to the young. Responsibility for the present reality and for its shape and many different forms lies first of all with adults to guide and orientate them. And he told them the adolescent groups that to them, belong responsibility for what will one day become reality together with yourselves but which still lies in the future for the youths. In Nigeria, Pope John Paul II also referring to youths as a sign of hope said that the youths, anywhere, could be in this way, referred to adults not only parents but also categories of animators, like religious people, teachers, professors, and those who collaborate in their physical and intellectual growth and development have to see the youths attain what they want to attain and to be serviceable to the society.

Most of what we are experiencing today in the Church and society are equally as a result of how the teachers, professors and educators of the yesteryears have trained these young people of God; the role of a clergy and the religious, and the laity meant a lot today on this aspect. Youth age in the Nigerian (Africa) Igbo traditional set-ups has much to do with their upbringing, growth, maturity and progressions and livelihood or lifestyles in the society where they find themselves; whether regionally, State or federal level.

CONTEXTUAL UNDERSTANDING OF IGBO CULTURAL IDENTITY AND AUTHOR OF CULTURE

Here we should contextualize the very meaning of Igbo cultural identity to the youth of our present age with letting them know God; the creator of all things as omniscient and omnipotent and in all ontological realm, that the author of life, the essence of mankind and all the natural values, talents and intelligentia of mortal man on this ephemeral- transitory hemispheres to be understood. Youth culture according to website-encyclopaedia on youth culture and orientation is "the sum of the ways of living of adolescents; it refers to the body of norms, values, and practices recognized and shared by members of the adolescent society as appropriate guides to actions" This definition includes two elements. The first is culture, which can be defined as the symbolic systems and processes of maintaining and transforming those systems, that people share. The second part of this definition is that youth culture is specific to adolescents and differs at least partially from the culture of older generations. Elements of youth culture include beliefs, behaviours, styles, and interests. An emphasis on clothes, popular music, sports, vocabulary, and giving them what many believe is a distinct culture of their own. Within youth culture, there are many distinct and constantly changing youth subcultures. These subcultures' norms, values, behaviors, and styles vary widely, and may differ from the general meaning.

We should also focus our mind here to the biblical injunction in the book of Genesis regarding the origin of the world and of the human race. This refers to creation narrative; and how the creation of the world and human kind took place. God created man in his own image and likeness and told man to fill the earth and subdue it. (Gen1:26-29), and in the garden of Eden-Paradise and the test of the free will Yahweh God took the man-Adam and settled him in the garden of Eden to cultivate and take care of it (cf. Gen 2: 5-15). And on the quest on the issues of Igbo cultural identity essentially does not seek the colour; body or mere geographical location of the Igbo in global map and this has to do with the "whoness" of the Igbo; as an Igbo.

Nonetheless, to understand this "whoness"-who is who that is not a character of extension but one has to understand what identity is all about.

The Chamber's dictionary of current English Schwarz (1993:829) describes and explains identity as the state of being the same, absolute sameness, individuality, personality, who or what a person or thing is" But for Mead (1973:3) the basic connotation of "identity" when applied to person or group, is that of sameness, or oneness, that persists in time. Odemene (1993:1) here goes etymological and says the word "identity" is also derived from the Latin word idem which means the "same, identifies." If the word is laterally translated it means "sameness" with the connotation that in spite of its structural changes due to the fact that its essence of substance withstands all temporary changes." He concludes that for that reason the "being" by way of individuals or groups" remains identical to itself, no matter where it finds itself: thus it is everywhere and at all times identifiable." Here equally Madueke (2002.1) defines identity as a sense of interior unity and continuity lasting in time and in various circumstances. "Identity" is therefore perjured sameness by which a person is marked out as different from others and does not alter with time or situation. It is immutable. It could however run into trouble if the person or people lack the ideal (values) and the actual self (self-knowledge).

This is where conflict comes in. The Igbo have characteristics for identification of Igbonity: what make them ndi Igbo (Igbo people). Igbo people are Africans. An Igbo man carries or imbibes within himself that religious believe and sensibility, and this is indispensable in identifying Igbo identity. It is coupled with that of communality in their good participation in the art, religion and philosophy and of community which characterized the Igbo man. The appropriation of land is not as absolute as one may think. But every individual and every family member has right to the sacred and secular utilization of land. Monogamous family (multiple-wives systems) among the Igbo folks especially among the non-Christians is in existence. That means that in the African communality as Obiefuna (200:80) clearly put it to some extent the spiritual or inner force that validates the system giving its psychological soundness, emotional sanity, social profitability and individual benefaction. The Igbos however believes in modernity and in the sacredness of things not only of the land usages and ritualistic tendencies of the traditional religionist but are majorly adaptable and flexible to accommodate modernity of the present age.

Another salient aspect of Africanity to be mentioned is that an Igbo man not only cherishes but also exhibits a principle respects for their elders (elders). An Igbo man sees his seniors or the elderly ones older than he or she is, as the better transmitter of ideas and experiences and certain existential links of the past and present ideas. The pure African society is fundamentally egalitarian. It is therefore communalistic, and that means the African, nay Igbo man has the right to life and existence and all that would make life meaningful as seen in Okadigbo (1976:4-8). However, in this meaning, it could be an over statement or exaggeration and presumptuous claim to heap some blame on the psycho-social and anthropological misnomer as regards where these cultural practices are battered or does not measure up especially on the part of non-Christians or traditional religionist where they still exist, which does not hold to the modern norm of Christian believes. These areas; the youth should understand and accept the urgent need of its enculturation for the expected sanity of it. Though Igbo's are great achievers, they should not be arrogant entities for the crazy pursuers of wealth and status or cultural norms and the present crazy pursuit of wealth cannot be safely said to be component of Igbo identity. If anything, it is an aberration or distortion. This distortion is the current state of affairs, a dislocation and disarticulations have ulcerated the apex manifest of Igbo identity. The consequent on multi-factorial explanation should always be researched and elucidated. For instance, the slave trade of a thing which possibly brought about first contact of the Igbo with the white man and his elements of cultural distortion and alienation, foreign money, alcohol, and gun. These made some people socially more important not through socially accepted mode of achievement but through a link with foreign people and culture. And even alcohol becomes enticing as guns engendered insecurity and suspicion. Igbo folk or society will need some aspect of reconstruction or an amendment to give a better befitting or comprehensive shape. But this will be based on the understanding that there was a structure; there was a shape. It does not necessarily mean going back to square one or referring to the original structure but the expected original shape.

This could mean so to say as Obiefuna (1985:73-74) remarked a remodelling which does not mean going back to the "ab-initio" but a kind of an interlace aspect of the component parts for the old and new. The Igbo cultural identity remains ever more and evergreen strengthened for both the young people and their elders to be part of it and to cherish such things, and to have in mind that although man is co-creator and co-maker but above all, God is the great maker and author of all culture and humanity in the whole cosmos.

YOUTH FORMATION AND APPROACH TO CHRISTIAN LIFE

This is a systematic way, process and programme of bringing youths to the right ways of living a good life in order to exhibit morality of human action. It is an open reality that the moral formation of nation's youth needs a solid pastoral formation or reasonable approach for a better training to enable them form their consciences, increase and strengthen their knowledge and belief in God and to have a guided and disciplined mode of life. Youth formation indeed involves good and conscientious planning, conscientization and timely execution processes.

It means a special orientation for the young people, so that they do not involve themselves or put in ´frequent collapses´ or be back into puerility and enslavement. The Lineamenta for the First National Pastoral Congress in Africa captured the situations vividly and explained: formation of the total person in both its spiritual and physical dimensions as indispensable as people grow in life. Human being (youth or adult), as a composite being; when one attempt to develop one aspect to the neglect of the other will result into a deformed personality. The formation we are talking about here can best be acquired through learning both formal and informal, what one becomes after learning constitutes one´s education that will guide one´s spiritual life and secular endeavours.

The Africa-Nigerian Church however, is aware that this total formation of young people needs to be intensified, because there are many factors militating against it; societal values are changing, but there are cherished values of today. The lineamenta reminded us that youth today are caught in the web of harsh realities of illiteracy, unemployment, slave labour, illness, hunger, drugs, cults, armed robbery and general violence. These concern the issues of morality and conscience, and good practice of religion, education and general enlightenment.

As popular saying of Thomas Aquinas (1955: qtn 5 art 2 part 1), dealing with formation especially moral formation is always formation in freedom. But the entry into freedom is slow and painful and it includes mistakes, wrong choices and sin. The special youth apostolate or formation has two fronts of approach or two human faces; in one way, it lies on all efforts to let them know God respect and fear Him, to be happy in life and be useful to themselves; in another respect to be good and to adapt well to the Church and the human society in general. The people of God both young and old people ought to live peacefully and work together in true faith and fraternal love. Neufeld (1986:153), said that the right way of living their faith in this way should be ensured.

The Church through the command of Jesus Christ is essentially a teacher, divinely authorized, and an infallible teacher in all that pertains to the right living. Regarding the conception of her divinely entrusted mission in the world, the Church has at all times, consistently and authoritatively expounded saving principles on the raison d'etre as well as the origin of the legitimacy of her role in the integral education of human person. That means the penetration of pastoral ministers and religious teachers into the people through catechetical instructions in the parishes and schools or elsewhere and responsibly instructing them on how their faith should affect their values and commitments in life. For the good of the Church, state and nation the purposeful engagement in pastoral formation remains a clarion call for humanity. The formation focuses on rich resources of years of experiences, deep insights, and wise advice. This formation is enriched by the fresh perspectives which are often envisaged situation faced by pastoral theologians through out the world. The youths should be actively and industriously prepared for unforeseen situations and eventualities. Youths spiritual and temporal problems, community conflicts are cases attracting serious attention. There is that need for reconciliation and restoration of their moral values for their souls and to bring things into peaceful atmosphere and order. And this has to be more grounded, carefully conceptualised, to help young people to understand themselves in their every day lives and to develop properly their life style. The example of Jesus Christ who, as a practical great teacher went about doing good, asking and answering difficult questions and solving people's problems and telling stories should be followed. When people are enlightened and well instructed; whether, youths or adults they could tell more about the root course of their failures and successes. This will bring to light needs for hope and healing and they become open to receiving illumination and sustainable solidarity.

The teachings and explanation processes here are to facilitate and strengthen the Nigerian-African youths livelihood and with regard to their faith in the Lord Jesus Christ. Here on the part of young people-the youth and the middle-aged; it becomes an opportunity of grooming and nurturing them well, an occasion of duty-consciousness, of creating more special disciples for Christian communities of discipleship that uphold the value priorities of the Christian faith. Ones identity could always be shaped by ones roles and commitments within a particular community. Youth formation needs all aids and supports for understanding and inspiration of people in the Church and society for the discernment of the moral truth. Howard (1998:48) in his view point said that the experience of awe is recognition youth as the inherent value of us and every person, of the natural world at large. Youth formation and orientation should all the more in all its meaningfulness, be seen and treated well by teachers, pastors, counsellors and other leaders in the society. The youth approach to Christian life is all the more very efficacious.

The great developments and technological advancements in today´s society have lots of influence on youths. Any wise Christian youths should not therefore, question whether Christ is really still at the centre of life. Christianity should be for all youths the guardian and a mirror of life. They should receive Christianity by listening and practicing what the Church says and then by having Christ at the Centre of their life; Christ the Lord Ccares and controls the world.The Church looks to youths with confidence and with love. She is the real youthfulness of the today´s world. The Church is evermore growing young and new. If the youths will look always upon the Church, they will find Christ in her face. They are made to discover themselves and the value of giving oneself through acceptance of some intensified moral principles and catechesis. In Nigeria, the enlightened youths are called to deepen their faith and to be evangelisers of their fellow peers. The Church uses its good example to influence youth listening to their problems and worries, providing jobs opportunities to them forming and directing them to good discipline and happy life.

Correct conscience is part of the youth's dignity and responsibility as good citizens and as good Christians. Udeze (1999:80) here said that values like consideration for others, sympathy, justice and fair play, matured and developed through a rightly formed conscience, moral education, deepening of faith and conscience formation will enable the youths, like every other laity to see reality, judge it correctly and act for the good of self and others.

Christianity which is an advocate of social justice and truth cannot thrive in an atmosphere devoid of God's presence, peace and tranquillity. The youths should adapt themselves anywhere for a peaceful co-existence and integration of all classes of people, irrespective of religion or tribe. The youths of our modern society can do it but the problem is that they are too materially engulfed and so loose often, easily forget that they are easily overwhelmed by the devil's diabolic traps, wrapped up in the attractive glittering clothing of our society so-called ´enjoyment´. The only way out of this dilemma, predicaments and confusion that undermine the lives of the youths, is to endear themselves to Christ who is the model of all the youths. The youths should also realize very well that they are the hope of the world; physically, they are the strongest; numerically they are the largest; spiritually they are still unspoiled and full of prospects; intellectually and socio-politically, the sky is their limit. So the youths should join hands and change the world and give it a positive and better face. The government and the Church are conscience and duty-bound to continue giving the youth sound education, sense of direction, belonging and patriotism so that the future of this country may be brighter and hopeful. The Church has never shown any sign of nonchalance as regards youth problems; instead she always strives to help the youths to explore new ways of tackling their problems.

On the great impact of Christianity to young children, the early missionaries who brought the faith to West Africa and to Nigeria did marvellously well, for instance, Father Joseph Lutz and his companion to achieve their objective; influenced by their experiences in Sierra Leone, where he worked 1877, adopted the strategy of winning people to Catholic faith through charity; Father Lutz also adopted the practical expedient approach for the inhabitants via the charitable provision of medicines, gifts and other material needs. The strategy worked out well

because he, he drew so many local people who needed everyday to obtain some medical and other helps. Parents bringing their children crowded the mission compound in search for some aids. Lutz in one of the Reports he wrote mentioned this as first step in the breakthrough in evangelization.
It is then the onerous task for and before the Church to make the youths truly understand the authentic religion. Thinking deeper into the situation of things in Nigeria, one could repeatedly question why the practice of religion has not gone beyond the surface level even among the youths?

There is innate desire in man to be religious. This is because man is a by nature a (homo religious), religious being. In this meaning, youth approach to Christian life should be taken seriously in order that they should be Christlike in their live.

ORIENTATION AND ADAPTATION TO CULTURAL MILIEUS

Every youth in any society need proper orientation to be able to succeed well, adapt and live better in any environment one finds oneself.

Orientation and adaptation here goes to mean the consciousness or relative direction concerning a youth character by which one is adapted to conditions of things regarding traditions and society's cultural milieus.

Every youth is important and will always be a necessity to the growth of our society. Be this as it is, their orientation and adaptation to the cultural milieus is of paramount attention. It is then the onus of the Church and government of the day each time to hearken to their problems and growth in life. Every youth in this sense and meaning should have the characteristics of good family upbringing.

On Christian education Vatican II stressed on the direct attention of pastors of souls to their very grave obligation to all in their power to ensure that this Christian education is enjoyed by the faithful and especially by the young who are the hope of the Church. As it is on the parents who also give protection to their children; the greatest obligation of educating their families should therefore, be recognized as being primarily and principally responsible for their youths' education.

The roles of parents in education of their youths are so important that it is almost impossible to provide adequate substitutes. It is therefore the duty of parents also to create a family atmosphere inspired by peace and our spirit of co-existence which will promote an integrated, personal and social education of their children. The family is therefore the principal school of the social virtues which are necessary to every society.

It is therefore above all in the Christian family, inspired by grace that children should be thought to know and worship God well and love their neighbours, in accordance with the faith which they have received in earliest infancy, in the Sacrament of baptism. In it, also, they will have their first experience of a well-balanced society and of the Church. Parents as stewards of their children´s right should maintain their right and duty to educate their children. Above allaspects of consideration regarding youths' orientations and Parent-youth relationships; parents remain indisputably the primary educators of their children. The parental right in this matter is according to Messner (1996:41) exclusive because the basis cannot be laid for the development of a personality capable of knowing and developing its essential self in different directions. The Child´s early directives come from the parents or step parents, or guardian's in order to avoid inconsistency in character. Many teenagers prefer the company of their friendship to that of their family. While at home they often prefer being alone.

Purposefully, Christian education comprised two elements, viz: the learning of the truths of the Christian religion and the moral laws of Christian behaviour. It was the parents' fundamental duty also to share the faith and moral discipline with their children. It was the parents' mission to develop the religious consciousness of their children, since the proper environment for the development of the Christian soul is the Christian family. Maturity remains a matter of courage for the youngsters of today.

At times, some of the Nigerian youths seem to be faster than their shadows. These are the ones who always aim at landing on top of the mountain or seeing themselves at least first of all on top of hill, and then to proceed further and higher. They want to amass wealth over night. On the book Contemporary Nigeria – Our Fate, Glories, Woes and Prospects, Abba (1997:18-19) put it that the government. They know and say to themselves that Nigeria is full of the great, the poor and wretched, good and the bad, which is undeniable. And those memories have faded, though they ought to be embellished by every Nigeria, to build the future experimentally and practically. Nwokora (1996:42) said more on this matter buttressing, that the simple reason behind this sorry situation is that Nigerian youths have no sense of belonging to any political entity that guarantees them survival and protection. We adults at times watch them drift on the destructive hurricane of our own indiscipline.

CONCLUSION

Our concentration so far, here has been to know that present and future orientations continue to exist in youth culture and among adults, their readiness to be aware, cherish and understand the good aspect of our natural heritage and to reasonably and wisely enjoy them.

While much research documents excels the harmony between basic values of youth and adults, it is still true that youth culture does exist and in certain ways is set apart from the world of adults. Developmentally, young people face special challenges that are associated with adolescence. Culturally, young people create patterns that are distinctive to peer groups. We see these patterns in taste, in music and clothes, in the ever-changing vocabulary of youth, in shifting fads in leisure activity.

Most view these cultural creation as ways in which youth attempt to separate themselves from the world of their parents, not in rebellion but as part of the process of learning to function as persons who have grown beyond childlike dependence on adults. And to communicate well with our youth, we need to be sensitive to and to understand this superficial culture, as well as recognize the basic needs shared by youth and adults as human beings. The future took on fresh significance for youth and cultural developmental maturity. The fact of differential incorporation of distinct cultural sections into a common state and economic unit was the case in the colonial polities and subsequent post-colonial states.

On Igbo cultural milieu Oguejiofor (1996:14-29) analyzed the views of some authors on Igbo personality and culture traits and came up with ten identifiable qualities that are for the purpose of this paper for Igbo identity, these include stubbornness, aggressiveness, arrogance, and clannishness, hard work, desire for achievement, competitiveness, community consciousness, egalitarian individualism, ultra-democracy, absence of kings, and receptivity to change. An aspect of Igbo cultural identity, which cannot be overlooked, is Igbo language. Language as a principal vehicle of communication transmits values of a people from generation to generation. It transmits both the philosophy and social systems of the people; their thinking pattern that lasts and influences social life. Igbo as people (indigenes) or Ibo as a language of the people is a strong instrument for the maintenance of Igbo identity. The uniqueness of Igbo as a people is equally enhanced by Igbo as language, a language unique in itself. Igbo identity is therefore identifiable through lasting Igbo cultural traits communicated through Igbo language; and title taking is here known as a mark of the achievement of a man.

What then are the suggestions that can be made to improve the youths conditions and to give them effective training, education and formation of the Nigerian youths? There is every necessity to enjoy the traditional set-ups of our cultural backgrounds where they exist and functions well. It is very important to prepare them better for the future. This is of course with real conviction and quantum of assurance that all aspect of cultural milieus and identities stemmed from the author of our heavenly universe. Nigerian affairs touch and affects young people (youths); challenges and some of the national problems of administration and leadership, development, political conditions and other socio-economic upheavals and problems.

The importance of 'nurture' on contemporary youth should be ignored; youths are products of their time. Youths are metaphysically what they know, what they know, and what they know includes the fact that they are products of two heritages. It is not enough for the Church to insist that youths must seek the face of God efforts should be made by the Church and State to provide work for these youths, to humanize the world to fight injustice, exploitation, to cultivate in youth, the spirit of patriotism, the value of hard work both during studies and after study periods, the value of being a good neighbour, acts of charity, preferential option for the poor and to take an objective stand between good and evil. Without effective work, food and shelter- there will be no hope for the future of youths.

Christendom should be at the fore-front in the fight for this purpose. Unfortunately, many of the youths of this generation and age groups find little or no reason to rejoice especially when one considers the spirit of the time they live in what had transpired so far regarding their livelihood. They are surrounded by a secular world that has lost the sense of sin and God. They are faced with the problems of poor education, unemployment, poverty, corruption, unfulfilled dreams and other sundry negatives that paint the picture of the future. The national youth association and forum of great gatherings and sittings and conferences as well condemned the continued inhumane treatment on any fellow citizen and child of God by members of Islamic Sect Jama' atul Ahalis sunn Lida'awati Wal Jihad also called Boko Haram. They opined that the menace of Islamic Sect- Boko Haram can be checked if authority, particularly, the northern elite, Muslim and Christian brethren will thread the path of sincerity the urgent need for a peaceful and happy living that we all, Christians and Muslims should practice the maxim of live and let live and loving each other for God's sake.

Being human and respecting good cultural norms, human right and dignity of man and total protection of life is needed for any righteous living. The youth should be well buffeted by the modern culture that promotes absolute peace and freedom than being besieged by any kind of free-thinking, relativism and 'anything goes' way of life. As a result of escape and in pursuit of 'lasting' happiness they resort to all kind of wrong doings ranging from anarchical adventures, violence, drugs, alcoholism, immorality, felony, to countless unwholesome behaviours.

It is in deed foolhardy and unequivocally wrong for youth in any cultural milieus to behave anyhow, thinking, that no threat is strong enough to dissuade them from authentic existence. Above all useful salient formation, moral values cum reasonable approach to Christian life, will assist the youth all the more for better orientation and adaptation to all the afore mentioned aspects of cultural milieus.

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Determinants of Tax Attitude and Tax Compliance among Small and Medium Enterprises (SMEs) in Tourism Industry: A Survey Study in Georgia

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Abstract
The aim of this study is to seek out factors that affect attitudes and considerations of taxpayers on tax compliance in tourism industry in Georgia. The factors were determined according to the previous literature, and classified as internal & external. The majority of recent researches on tax compliance focused on individuals, not on firms. In this paper, we use data collected from Small and Medium Enterprises (SMEs) in tourism industry in Georgia. A questionnaire was designed by using a five point Likert scale and filled out with face-to-face interview. Cronbach's alpha coefficient widely used to measure internal consistency was obtained as 0,837 in this study. The findings show that internal factors seem to be much more effective determinants on tax compliance than external ones. Their opinions about current situation do not differ from as it should be. Ability to pay tax, accurate tax payment, raising tax morale and consciousness of citizens, and reassessment of deterrence policies (such as exemption, audit, penalty and fine) have been perceived as contributing factors toward compliance behavior among taxpayers. It is also found that there is no statistically significant difference in the perception and attitudes of respondents to taxation according to age and location of firms, but there are a few differences according to their ownership and subsector.

Keywords: Georgia, SMEs, Tax compliance, Tourism industry, Subject classification codes.

INTRODUCTION
Georgia, like other post-communist countries that merged from a centrally- planned economies to market-based economies has established a dynamic business environment including a modern tax system similar to Western style during the last decades. Before the Rose Revolution in 2003, Georgia had a poor tax system that involved widespread tax evasion and avoidance, tax law deficiencies, and corruption of institutional frameworks. Although Georgia had high tax rates, tax revenue collection did not exceed 15 percent of GDP (Gurgenidze, 2009). The government was thus incapable of funding even the most basic public services and maintaining critical infrastructure. Schneider et al. (2010) found that Georgia had the highest shadow economic activity in the period of 1999 to 2007 among 21 transition countries (TCs, Post-communist countries). After the Rose Revolution, the government committed itself to deeply reforming the tax system, hoping to reduce the instances of both tax and administrative

abuse. After a year of discussion and debate, the number of taxes and their rates were reduced to the lowest levels in the region at the end of 2004 (Torosyan and Filer, 2012). In 2005, Georgia enacted a new tax code introducing lower and flat- tax rates, significant procedural and institutional innovations (Batumi Investment Agency Report, 2011). It was a major change in the Georgian fiscal policy. In this way, low tax rates were adopted and 21 different taxes applied in 2004 were reduced to 6 in 2005. As a result of tax cuts and overhaul of the tax code, system has been improved by 2010. In 2009, Georgia was ranked fourth-best performer worldwide by the Forbes Tax Misery and Reform Index. In 2010, another new tax code was enacted to consolidate the tax and customs rules into a single code. Implemented new code aimed three main objectives: 1. Taxes should be simplified, 2. Trust in the tax system should be increased, 3. Georgian tax legislation should be better aligned with international best practice and EU directives (PricewaterhouseCoopers, 2011). In the following years, Georgia developed a broad range of e-government services, often using online tax filing system as a starting point, and the infrastructure for e-government by introducing electronic structure. As a result, Georgia became a nation of neoliberal reforms (Papava, 2014).

Today, Georgia has a tax system consistent with the free market economy, and it had been ranked 9th in the Ease of Doing Business in 2013 (12th in 2012, 11th in 2010) according to The World Bank and International Finance Corporation (IFC). Georgia's position in the Index of Economic Freedom has improved as well. Georgia ranks 21st in the 2013 survey made by the Heritage Foundation, and the Corruption Perception Index for Georgia is 51, which is the best ranking in the region according to Transparency International (Business Climate in Georgia KPMG Report, 2013). Tax legislation has been based on equity and neutrality principles. However, application of tax legislation has been failed, even misused quite often. The state's effort to improve tax administration has had precious few positive results, and most of the people believe that tax collecting structures are corrupted and tax evasion has been usual in the structure. Parallel to them, tax inspectors believe that the majority of people employed in the private sector are officially not registered and great majority of self-employed evade taxes. There have been often conflict situation between administration and taxpayer due to ambiguity of tax laws. In spite of decline in the tax rates, low taxes don't contribute to economic growth. Taxation has not been used as a lever to promote job creation in specific sectors or regions, and to solve public problems, such as struggle with poverty, urban development or investment to new growing sectors, especially in service sectors like tourism.

Tourism is one of those potential sectors that Georgia can increase its income with ease. Thus, it is clear that tourism can play a valuable role in stimulating higher growth, creating employment, reducing regional asymmetries, and bringing about positive externalities that affect other economic activities, directly or indirectly (Margvelashvili et al, 2014). The presence of rich tourism potential in the country contributes to the development of virtually all types of tourism, such as rural, rest and recreation, business, cultural, wine and adventurer (Korganashvili, 2013). However, the potential which exist in the country is underutilized and investment needed into the infrastructure to encourage tourism is probably to pose a problem. Erkomaishvili et al. (2014) found the factors impeding the development of tourism industry in their study, namely - existence of the conflict zones, high rates of the bank credits, deficiencies associated with the tax laws, low level of infrastructural development, low quality of services, deficit in the competitive staff, excessive increase of prices in the peak seasons, insufficient promotion of the touristic opportunities of Georgia on the international market.

Due to the role of tourism in the sustainable development of a country and in the growth of wellbeing of its citizens, it is important to explore and assess attitude and compliance of tourism industry towards taxation. Alm and Martinez-Vazquez (2003) classified determinants of tax compliance into two basic categories; The first category relates to how the taxpayer judges his/her own compliance behavior in light of the individual's own feelings about what is proper, acceptable, or moral behavior, might be termed as internal norms. The second relates to perception of taxpayer about fairness of tax system, level of transparency and accountability of government, level of corruption, technological capability of tax office, and complexity in the tax laws, inadequate tax knowledge, approach of tax administration to taxpayers, might be termed as external norms. Hazman (2009) focused on external variables and found that failure in fiscal transparency and deficiency to submit public goods and services have a strong meaningful effect on tax compliance. Especially, trust in government affects tax compliance of citizens, and increases the tendency to declare taxable revenue more precisely (Alm et al, 1992; Alm and Torgler, 2006). Individual perceptions of good governance may increase tax compliance. When the services provided by the government are viewed as widely desired, and the decisions determining services provided are transparent and fair, compliance is expected to be higher. The close effect of tax authority’s supervision on timely tax payments shows no positive overall effect on tax compliance. Interestingly, supervision through friendly deterrence leads to delayed tax payments, and causes a crowding out of intrinsic tax compliance (Gangl et al, 2014). However, it has also been found that customer oriented tax administration fosters voluntary tax compliance of citizens (Mutlu and Taşcı, 2013). High tax rates and complex filing procedures are the most crucial external determinants of non-compliance, apart from multiple taxation and lack of proper enlightenment (Atawodi and Ojeka, 2012). Observed tax compliance behavior cannot be explained entirely with the traditional economic analysis that focuses mainly on deterrence components, such as the impact of audit, penalty, and tax rates. It has also been suggested that tax morale, in other words, ‘‘the intrinsic motivation to pay taxes’’, might help explain the puzzle of why so many individuals pay their taxes (Alm and Torgler (2006). Compliance is higher if the citizens are well-informed about outcome of the vote, and taxes are spent in ways consistent with the preferences of the citizens (Alm et al, 1993). The study conducted by Cummings, et al (2004) by using data from field and laboratory experiments from the United States, Botswana, and South Africa revealed that observed differences in tax compliance and tax morale levels can be explained by differences in the fairness of tax administration, perceived fiscal exchange and overall attitude towards the respective governments across the countries. The studies conducted on tax compliance are based on surveys analyzing individual taxpayer considerations and self-reports or empirical researches that mainly cooperate with students. However, the empirical researches on firm tax compliance are limited. These studies had used firm data, and field studies or laboratory experiments to provide further evidence on tax compliance (Kirchler, 1999; Hazman, 2009; Alm and McClellan, 2012; Nkwe, 2013; Razak and Adafula, 2013; Gangl et al, 2014; Nyamwanza et al, 2014).

As a novelty in this study, we conduct a quantitative study for tax compliance assessment focusing on firms in tourism industry. This study intends to (1) investigate the determinants of tax compliance by classifying them as internal and external, and (2) reveal taxpayers’ perceptions about tax system in Georgia. Moreover, this paper can contribute to the literature in two ways: (1) The information derived will add to poor literature available for Georgia, and (2) The information about determinants of tax compliance enables Georgian policy makers to enhance the impact of positive variables and mitigate the impact of negative ones so that high voluntary tax compliance can be ensured in the future.

THE METHODOLOGY

A quantitative study was adopted to gather information from the financial / chief account managers of tourism operators running small or medium-sized enterprises in Batumi, Tbilisi and Kutaisi regarding their attitudes and perceptions toward tax compliance. According to the Ministry of Finance, the term “SME” in Georgia refers to any firm generating annual turnover of less than GEL 1,500,000 (roughly $850,000 at the time of writing), regardless of the number of employees (Caucasus Research Resource Centers, 2014). The sample consists of 74 firms including hotel, travel agency, food & beverage and others (car rental service, souvenir shop, tour guidance etc.). The questionnaire was adapted from the previous studies conducted to measure the effects of internal & external factors on tax awareness & compliance (Helhel and Ahmed, 2014; İpek and Kaynar, 2009; Aljaadi et al., 2009). All questionnaires were filled out with face-to-face interview. The questionnaire was divided into two sections such that Section 1 was designed to obtain characteristics of firms (subsector, experience, location and ownership), and Section 2 consisting twenty-two (22) statements was designed to evaluate attitudes of tax payers against tax. A five-point Likert scale (from1 strongly disagree to 5 strongly agree) was used to indicate disagreement or agreement of the subject with each statement. Internal consistency of answers given to the questionnaire was also examined by reliability analysis. Cronbach’s alpha coefficient that is widely used to measure internal consistency of Likert scale & two resulted dichotomous variables in social sciences, and a calculated value of alpha between 0.7 and 0.95 that tells that the instrument used to measure variables of the study has fulfilled the validity & reliability (Tavakol and Dennick, 2011). Aforementioned method was applied on the 22 statements indicating opinions and attitudes of respondents, and this coefficient was obtained as 0,837.

This study is subject to some limitations such that questionnaires were applied only to 74 firms liable to pay. So, the results have not shown a whole picture of sector in Georgia. Several studies are required to generalize the results of this study & fill in this gap. The second limitation of this research is that thoughts of respondents are limited to the time in 2014. Moreover, sampled respondents may not have answered all questions with candor, so the results of this research based on the opinions of the sampled group might not accurately reflect the opinions of members of the included population. This is more so because, people generally feel reluctant to divulge their real opinions (Razak and Adafula, 2013). Finally, this research is conducted to explore the financial / chief account managers of tourism operators in Georgia towards taxation process using questionnaire. So, the results obtained in this research are limited in terms of methodological approaches using present questionnaire. In order to confirm and enlarge the scope of these results, more surveys (interviews about supervision of tax authorities, perceived restrictions, legal process etc) need to be held on.

ANALYSIS AND RESULTS

The sample consists of 74 SMEs activating in tourism industry. Of the questionnaires retrieved, 31.1 % are from travel agencies, 28, 4% are from food & beverage, 23% are from hotels, and the remaining 17.6 % of the SMEs are from car rental service, souvenir shop and tour guidance businesses. 48.6% of them are new businesses (1 to 5 years old), 29.7 % of them are 6 to 11 years old, 13.5 % of them are 12 to 20 years old, and only 6 % of them are older than 20 years. This distribution shows that the majority of the firms (approximately 79 % of them) is newly established (11 years and less). The survey of this study was held in Tbilisi (28.4 %) which is the capital city of Georgia, Batumi (51.4 %) and Kutaisi (20.3 %) which are the most important tourism destinations of Georgia. The majority of the firms were domestic (70.3 %).

Table 2 lists the eight statements including internal factors and overall mean scores for each statement. Respondents were asked to choose a number between 1(one) and 5 (five) to indicate the extent of their disagreement or agreement with each statement.

Table 1. Characteristics of Firms

Characteristics of Firms		Number of Firms	Percent
Subsector	Hotel	17	23
	Travel Agency	23	31.1
	Food & Beverage	21	28.4
	Others	13	17.6
	Sub Total	**74**	**100**
Ownership	Domestic	52	70.3
	Foreign	22	29.7
	Sub Total	**74**	**100**
Experience	1-5 years	36	48.6
	6-11 years	22	29.7
	12-20 years	10	13.5
	20-above	6	8.2
	Sub Total	**74**	**100**
Location	Tbilisi	21	28.4
	Batumi	38	51.4
	Kutaisi	15	20.3
	Sub Total	**170**	**100**

As it is shown in Table 2, approaches of tax payers about taxation in the light of internal factors have been varied. Three points (3) located in the middle scoring has been considered to be "neither satisfied nor dissatisfied". One-sample t-test was applied whether there is statistically significant difference by taking the average of the scores given to the statements according to point 3 that is "neither satisfied nor dissatisfied". As can be seen in Table 2 & Table 3, since the p values of all statements are less than 0, 05 at 95% confidence interval of the difference, these differences assessed as statistically significant. It means that overall mean scores can be regarded more disagree below point 3, and regarded as more agree above point 3 than to be "neither satisfied nor dissatisfied" (Abdieva et al, 2011).

The strongest agreement in terms of the mean scores was that tax payment is a sacred duty. Some empirical studies tended to show that religiosity might influence people's habits, and might make individuals reluctant to engage in tax evasion, and a higher religiosity is correlated with higher tax morale (Alm and Torgler, 2006). The political endorsement of tax subject to the state as well as allegiance is the second strongest agreement that effect on tax compliance. Since mutual relationship between the majority of tax payers and state has been positive in terms of their approaches towards tax, feeling of displeasure due to tax payment will be less felt. Moreover, these citizens attribute greater legitimacy to administration and be more compatible to the laws than citizens with negative perceptions (Tunçer, 2002).Loyalty with the state may be enhanced by permitting citizens to participate actively in the political process and to express their preferences (Alm & Torgler, 2006). The third strongest statement is the opinion of a tax payer about other tax payers' obligations. The general opinion of tax payers about reluctance of others to meet their tax obligations may affect them in all of the countries. Tax payers that have paid taxes on time and accurately may feel to be deceived against others that haven't regularly paid, then this situation may lead to negative orientation and defiance (Demircan, 2003). The prevalent opinion is that tax payers are not taxed according to their ability in Georgia among the respondents. This situation can be identified with the principles of horizontal and vertical equity. The first theory suggests that people with the same ability to pay should pay the same amount ((horizontal ability-to-pay equity), and the second emphasizes a tax subject with a higher ability to pay should pay a higher amount (vertical ability-to-pay equity) (Meşca, 2013). According to these theories, taxpayers have to be forced to give up a certain amount of wealth, directly or indirectly. The following strong agreement is that "so many tax subjects evade tax, so I also have a right to evade tax". Evidence suggests that perceptions about the honesty of others may affect compliance behaviour. The first disagreement statement is that collected taxes are not well-spent as public service in Georgia. In other words, respondents indicated that they are moderately benefiting from governments' use of public funds. Razak and Adafula (2013) indicated that taxpayers may continue to comply with their tax obligations if the perceived benefits from government increased, even though their tax burdens were high. The existence of positive benefits may increase voluntary compliance of citizens, without direct coercion. Similarly, the respondents support the statement that needs of tax payers are taken into account in determining tax policies. When the requirements & preferences of tax payers have not been paid attention, the attitudes of them have not been clear against tax policies, especially in totalitarian regimes (Çataloluk, 2008). There is also some anecdotal evidence that individuals are less inclined to pay their taxes when they feel that they have little say in government decisions and when government is perceived as unresponsive to their wishes (Alm et al, 1993).

Table 2: Summary of Responses Related with Internal Factors

	N	Mean	Std. Deviation	P value
S4- Collected tax is not equivalent to public goods in Georgia	74	2,58	1,517	,005
S16-Requirements of tax payers are not taken into account in determining tax policies	74	2,52	1,500	,003
S17-Tax payers do not pay taxes on ability to pay in Georgia	74	3,92	0,962	,000
S18-Tax payers are not paying taxes accurately in Georgia	74	3,93	0,956	,000
S19-The mentality "why I am not evading tax, everyone on tax evasion" is prevalent among tax payers in Georgia	74	3,63	0,751	,000
S20- Reluctance of someone else to meet tax obligations affects me	74	4,55	0,967	,000
S21- Tax payment is a sacred duty for me	74	4,69	0,700	,000
S22- Tax payment is an indicator of loyalty to state	74	4,62	0,805	,000

(1= strongly disagree; 5= strongly agree)

The external factors (resulted in economic & political situations, structures of tax system & tax administration) may also be effective on compliance behavior. The majority of the respondents reported that existence of unrecorded transactions that generate tax revenue is not ethical behavior. Furthermore, tax penalties, extensive tax exemptions and tax amnesties granted frequently are considered inefficient methods for strategy of equality by respondents. There is no doubt that audit is adequate to levy tax, but tax fines and penalties are not considered enough for deterrence policy. Experiments on tax behavior in the laboratory have consistently supported the positive impact of audits and fines on compliance. Nonetheless, the effects were rather weak. Field studies and surveys have yielded effects that are lower than, and sometimes the opposite of the predicted effects (Gangl et al, 2014). Cummings et al (2009) stated that reducing tax evasion is often not simply a matter of applying higher penalties and/or increasing the frequency of audits, and extreme penalties may backfire by creating a setting in which bribery and corruption is more prevalent with the end result being lower tax compliance and a general loss of trust in public institutions. They argued that the responses to the usual enforcement mechanisms (audits and penalties) are shown to be enhanced by individual perceptions of good governance that include a fair tax system, a government providing valued goods and services in return for tax revenues, and a political system that is not corrupt. Tax rates and tax system are not generally perceived to be high and unfair in Georgia by respondents, respectively. There have been many studies concentrated on tax rate and fairness on compliance. One of these studies realized by Etzioni (1986) documented that the fairness perception is more likely to affect tax compliance rather than tax rates. The author also found that tax evasion has increased as citizens have been considering taxes unfair, even as tax rates remained stable. Surprisingly, the majority of taxpayers do not think about tax law as complex, moreover, supports recurrent reform of tax law. Razak and Adafula (2013), in their research on Gana found that older business operators may better understand the tax laws, and consequently may be better positioned to evaluate their burden of taxes. A significant statistical positive relationship was found between understanding level of tax laws and tax compliance in this study. Similar findings were documented by Nkwe (2013), Saad (2012) and Kirchler et al (2006). Tax system is a complex and significant structure to ensure the success for taxation. In this survey, the majority of respondents have considered about number of tax officers as sufficient, their professional knowledge, training and respectful treatments to taxpayers as adequate. Alm and McClellan (2012) reported that providing better taxpayer services make easier for firms to pay their taxes and reduce obstacles to compliance. Respectful treatment includes that tax officers see it as their task to advise taxpayers and to perceive taxpayers as cooperative individuals, and not as savvy citizens searching for loopholes to escape the law (Hofmann et al, 2012).

Table 3: Summary of Responses Related with External Factors

	N	Mean	Std. Deviation	P value
S1- Tax rates are too high in Georgia	74	2,57	1,518	,005
S2- Tax system is unfair in Georgia	74	2,39	1,467	,000
S3- Tax law is not simple and clear in Georgia	74	2,34	1,446	,000
S5- Recurrent tax reforms lead to inadequate application	74	2,39	1,460	,000
S6- Tax system is not adaptive to economic situation	74	2,44	1,527	,000
S7- Tax audit is not deterrent sufficiently in Georgia	74	2,56	1,664	,000
S8- Tax penalties are not deterrent sufficiently in Georgia	74	3,58	1,194	,000
S9- Existence of unrecorded transactions that generate tax revenue is not ethical behavior	74	4,27	1,275	,000
S10-Tax amnesties granted frequently result in tax inequality	74	3,20	1,638	,002
S11- Extensive tax exemptions result in inequality	74	3,27	1,621	,000
S12- Number of staff working in the tax office is not sufficient for effective service	74	2.18	1,576	,000
S13- Orientation & professional knowledge of staff working in the tax office is not adequate for effective service	74	2.29	1,529	,000
S14- Relationship between staff working in the tax office and tax payers are not positive	74	2,32	1,582	,000
S15- Tax office is unable to adapt to technological developments	74	2,10	1,584	,000

The perception and attitudes of the tax subjects to taxation are analyzed whether there is significantly difference according to ownership and subsectors or not in this stage. It was found that distribution of data was not normal according to Kolmogrov-Smirnov normality test (p<0, 05), and data did not have homogenous distribution in terms of total values (p<0, 05). Therefore, comparative analysis based on subsector and ownership was done with nonparametric analysis in all 22 statements without any distinction as internal and external. Table 4 shows that there are significant differences between domestic & foreign firms in terms of only three statements including one internal and two external factors. It can be said that domestic firms have tendencies to behave more compliant than foreign firms, except for statement 11 that is about extensive application of tax exemption. It can be generally said that the role of ownership impact has been only for 3 factors on compliance in Georgia.

Table 4: Mann Whitney U Test Related with Internal & External Factors-Ownership

Statements	Ownership	Mean Rank	M-W U	Z	P-Value
S6-Tax system is not adaptive to economic situation *	Domestic	40,87	397	-2,161	0,031
	Foreign	29,55			
S11-Extensive tax exemptions result in inequality*	Domestic	34,35	408	-2,030	0,042
	Foreign	44,95			
S16-Requirements of tax payers are not taken into account in determining tax policies	Domestic	40,62	410	-1,995	0,046
	Foreign	30,16			

Kruskall-Wallis test is a nonparametric alternative of one-way ANOVA (the one-way analysis of variance between groups), and provides to compare three or more groups with continuous variables. Each person must be in different group, since it is an inter-group analysis (Kalaycı, 2006). The values are converted to sequential row and their averages are compared with each group. Aforementioned test was used to investigate the respondents' approaches to taxation whether there is statistically significant difference according to the subsectors or not. Applied test results for internal and external factors are represented in Table 5. There are significant differences for only four statements, 2 of them are external. Mann-Whitney U test was performed for these statements in order to determine which subsector is statistically different from each other. Throughout Table 5; H indicates hotel, TA indicates travel agency, and F&B indicates food and beverage.

Table 5: Kruskall Wallis Test Related with Internal & External Factors-Subsector

Statements	Mean Rank / Subsector				χ^2	P	Significant Difference
	Hotel	Travel Agency	Food & Beverage	Other			
S8-Tax penalties are not deterrent sufficiently in Georgia*	23,62	47,22	41,38	32,19	14,777	0,002	H – TA H - F&B TA –Others
S9-Existence of unrecorded transactions that generate tax revenue is not ethical behavior *	32,68	40,46	30,12	50,50	11,841	0,008	H - Others TA- Others F&B - Others
S21-Tax payment is a sacred duty for me	32,29	41,02	32,93	45,50	8,450	0,038	H - Others F&B - Others
S22- Tax payment is an indicator of loyalty to state	32,15	40,67	33,40	45,50	7,970	0,047	H - Others F&B - Others

CONCLUSION

This study was conducted to survey voluntary tax compliance tendency of SMEs activated in tourism industry located in the most promising tourism destinations in Georgia in terms of internal and external factors. Georgia, as developing and post-communist country has made progress to develop policies and institutions, specifically targeting SMEs by increasing public-private dialogue and inter-governmental coordination. SMEs play an important role as key engines for economic growth and development in all developing and transitional countries, including Georgia. In recent years, tourism has been main priority sector for Georgia to ensure sustainable development of the country. Therefore, Georgia improved the business

environment by offering various incentives to investors, including reduction of tax burden and elimination of deficiencies associated with tax laws.
Based on the findings above, it can be generally concluded that SMEs of tourism subsectors have been influenced positive from internal and external factors specifically targeting voluntary compliance. Opinions of taxpayers about current situation do not differ from as it should be. Taxpayers generally advocate fulfilment of tax obligation, at the same time they also denote that current situation contributes to tax compliance positively.

According to the results, internal factors seem to be key determinants to enhance tax compliance in comparison with external factors in Georgia. If the following problems are solved immediately, voluntary tax compliance among SMEs in tourism industry can be promoted:

- Ability to pay tax
- Accurate tax payment
- Raising tax morale and consciousness of citizens
- Reassessment of deterrence policies (penalties, audits and exemptions etc.)

The findings point out that there is no significant difference in the perception and attitudes of respondents to taxation according to age and location of firms, but there are a few differences according to their ownership and subsector.

Since this research points to a broader understanding of tax compliance, more empirical and specific work is needed to better understand tax compliance in Georgia. Moreover, the robustness of these results must be checked in other sectors, other developing and transient countries. Otherwise, these findings cannot be generalized.

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Strategic Management and Supply Chain Management in Organizational Theory Perspective: A Synergistic Approach

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Abstract
An ultimate question mark in history of strategic management is why and how organizations perform better than others? One comparative answer to explain this phenomena is an organization's actions and strategic choices how it operate its supply chain. Supply chain management with the strategic management viewpoint is very fertile area and its integration can enrich this domain significantly. Network competition, hypercompetition and new competitive landscape got paramount significance in today's competitive environment and strategy building process. The basic purpose of this literature review is to explain this shortcoming while explaining intended outcomes extracted from crucial abilities and configuration of supply chain management principles in hypercompetitive industries. While taking network competition, this report also extends the reference point of Abdulla (2009) on strategic demand network management (SDNM). Moreover this conceptual review will also develop a linkage in academic literature with respect to dynamic capabilities and supply chain management.

Keywords: Supply Chain Management, Strategic Demand Network Management, Strategic Management, Dynamic Capabilities, Literature Review

INTRODUCTION
From last couple of decades, many organizations are expanding their business internationally due to maturity and saturation in domestic markets. To expend globally, organizations are required some noteworthy strengths like supply chain management capabilities, process innovation, product innovation, marketing expertise, human resource and competitive brands. This sudden shift in business environment forced the organization to put more emphasized on supply chain management for overall competitive advantage. Well competing organizations developed their supply chain management as their key competitive advantage because of changing geopolitical events (market access to Brazil, Russia, India, China, North America Free Trade Agreement and European Union) deregulations of national policies and global expansion thus increased pressure on competitors (Fawcett et al., 2014; Christopher, 2012). Apart from corporate/strategic importance of supply chain management, academic literature also supports the notion of collaborative and integrative approach of supply chain and competitive advantage on theoretical as well as empirical basis. But, organizations manage their businesses in hypercompetitive conditions may face arduous challenges while integration and collaboration of supply chain with dynamic capabilities due to constraints in strategic flexibility. But on theoretical basis, the integration of dynamic capabilities and supply chain management is relatively new concept in dynamically changing industries (Beske, Land, and

Seuring, 2014). In presence of these constraints, organizations may emasculate their abilities in creating series of temporary advantages in discontinuous changing, relentless and rapid business environments.

Carter and Roger (2008) contended that sustainable advantage, across a breadth of industries, replaced by temporary advantage dramatically. Key aspects like flexible manufacturing, communication, technology revolutions and globalization have changed the nature of competition on entry barriers, product life cycles, radical innovation, market speed, quality and price (D'Aveni, 1994). All of these factors are unpredictable, discontinuous, evolutionary and competence-enhancing in nature. Apart from above said factors, changing nature in playing field, devalued products, fluid participants, uncertain relationships and disruptive technologies also converted the business environment into unpredictable and turbulent for creating value added supply chain functionally and strategically. Many researchers (for reference Min, Mentzer, & Ladd, 2007; Min et al., 2005; Chen, Daugherty, & Landry, 2009; Dyer & Singh, 1998) argued that competitive forces seems to be discordant with mainstream models that supports building mechanism, reward and risk sharing, process integration, demand and supply data, processes, information, knowledge sharing, idiosyncratic investments, trust and long term partnerships. Gersick (1991) suggested these events as "… merely signal a punctuated equilibrium cycle, but it is equally likely that relentless competitive disruption will continue, and create an enduring and more hostile competitive environment in which firms at best achieve a series of temporary advantages". If an organization faced above said facets then we called it hypercompetition as defined by D'Aveni's (1994). The academic literature is sparse on developing linkage between hypercompetitive mindset and supply chain management.

LITERATURE REVIEW

With respect to prior literature, supply chain management defined as "the configuration of managerial and strategic choices a firm makes regarding the intended interactions, relationships, expected benefits and outcomes resulting from relations with members of its supply chain(s)" (Wisner et al., 2015; Hugos, 2011; Lee, Miranda & Kim, 2004; Xie et al., 2011; Christopher & Towill, 2002). In today's competitive environment, the paradigm of supply chain management from efficient transformation of information, money and material is changed to effective sharing in networks/value chain and improving performances. That is why we are seeing numerous calls for research studies that integrate supply chain management with organizational and strategy research (Miles and Snow, 2007; Christopher et al., 2006; Ketchen, Hult and Slater, 2007; Bettis, Helfat, and Shaver, 2013; Hoffmann, Lavie, Reuer and Shipilov, 2014). Without any doubt, the inclusion of strategic research in supply chain management is beneficial for organizations in terms of enabling, developing and implementing organizational strategies. Despite the seminal work of Porter (1985), indicated the conception of value chain with integration of strategic behavior, relationships and processes of supply chain management with strategic behavior is still disintegrated. Therefore, dynamic capabilities, knowledge-based view, resource based view, strategic choice, social capital theory, network theory, game theory, institutional theory, resource dependence theory, institutional theory, agency theory and transaction cost economics theory come into play for supply chain management literature (for example: Peteraf et al., 2013; Teece, 2007; Helfat and Winter, 2011; Barney and Felin, 2013; Camuffo, Furlan and Rettore, 2007; Ketchen & Giunipero, 2004; Saeed et al., 2011; Cheng & Grimm, 2006).

On the foundation some recent arguments (Pacheco-de-Almeida, 2010; D'Aveni, Dagnino, & Smith, 2010) and call for papers, this literature review is devised on this question. How organization should manage its supply chain based on different environmental situation requires unpredictability, self-cannibalization, aggressiveness, secrecy, stealth and speed to achieve competitive advantage? After answering this question with the help of available theories, three key developments/significance/contribution/motivations also discussed subsequently. The first development is related with the integration of dynamic capabilities framework of strategic management with supply chain management research. More specifically, it will explore how supply chain management concept and practices instigate organizations to obtaining and achieving dynamic capabilities. Captivatingly, researchers (Zahra, Sapienza, & Davidsson, 2006; Eisenhardt & Martin, 2000) proposed that dynamic capabilities is not enough to get competitive advantage. Accordingly, this work will try to answer how supply chain management practices are significant for obtaining dynamic capabilities while taking network based competition into consideration. Moreover, this literature review will also explain the role of dynamic capabilities in supply chain designs and supply chain practices.

The second development of this work is to amalgamate supply chain management with alliance research, network theory and relational view with respect to strategic management. Since the basic purpose of supply chain practices is to interact between independent yet interdependent network of firms and interactions of employees working in it, this is why network theory and relational view can add food for thought in academic literature. Since supply chain management field is in developing phase in accordance to network theory and relational view so adding these concepts in this field will help researchers' and practitioners' understanding about designing and implementing effective supply chain practices. To enhance performance, organizations used Triple A of supply chain (Lee, 2004; Ishaq et al., 2011) – alignment (synergistic interest), adaptability (managing few chains within available resources) and agility (ability to be responsive and proactive) – in order to give competitive priorities and flexibility. The third development of this literature review is built on knowledge-based view and resource based view which represents supply chain as catalyst of effective boundary decision making and strategic entrepreneurship.

PRESENTATION OF STUDIES

Rajaguru and Matanda (2013) published their research in Industrial Marketing Management on the title "Effects of inter-organizational compatibility on supply chain capabilities: Exploring the mediating role of inter-organizational information systems (IOIS) integration". The basic purpose of this research study was to investigate the impact of inter-organizational computability and supply chain capabilities and also examining the mediating role of inter-organizational informational system (IOIS) in above said relationship. To support their basic research question, the authors used interdisciplinary theories like network theory and claimed that there is setback of these theories because of inability to explain the role of information systems integration with supply chain. So authors developed their arguments with the combination of dynamic capability theory, resource based theory and congruence theory to understand the conceptual relationships of supply chain capabilities, IOIS and inter-organizational compatibility. From the conceptual framework, authors devised ten hypotheses and incorporate firm size as control variable.

The sample of this study was generated through Yellow Pages and Australian Centre for Retail Studies in hardware, liquor and supermarket retailing sectors. After sending questionnaire to 2000 randomly selected organizations, only 196 respondents returned the questionnaire with 15% response rate. Non-response bias, common method bias, multicollinearity, confirmatory factor analyses and structural equation modeling was used to test the hypotheses. The statistical analyses showed that firm size, cultural compatibility, strategic compatibility and technical compatibility had positive and significant impact on IOIS integration while IOIS integration also put positive influence on supply chain capabilities. Moreover, firm size and cultural compatibility were linked positively with supply chain capabilities while strategic compatibility and technical compatibility did not have significant impact on dependent variable. With respect to mediating mechanism, IOIS integration fully mediate the relationship of supply chain capabilities – technical compatibility, supply chain capabilities – strategic compatibility and partially mediate the relationship of supply chain capabilities and cultural compatibility.

With my point of reference, this study has some significant contributions for practicing managers, working in business-to-business organization, to develop supply chain capabilities with the help of IOIS integration. Managers should take into cultural, strategic and technical inter-organizational compatibility with IOIS integration to gain competitive advantage. Another implication for managers is to perilously analyze the suppliers on the basis of congruency and compatibility of attitudes, goals and values ahead of IOIS implementation. Third, organization should also take partnering organizations into consideration while integrating IOIS with supply chain strategies. In addition to it, this study also has several limitations that should take into consideration while taking future research on the same domain. This research is cross-sectional in nature which gives information at one time of reference so conduction longitudinal research would be more feasible to understand the time lags, investments on IOIS implementations and benefits realized after it. Another crucial limitation is the generalization of results into other industries as this study was conducted on retailer industry only. Moreover, I found one drawback of this study as well. The authors took firm size as control variable but taking industry type as control variable would have different results. The reason for this is that researchers collected the data from three different retailing industries i.e., liquor, supermarkets and hardware with different market share, point of sale, supply chain, target market etc.

Fraj, Martinez and Matute (2013) conducted research on “Green Marketing in B2B Organizations: An Empirical Analysis from the Natural Resource Based View of the Firm” published in Journal of Business and Industrial Marketing. The basic purpose of this research was to understand the influential role of green marketing strategies in B2B organizational performance in accordance to natural resource based view (NRBV). This study was conducted on under-researched topic i.e. natural resource based view and test theoretical underpinnings empirically and proposed noteworthy implications of green marketing strategies with its competitive consequences. Indubitably, greening environment took paramount importance from practitioners and researchers perspectives and most salient journals published special issues on greening/environmental issues. Despite the availability of academic literature that developed the linkage between proactive strategies and performance (Menguc and Ozanne, 2005; Christmann, 2000, 2004) with different variables (Lopez et al., 2009) proposed fragmented results but many questions are still ambiguous, tricky, unclear and unanswered. Consequently, practitioners are academicians are still looking for non-unanimous answers of normative questions like: do green strategies beneficial for organization (Delmas et al., 2011; Hillman and Keim, 2001)? To understand the role of green marketing practices in supply chain, its consequences, organizational capabilities and resources required in implementing these strategies in industrial firms, researchers used natural resource based view (NRBV) proposed by Hart (1995).

To answer their research questions, data was collected from 2098 industrial firms from European country. The organization selection was did on the basis of minimum 150 employees, size of the firm, role in country’s economy and environmental practices implementing. Most relevant industries within the population were automobiles, furniture, electronics, metallurgy, machinery, chemical, non-mineral, wood and paper, textiles and food. As explained previously, this study tried to test the green marketing strategies on performance and to what extent environmental culture, practices and intrinsic organizational resources supports green marketing strategies to enhance organizational performance. The results indicated that green marketing strategies had two unique dimensions in B2B context: market oriented activities and process oriented activities. Researchers defined market oriented activities as "undertaken with the purpose of projecting externally a greater environmental commitment" whereas process oriented activated referred as "environmental actions, including transformations of products and internal processes, that are aimed at reducing environmental impact". For second research questions, the results showed that companies with strong environmental culture always showed more enthusiasm in developing green marketing / environmental friendly marketing strategies. Based on the article, there are some recommendations for future researchers. In order to measure environmental practices along with their consequences, subjective measures were used which may reflect social desirability bias in results. Being a cross-sectional study in nature, researchers did not evaluate the dynamics in environmental decisions.

Allred, Fawcett, Wallin and Magnan (2011) published their article in Decision Science Journal with the title of "A Dynamic Collaboration Capability as a Source of Competitive Advantage". The authors supported the notion of resource based view of the firm that referred as how an organization develop non-substitutable, rare, inimitable and value capabilities in its supply chain to get superior performance and inimitable advantage. But they also argued that it required high level of coordination activities among all players which are, unfortunately, missing in many organizations. So inter-organizational conflicts and manifest cross functional teams obstruct the collaboration advantages. Despite having considerable researches in resource based view (RBV), there is still some dearth in the process that allows the organizations to invest supply chain and firm resources to attain distinctive capabilities (Barreto, 2010). More specifically, RBV has two extensions that explain the process of competitive differentiation. Firstly, researchers (Barney, 1992; Wernerfelt, 1984; Teece et al., 1997) focused on the resource heterogeneity aspect of RBV which emphasized on the resource configurations for distinctive performance. Second perspective explained by Dyer and Singh (1998) as "some of the resources needed to achieve distinctive advantage are often embedded in inter-firm resources and routines". That's why researchers (Ketchen et al., 2007; Fawcett et al., 2007) declared supply chain relationships as potential source of differentiations and vital complementary resources of competitive advantage. But coordinating actions among inter-organizational and functional boundaries is somewhat arduous (Ellinger et al., 2006).

While giving background for hypotheses, the authors summarized the research question as "how decision makers use collaboration to enable their firms to combine and configure resources across organizational boundaries". To analyze their questions, the use multi-method technique of data collection – combination of survey and interviews – in two cross-sectional sets in two time periods based on 6 years. Several theories explicitly or implicitly discussed the impact, development and importance of collaboration in supply chains as dynamic capability. To understand the distinctiveness of collaboration advantage, researchers discussed three streams that derived from the literature: (1) inter-functional and supply chain collaboration, (2) conflict and organizational orientations, and (3) RBV of an organization. The total usable surveyes were 980 with 15.21% response rate. After the surveys, interviews were conducted in two different periods across four channel positions – service providers, direct material suppliers, finished goods assemblers and retailers. 51 interviews for period 1 and 58 interviews for period 2 were conducted from fifteen 15 organizations. After checked multicollineraity and non response bias, confirmatory factor analysis and structure equating modeling was used to test the hypotheses. The results concluded that "…relationship between a firm's customer orientation and its ability to create value as measured by satisfaction and productivity". The researchers also found positive impact of firm's supplier orientation on firm performance for both time laps.

While collecting the data through surveys and interviewing the respondents help the research to understand the in-depth analysis of supply chain collaboration which is not possible if researchers were conducted survey research, case study and single period data collection. Despite this powerful argument, this study still has some limitations. First of all the applicability of measuring instruments of dynamic capabilities and market orientation because the concepts were new and these measures are yet to be accepted on widely basis. In spite of limitation in case study research design, a small-scale case study that follows the same companies over time could provide additional details regarding the dynamics of developing a collaboration capability. This study was only used two aspects of market orientation, supplier and customer, so future researchers should also take governmental agencies, competitors and channel members into consideration.

CONCLUDING REMARKS AND RECOMMENDATIONS

In summary, this study found immediate and substantial market value implications for firms being publicly ranked for supply chain competence. Consequently, winning such recognition is strategic, not cosmetic in nature. The immediate and asymmetric benefit this award creates is good news for firms embracing integrative and collaborative supply chain management. However, it may be frustrating news for firms that find integrative and collaborative practices do not work well in the strategic context in which they operate. Strategic supply chain management research has yet to adequately address whether alternative configurations of strategic supply chain management practices can provide a better explanation of supply chain management contribution to firm performance under different competitive conditions. This study has hopefully encouraged reflection on and further research into: (1) the pressures firms face to adopt integrative and collaborative supply chain management, (2) the alternatives available to integrative and collaborative supply chain management, and (3) what supply chain management competence means. Oliver Williamson's (2008) challenged supply chain researchers to answer "What is the methodology for SCM?" and "What is the main case for SCM?" As this study shows, the answers to these questions hold market valuation consequences for firms.

This study sought to make two main contributions. First, this study aimed to add to the literature explaining firm performance. This study consequently adds to a body of evidence suggesting investors are considering factors related to supply chain management in their valuation of firms. Not only are investors considering news about supply chain disasters (e.g. Hendricks & Singhal, 2003; 2009), excess inventory (Hendricks & Singhal, 2008), supply chain management information systems (Filbeck et al., 2005) in their valuations, they also appear to consider rankings of overall supply chain management competence. The study also complements Ellinger and colleagues' research showing firms ranked in the Gartner Supply Chain Top 25 outperform competitors in financial performance (2011; 2012) and customer satisfaction (2012). Ellinger and colleagues examined compared ranked and non-ranked firms (a relation).

Second, this study aimed to draw attention to asymmetric benefits that some firms may be receiving because they operate in industries where integrative and collaborative supply chain management practices may be most effective. To do so, this study discussed the supported market valuation effects in light of: (1) the influence and potential limitations of the integrative and collaborative approach to supply chain management, and (2) the gap in our understanding of how supply chain management contributes to firm performance under different competitive conditions. In doing so the study adds to a body of literature that supports alternative theory development in strategic supply chain management research (e.g. Burgess et al., 2006; Carter, 2011; Fabbe-Costes & Jahre, 2008).

The empirical portion of this study shows the market valuation benefit afforded to firms recognized for supply chain management competence is large and may create some potential liability for firms that later lose this recognition. In addition, the above discussion on the current limitations in supply chain research suggests the integrative and collaborative supply chain management approach that heavily influences current perception of supply chain competence may have bounds to its application. Thus, while this study shows firms ranked for supply chain management competence receive market valuation benefits, firms should consider the environmental context in which they are operating and their strategic priorities before concluding they will receive benefits from adopting, and then promoting their adoption, of the integrative and collaborative approach to supply chain management. Assuming the universal applicability of integrative and collaborative SCM may actually be “putting the cart before the horse”.

This research may encourage some firms to strategically pursue recognition for supply chain management competence. It may also encourage firms that are already ranked for supply chain competence to maintain their standing on the ranking due to potential liability they may incur if dropped. In both situations it may be wise for firms to understand and monitor the methodology of existing rankings for supply chain competence. What are the evaluation criteria? How does my firm compare against these criteria? What are my firm’s supply chain management strengths and which areas require improvement? Firms motivated to invest in integrative and collaborative supply chain management have resources at their disposal to better understand what investors and ranking organizations may expect to see as evidence of supply chain management competence. Comprehensive explanations of the underlying processes and strategic logic behind various models of integrative and collaborative supply chain management are available in research (e.g., Min et al., 2005; Min et al., 2007) as is training from not-for-profit professional associations such as the Council for Supply Chain Management Professionals (www.cscmp.org) and the Supply Chain Council (www.supply-chain.org). It may also be wise, given the potential benefits of being recognized for supply chain competence, for firms to promote their supply chain management activities and strengths.

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Measuring the Performance of University Technology Transfer through the estimation of Invention Disclosure Life: Focus on Urban Marginal Area

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Abstract

With the growing competition in a globalized world, universities are seen as the key organizations and supporters in the national innovation system (Audretsch et al. 2006). Thus, national and regional policy makers try to set incentives for innovations and to increase the innovative potential of universities and to use it effectively. A large and diverse literature analyzes the importance of universities within the regional and national innovation system (Mowery and Sampat 2005; Cosh and Hughes 2010; Audretsch et al. 2011), often highlighting the necessity of separate and specialized organizational units to manage industry–university collaborations (Link et al. 2008; Fritsch and Lukas 2001). Within this process, TTO are seen as the institutionalized way to transport and canalize the ideas, inventions and innovations of academic researchers into the (regional) industry and society (van Ledebur 2008; Meoli et al. 2011; Gonzàles-Pernia et al. 2011). Thus, given the importance attached to TTO within this process, policy makers and university management should be interested in the performance differences of TTO.During its activity, after a certain period, we can define as the "performance life", continuing to try to transfer to the industry the same technologies leads to heavy financial loss to the TTO, because innovations and their commercialization, based on networking effects between the academic researchers and the industry, with TTO as the hub of the university–industry, determine market saturation.In this article, we deal with estimation of "performance life" for the invention disclosures by TTO and determination of replacement plan. This "performance life" has been modeled using a piecewise linear-quadratic TTFR function. A computational procedure is proposed for estimation of performance life. Hülsbeck et al., (2011) used the number of invention disclosures as a performance measure, to analyze how variance in performance can be explained by different organizational structures and variables of TTO. In this paper we refer to the same performance measure to be monitored.The approach of the present study declines the exposed issue to the specific case of marginal urban area. Results of an empirical analysis are proposed. It regards to a real case, based on the analysis of the impacts of the recent settlement of a research center, the center Cesma of the University of Naples Federico II, in marginal east area of the city of Naples, in which the local administration has decided to implement requalification actions. Finally, a technology transfer replacement plan for TTO is derived. This proposed model and solution may be appealing to geographers, managers and technology transfer agents since the graphs and tables proposed could be reproduced in a number of standard optimization software.

INTRODUCTION

A TTO is expected to perform its intended function for a certain number of technology transfer instances (TTI) referred to a certain specific invention disclosure, we say ID*. The performance life of a TTO is designated by the number of such TTI it has performed with regard to this particular ID*.

To transfer to the industry the same invention disclosure leads to heavy financial loss to the TTO, because innovations and their commercialization, based on networking effects between the academic researchers and the industry, with TTO as the hub of the university–industry, determine market saturation.

On the other hand, an early replacement of an invention disclosure leads to its under-utilization (and hence additional technology transfer cost). In the absence of proper knowledge on the performance life of each invention disclosure, the operators carry out audit (in between TTIs) in order to arrive at the decision for its replacement. A suitable replacement plan will thus help in reducing technology audit cost through lesser audit, a plausible approach to the development of a replacement plan is based on the estimate of the wearout point of the corresponding TTFR rate function. Wear-out point of the TTFR rate function is defined as a change-point. Generally, a change-point refers to the time point when TTFR rate pattern changes abruptly. The literature on estimation of changepoint is quite rich. For reference, see Gombay (2000), Loader (1991), Nguyen et al. (1984), and Rukhin (1997). Motivation for this problem can be found in various applications. For instance, Mathews and Farewell (1982) studied the effectiveness of a new therapy in terms of reduction in relapse rate. Basu et al. (1988) (hereafter referred to as BGJ) deal with change-point estimation in the context of optimal burn-in strategy in reliability engineering. Gürler and Yenigün (2002) proposed a method for detection of AIDS (acquired immune deficiency syndrome) in HIV-infected patients. A large majority of these articles consider piecewise linear TTFR rate function (with or without a jump at the change-point). The solution procedures are developed using likelihood method or bayesian approach. A common feature of these articles is the assumption that TTFR rate is well known. On the contrary, a practical problem generally calls for modeling and estimation of TTFR rate. This article is organized as follows. We refer to the approach proposed, in other field, by D.K. Manna (Manna 2004). We discuss the basic data on performance life and study the pattern of empirical TTFR rate function. Lifetime is modeled using a piecewise linear-quadratic TTFR function. We propose a computational procedure for the estimation of associated parameters and for derivation of replacement plan of a certain invention disclosure (ID*). We also discuss the results of maximum likelihood method and the procedure of BGJ and contrast them with that of the proposed method.

TECHNOLOGY TRANSFER PERFORMANCE METRICS

The performance of university TTOs has been studied by many investigators, and a wide range of metrics has been selected to assess their performance (Tseng and Raudensky, 2015).

The rapid increase in university technology transfer has attracted attention in the academic literature (Rothaermel et al. 2007; Carlsson and Fridh 2002; Jensen and Thursby 2002; Di Gregorio and Shane 2003; Baldini 2006; Anderson et al. 2007; Thursby and Thrusby 2007). This emerging literature is interdisciplinary, with contributions from scholars in many disciplines, such as economics, sociology, political science, public administration, engineering, and in several fields within management, such as strategy, entrepreneurship, human resource management, and technology and innovation management. There is also some international evidence for this phenomenon. Due to the complexity of the issues raised by the rise of technology transfer at universities, many authors have employed qualitative methods (De Falco 2012, 2014) to address key research questions (Vinig and Lips 2015).

Many studies have shown that a great deal of TTOs operate inefficiently. Some studies have been conducted to understand the underlying deficiencies. When we try to assess the ratio of each output, then we start to question the effectiveness of university technology transfer. A simple calculation of ratios of research expenditures per invention disclosure and licensing income dollars may at first glance lead a sceptic to question the effectiveness of university technology transfer. Heher (2006) provides a forecast of the income through university innovations. His finding of expected exponential increase also justifies exploration of the field. This issue of efficiency has been explored by using different methods. University research and its transfer to industry has been a topic of interest in the management of technology literature over decades (Anderson et Al. 2007).

We can see the literature grouped under the following titles: Organizational structures. Regional or international comparisons/case studies. Impacts of university research. Tangible outputs of university research (patents, licenses, spin-offs). Efficiency of university research transfer. Several researchers focused on the organizational issues. Siegel et al. (2003) explored such organizational structures of the TTOs linking them to their productivity suggesting that the most critical organizational factors for productivity TTOs in research universities are faculty reward systems, TTO staffing/compensation practices, and cultural barriers between universities firms. Rasmussen et al. (2006) explored initiatives provided by the universities to promote commercialization of university knowledge and identified coordination a challenge. McAdam et al. (2005) provide such a coordination model for university innovation centers. They analyze licensing and business building processes. Chapple et al. (2005) indicated that there is a need to increase business skills and management capabilities to TTOs. Thursby and Kemp (2002) also explored efficiency of university technology transfer by looking at the organizational issues. Siegel and colleagues studied similar issues (Siegel et al., 2003, 2004) also studied similar issues. Their focus has been the impact of organizational characteristics and the implications for education. They make recommendations based on the barriers identified in the UTT efficiency and effectiveness processes such as culture clashes, bureaucratic inflexibility, poorly designed reward systems, and ineffective management of TTOs. Lowe (2006) proposes a theoretical model to illustrate how the inventor know-how affects whether the inventor starts a firm to develop her idea or licenses an invention to an established firm for development. This model is then used to analyze the role and impact of a university TTO on this process to understand how TTOs may both positively and negatively impact the transaction. Leitch and Harrison (2005) explored the dynamics of the spin-off phenomenon with a focus on the TTO and they propose a wider role for such offices to be more efficient. Lopez (1998) explored different ways universities can get organized to improve the research efficiency. This group of literature supports our hypothesis that there are efficiency issues while transferring technology out of the university environment. We also see studies comparing different approaches or regions Goldfarb and Henrekson (2003) and Feldman et al. (2002) studied different policies for transferring university technology. Di Gregorio and Shane (2003) explored differences among universities in commercialization of technologies. Colyvas et al. (2002) studied case studies of commercialization of university inventions. Lee and Win (2004) explored three university research centers in Singapore concluding that coordination among university center, industry and government is one of the key success factors. Owen-Smith et al. (2002) compared US and European practices in terms of university industry relations. Other studies focused on individual cases to explore similar issues. Zucker et al. (2002) looked at the efficiency of university technology transfer through a biotechnology case study. Lopez-Martinez et al. (1994) found out that in developing countries specifically in

Mexico both academia and industry have implicit cultural dissimilarities which directly affect current or potential cooperative liaisons. The industry–academic interdepencies in Germany have been well studied (Meyer-Krahmer and Schmoch, 1998; Beise and Stahl, 1999). Their research findings indicate that there are certain requirements to be met by both parties to have successful long term collaborations. Boyle (1986) focused on the technology transfer between universities and the UK offshore industry; Corsten (1987) reviewed industry–university collaborations in 225 enterprises; and Goldhor and Lund (1983) provided a detailed analysis of transfer of a text to speech reading machine from MIT into industry. This group of literature verifies the efficiency issue further by adding another dimension of variance. We see that organizational, cultural and regional differences can make a difference. Some other studies focused on the impact of university research. Feller et al. (2002) and Cohen et al. (2002) specifically explored the impact of university research on industrial innovation. Shane and Stuart (2002) studied the resulting start ups through university research. Siegel et al. (2003) concluded that science university parks do not have significant impact on research productivity. Bennet et al. (1998) focused on university–industry collaboration for technology transfer in poorer regions of the United Kingdom. Such collaborations are reported to be successful and help local economies. Studies that focused on exploring the efficiency through studying their tangible output are found frequently in relevant literature. Trune and Goslin (1998) studied performance of the TTOs from a profit/loss analysis perspective. Their results indicate that such centers are profitable and are acting as significant economic drivers. Berman (1990) also provided evidence on the economic impact of industry funded university R&D. Several studies (Agrawal and Henderson, 2002; Mowery et al., 2002; Shane, 2002) have specifically explored patenting within the universities. Geuna and Nesta (2006) fear that the increase in university patenting exacerbates the differences across universities in terms of financial resources and research outcome. Also, because of international property regulations (IPRs) there is a tendency for universities and academics to limit disclosure of materials and information, therefore helping to foster growing commercialism and competition among universities and dampen open science and knowledge transfer (Sampat, 2006). Mazzoleni (2006) presents a model of R&D competition based on a university invention where appropriability conditions are defined by the patentability of downstream innovations and imitation opportunities. He concludes that university licensing royalties are therefore a poor gauge of social welfare gains from university patenting.

DATA COLLECTION AND PRELIMINARY ANALYSIS: FOCUS ON EAST AREA OF NAPLES

It is customary to maintain a life-history data base for every invention disclosure. This contains information on its life (i.e., the cumulative number of completed TTIs, where for completed we refer to those TTIs who have generated a contact link of interest with the potential users), in addition to other particulars such as dates of different technology transfer phases in which it's involved.

The Research Centre Cesma of the University of Naples Federico II, on which in based the proposed analysis, rises from 2012 in the ex former Cirio in San Giovanni in Teduccio, district of the east area of Naples (figure 1), that is a marginal no-tax area in which local government decided to invest to regenerate it through industries and research centres. An area of 200,000 quare meters that hosts classrooms, laboratories, libraries, departmental studies and conference center, with the aim to revaluate spaces, in a logic of urban regeneration of the coastal strip of Naples and suburbs.

CESMA is the Center for Advanced Metrological Services of the University Federico II, in which pre-existing laboratories network with new laboratories to perform measurement activities in several different fields of Engineering, Physics, Chemistry and Biology. The Centre CESMA come as node connection between the University Federico II and the industries and enterprises of the east urban area of Naples.

Figure 1 East Urban Area of Naples.

A certain invention disclosure ID* of TTO, was proposed to many different potential users located in the east area of Naples during 24 months and 257 of these failed because they didn't arouse interest. We consider as failure a condition in which the technology transfer instance relative to a certain ID* proposal doesn't generate a contact link of interest with the potential users.

The sample selected for this analysis is constituted by 145 SMEs of the east area of Naples and is evaluated, during the years 2013 and 2014 after the start-up of the research centre Cesma,.

Data collected have been stratified into categories of table 1.

SMEs' sector	*Number*
ICT	30
Consulting	20
Logistic & Transportation	55
Tourism	40
Total	**145**

Table 1: SMEs Sectors of urban east area of Naples

So, the basic data on observed performance life correspond to 257 technology transfer instances (TTI), related to the same ID*. Therefore, these constitute a random sample without censoring. Among these failures, 251 TTIs could be corresponded to the market saturation and the remaining six failures are due to errors in the choice of users not suitable for the proposed technology of the invention disclosure ID*.

Let ti be the life (in TTIs) of IDi. That is, we have the observations ti, i=1, 257. The first step in life data analysis is to estimate the technology transfer failure rate (TTFR) that leads us to guess fairly well about the underlying distribution of life. Lawless (1982), Meeker and Escobar (1998), Nelson (1982). The TTFR for TTI is estimated as in the following:

TTFR during an interval = (number of failures during the interval) / (average number of invention disclosures exposed to the risk of failure at the midpoint of the interval) x (length of the interval) (Srinath, 1975).

The calculations are shown in table 2 and is plotted in Fig. 2.

Class interval of TTIs	Number of failures	Number of completed TTIs	TTFR
0–10	7	250	0.00276
10–20	7	243	0.00284
20–30	9	234	0.00377
30–40	4	230	0.00172
40–50	5	225	0.00220
50–60	4	221	0.00179
60–70	7	214	0.00322
70–80	4	210	0.00189
80–90	4	206	0.00192
90–100	6	200	0.00296
100–110	4	196	0.00202
110–120	15	181	0.00796
120–130	31	150	0.01873
130–140	60	90	0.05000
140–150	73	17	0.13645
150-160	16	1	0.17778
160-170	1	0	0.20000

Table 2 Estimation of TTFR

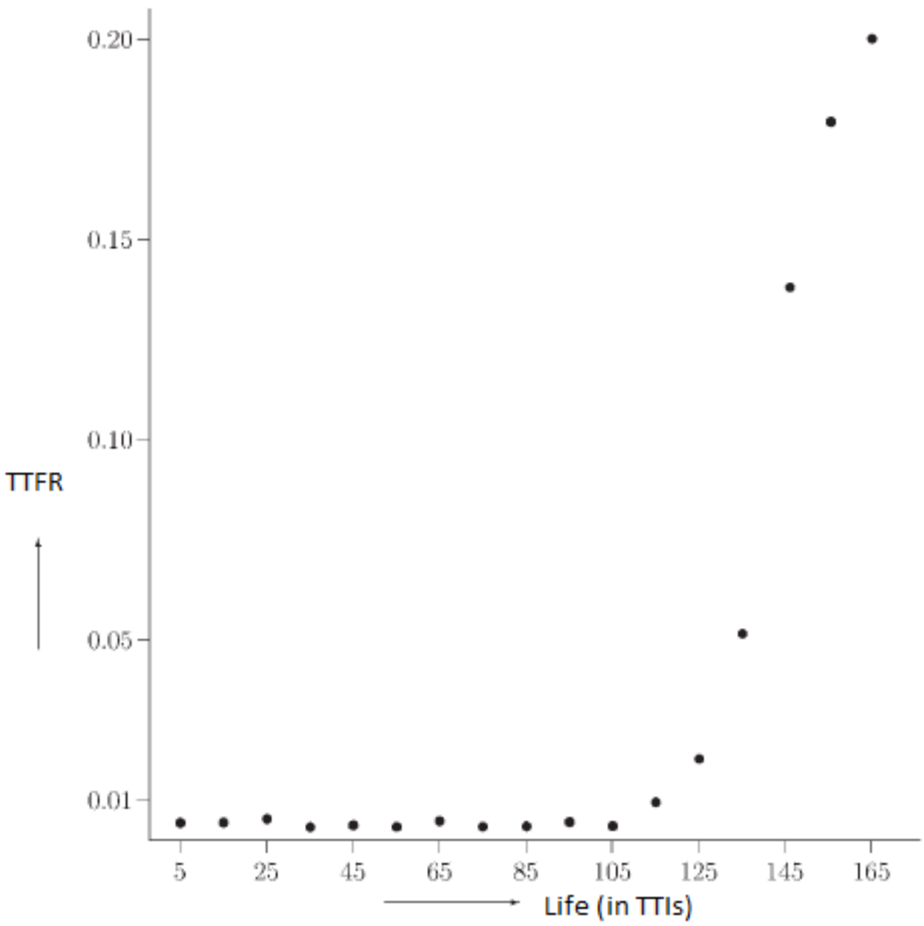

Fig. 2 Technology Transfer Failure Rate plot. Source: Manna (2004)

We observe that the values of six ti's corresponding to the non-market saturation condition failure modes are spread over the entire range of remaining ti's, and TTFR function remains almost unaltered even when they are dropped. It is evident that (empirical) TTFR is more or less constant up to a certain time point and then increases very rapidly. This time point is referred to as wear-out point or change-point. On comparison of figure 2 with a typical bath tub curve that generally describes failure rate over the whole life-span, we conclude that just when the TTO propose a new invention disclosure, the interest of potential users is very great and so early failure condition is absent, while the period indicating constant failure rate is useful life, and the last phase describes wear-out period starting from the change-point (or wear-out point).

ESTIMATION OF INVENTION DISCLOSURE LIFE

In this section, we try to identify a suitable distribution that describes the performance life of an invention disclosure. We refer to the TTFR plot of the last section and the conclusions drawn therein. It may be observed that standard probability distributions, like Weibull distribution, log-normal distribution, or extreme-value distribution are not well suited to describe this life pattern. Therefore, we look for a function that closely resembles the observed TTFR function. We consider a piecewise linear-quadratic TTFR function h(t) given by Eq. (1), where t denotes the life and λ is the constant failure rate up to the change-point τ. We consider λ constant but different according to the different field, if science and engineering or medicine, from which the TTO find the invention disclosure.

Beyond τ, h(t) is quadratic in form:

$$h(t) = \begin{cases} \lambda & \text{if } t < \tau \\ \lambda + \beta_1(t-\tau) + \beta_2(t-\tau)^2 & \text{if } t \geq \tau \end{cases}$$

Hence, it is expected to represent our data well. However, we note that unless both β_1 and $\beta_2$arepositive, the corresponding distribution function need not be non decreasing. In fact, it is found that the least-square estimates are $\widehat{\beta 1} < 0$ and $\widehat{\beta 2} < 0$.(The estimation procedure is discussed later). Althoughthe function given by Eq. (1) represents our empirical TTFR rate extremely well, the corresponding distribution function of life is not well defined due to the signs of $\widehat{\beta 1}$ and $\widehat{\beta 2}$. Therefore, we resort to thefollowing modified form of TTFR rate function:

$$h(t) = \begin{cases} \lambda & \text{if } t < \tau \\ \lambda + \beta(t-\tau)^2 & \text{if } t \geq \tau. \end{cases}$$

The corresponding density function f (t) and distribution function F(t) are obtained by using the following relationship (Kapur and Lamberson, 1977):

$$f(t) = h(t)\exp\left[-\int_0^t h(x)\,dx\right] \qquad (3)$$

And

$$1 - F(t) = \frac{f(t)}{h(t)}. \tag{4}$$

The explicit form of f (t) and F (t) are

$$f(t) = \begin{cases} \lambda \exp(-\lambda t) & \text{if } t < \tau \\ [\lambda + \beta(t-\tau)^2] & \\ \quad \exp[-\{\lambda t + \beta(t-\tau)^3/3\}] & \text{if } t \geq \tau, \end{cases} \tag{5}$$

$$F(t) = \begin{cases} 1 - \exp(-\lambda t) & \text{if } t < \tau \\ 1 - \exp[-\{\lambda t + \beta(t-\tau)^3/3\}] & \text{if } t \geq \tau. \end{cases} \tag{6}$$

The graphical forms of f (t) and F(t) are shown in Appendix B, along with the moments of the distribution.

In order to estimate the parameters involved, we fit the TTFR rate function given by Eq. (2) to our data by method of least squares. Note that besides the usual parametersλ and β, the change-point $\tau$is also required to be estimated.

In this context, we propose the following procedure.

1. Suppose τ_0 be a trial value of τ. Divide the set of all 257 TTIs into two groups, namely, G_1={TTI i: $t_i<\tau_0$}, G_2={TTI i: $t_i \geq \tau_0$}.
2. Obtain LSE (least-square estimate) of λ, say $\hat{\lambda}$ from G_1, and let ESS(G_1) be the corresponding error sum of squares. Use this estimate of λ in G_2 and obtain $\hat{\beta}$, the LSEof β. Let ESS(G_2) be the error sum of squares in G_2.
3. Denote the estimate of τ by $\hat{\tau}$. Select $\hat{\tau}=\tau_0$when the sum ESS(G_1)+ESS(G_2) is minimum for $\tau=\tau_0$. Further, the corresponding $\hat{\lambda}$ and $\hat{\beta}$ are taken as the estimates of λ and β respectively.

This yields the estimates as

$\hat{\tau}$= 112 TTIs;

$\hat{\lambda}$=0:002522; and

$\hat{\beta}$=0:000127.

Class interval of TTIs	Observed frequency	Expected frequency	Estimated χ^2
0–10	7	6.400	0.056
10–20	7	6.241	0.092
20–30	9	6.086	1.396
30–40	4	5.934	0.630
40–50	5	5.786	0.107
50–60	4	5.642	0.478
60–70	7	5.502	0.408
70–80	4	5.365	0.347
80–90	4	5.231	0.290
90–100	6	5.101	0.159
100–110	4	4.974	0.191
110–120	15	8.921	4.142
120–130	31	41.165	2.510
130–140	60	73.366	2.435
140–150	73	54.035	6.656
Above 150	17	17.251	0.004
Total	257	257.000	19.900

At 5% level of significance, tabulated value of χ^2_{12} =21:026:

Table 3 Test for goodness of fit for TTIs

Depending upon the values of λandβ both f (t)as well as F(t) take different forms. They are displayed in figures. 3 and 4, respectively. Given λ, a larger value of β increases the peak of f(t). Whereas, the value of λ (for fixed β) decides its shape. The value of τmainly gives the time-point after which f(t) starts increasing (see cases b and c of figure 3).

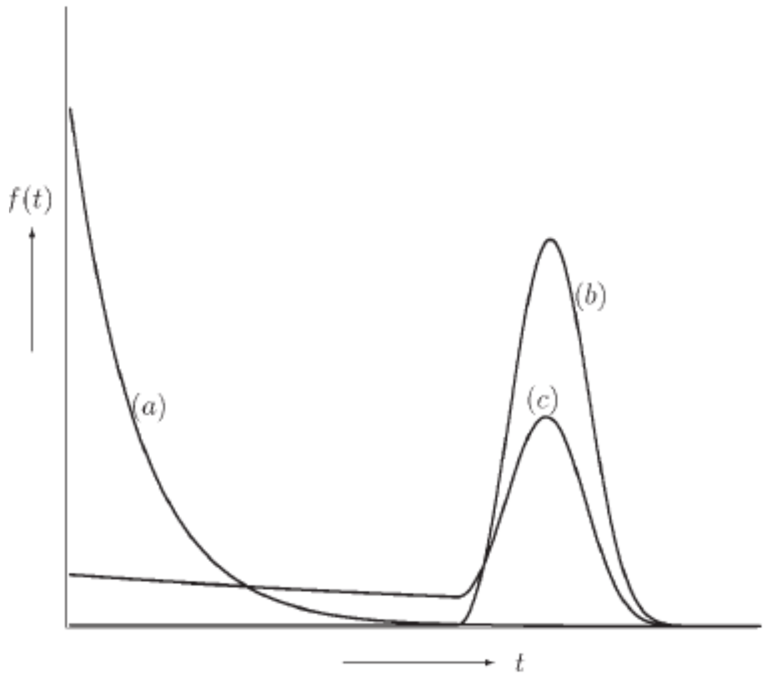

Fig. 3 Graphs of f (t) for τ=112 and (a)λ=0.05, β=0.0001 (i.e.,λ>>β), (b) λ=0.0001, β=0.0001 (i.e., λ very small),(c) λ=0.005, β=0.0001. *Source*: Manna (2004)

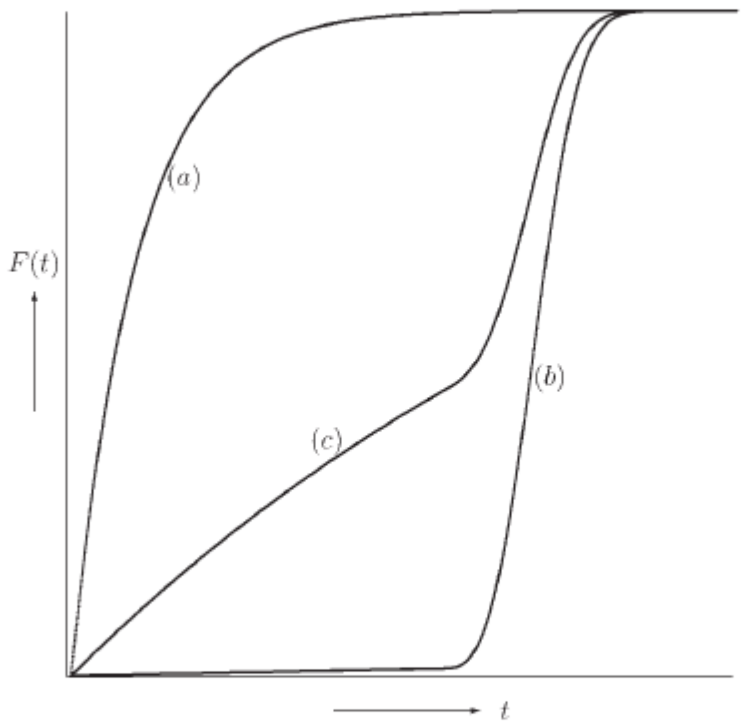

Fig. 4 Graphs of F (t) for τ=112 and (a)λ=0.05, β=0.0001 (i.e.,λ>>β), (b) λ=0.0001, β=0.0001 (i.e., λ very small),(c) λ=0.005, β=0.0001. *Source*: Manna (2004)

The mean μ of life can be computed as follows:
μ =

And, it may be observed thatμ> $(1-e^{-\lambda\tau})/\lambda$
Generally, the *r*th raw moment of life is given by μ'_r, where:

$$\mu'_r = \begin{cases} \frac{r!}{\lambda^r} - \tau^r e^{-\lambda\tau} \sum_{k=1}^{r} \frac{1}{(\lambda\tau)^k} \frac{r!}{(r-k)!} \\ \quad + re^{-\lambda\tau} \sum_{k=0}^{r-1} \binom{r-1}{k} \frac{\tau^{r-k-1}}{\sqrt[3]{3^{2-k}\beta^{k+1}}} \\ \quad \times \sum_{j=0}^{\infty} \left(-\lambda\sqrt[3]{\frac{3}{\beta}}\right)^j \frac{\Gamma((k+j+1)/3)}{j!} & \text{if } \lambda\sqrt[3]{\frac{3}{\beta}} \le 1 \\ \frac{r!}{\lambda^r} - \tau^r e^{-\lambda\tau} \sum_{k=1}^{r} \frac{1}{(\lambda\tau)^k} \frac{r!}{(r-k)!} \\ \quad + re^{-\lambda\tau} \sum_{k=0}^{r-1} \binom{r-1}{k} \frac{\tau^{r-k-1}}{\lambda^{k+1}} \\ \quad \times \sum_{j=0}^{\infty} \left(-\frac{\beta}{3\lambda^3}\right)^j \frac{(3j+k)!}{j!} & \text{if } \lambda\sqrt[3]{\frac{3}{\beta}} > 1. \end{cases}$$

The mean μand standard deviation σof life are then estimated as $\hat{\mu}$ =116.20 TTIs and $\hat{\sigma}$ = 40.20 TTIs.

The corresponding observed values in the sample are 116.94 TTIs and 41.63 TTIs, respectively. Subsequently, the adequacy of f (t), given in Eq. (5), is evaluated with a χ^2- test (see table 3).We conclude that f (t) describes the data quite satisfactorily. The graph for the associated technology transfer reliability function TT-R(t) is given in figure 5.

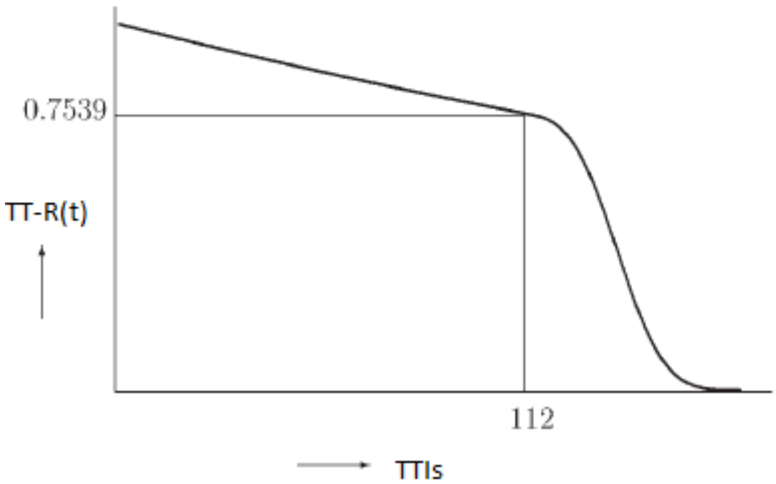

Fig. 5 Technology transfer reliability function TT-R(t). *Source*: Manna (2004)

REPLACEMENT POLICY OF INVENTION DISCLOSURE

It is evident that a safe replacement policy is to withdraw the ID* when it has reached the wearout point τ. However, the true value of τ is unknown; we have merely an estimate of it. In such case, wedepend on its confidence interval. This is derived using the *bootstrap methodology* (Efron and Tibshirani, 1993). One thousand bootstrap samples are drawn from our basic data set, and change-point is estimated (following the procedure presented earlier) for each of these samples. The percentiles of $\hat{\tau}$, thus obtained, are presented in table 4.

Probability	0.05	0.10	0.50	0.90	0..95
Value of $\hat{\tau}$	94	101	113	123	125

Table 4 Percentiles of $\hat{\tau}$

It is to be noted that in order to decide on the replacement time of ID*, we are interested in the lowest possible value ofτ. That is, a lower confidence interval for τ is of interest. A 95% lower confidence interval for τ is given by$\tau \geq 94$ TTIs; that is, a ID* should be replaced when it has completed 94 TTIs.

The method of maximum likelihood can also be applied for estimation of the parameters. It may be observed that the corresponding likelihood function is not differentiable; therefore, we obtain the estimates numerically. As we have mentioned earlier, most researchers deal with piecewise linear TTFR rate functions. However, the procedure of BGJ (Basu et al., 1988) is quite relevant here for the estimation of changepoint, but it does not address the problem of life estimation. Minor trivial modifications are made to this procedure to suit the present problem.

Suppose that is the empirical distribution function of life, and y(t)=-log[1- $\hat{F}(t)$]. Let p_0>0 be very small and p_1 be a good lower bound for F(τ) (<1), where F(t) is the true distribution function of life.

Then, the estimate of λ is given by:

$$\bar{\lambda} = \frac{\sum t_{[i]} y(t_{[i]})/(k+1) - (\sum t_{[i]}/(k+1))(\sum y(t_{[i]})/(k+1))}{\sum t_{[i]}{}^2/(k+1) - (\sum t_{[i]}/(k+1))^2} \quad (7)$$

Where $t_{[i]}$ is the *i*th ordered life, k=[np_1]-[np_0], *n* isthe total number of observations, and all the summations range over i=[np_0]+1 to [np_1].
Then the BGJ estimator for τ is estimated as:

$$\bar{\tau} = \sup\left\{ t : \frac{y(t+\Delta t) - y(t)}{\Delta t} < \bar{\lambda} \right\} \quad (8)$$

Δt>0 and $\bar{\lambda}$ is obtained from Eq. (7).

In order to derive the estimates, we have *n*=257,
$\hat{F}(t_{[i]})$= (i- 0.3)/ (*n*+0.4) (average ranks are used for tie cases), and set p_0=0.004, p_1=0.20, Δt =1.Using Eqs. (7) And (8), we get
$\hat{\lambda}$=002445 per TTI; and
$\hat{\tau}$ = 110 TTIs:

The estimate ofτ by BGJ is obtained as $\bar{\tau}$ =110 TTIs, and the 95%lower confidence interval for τ (estimated through bootstrap method using 1000 bootstrap samples) is given by: τ $\geq$97 TTIs. Hence, we find that there isalmost no discrepancy in TT replacement plan obtained from these two methods.

CONCLUSION AND FUTURE WORK

In this paper we have pointed out the importance, for geographers and TT managers, to use operative tools to control and monitor the performance of TTOs and for this aim we have studied the problem of "performance life" for the invention disclosures by TTO and determination of replacement policy. We have transposed models generally used in other field, (Manna 2004), and we have referred to the TTFR rate as a piecewise linear-quadratic function. We have proposed a procedure for estimation of technology transfer life in this situation and the approach of the present study is declined to the specific case of marginal urban area. Subsequently, the technology transfer replacement plan for an invention disclosure is derived using the confidence interval of the wear-out point of the proposed curve. As in the present case of particular invention disclosure ID*, there can be many situations where life distribution may not be easily visualized as one of the standard probability distributions. Under such circumstances, we rely heavily on the underlying TTFR function. The advantage of the proposed procedure over existing ones is that it makes direct use of the empirical TTFR function in order to identify the distribution of life. This estimation procedure is primarily based on the least square method and is applicable to general piecewise TTFR function. However, utmost care must be taken in estimation of proper distribution function of life while dealing with quadratic TTFR function.

The proposed approach provides information to the TT managers concerning the optimal choice compliance with the promotion's activity of invention disclosures of TTOs, behind as practical implications we can consider that esults of the analysis give two positive corollaries:

first they may promote further studies in this sector because the prospective of impacts of technology transfer in urban marginal areas lends itself well to further studies not yet present, in large numbers, in the scientific literature of the field; second, they may guide both geographers, researchers and managers of local urban institutions to develop more and more geographical connections between citizens and research institutions to promote the entrepreneurial activity related to the smart services in the marginal areas.

About further research

Such authors (Anderson et al. 2007) studied the efficiency of university technology transfer and they reported some propositions, between some of them, the following:

1. Proposition 6. There are no differences in university technology transfer efficiency between private and public institutes.
2. Proposition 7. There are differences in university technology transfer efficiency between universities with medical schools and those without.
3. Further research will provide to evaluate and compare the constant failure rate l to verify the transposition of the previous propositions in term of the following:
4. Proposition 1. There are no differences in constant failure rate l of university technology transfer activities between private and public institutes.
5. Proposition 7. There are differences in constant failure rate l of university technology transfer activities between universities with medical schools and those without.

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Influence of Job Fit, Perceived Support, and Organizational Identification in the Sales Force: An Analysis of Antecedents and Outcomes

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Abstract

Controlling turnover is an important issue for all organizations. But, the situation is especially relevant for professional salespeople where turnover and the costs associated with replacing salespeople are both high. While previous research has examined antecedents related to salesforce turnover, sparse research exists examining how the level of support salespeople perceive they receive from their sales manager and the organization are related to their intention to leave. In addition, the degree to which salespersons identity and fit with the organization's goals and values also have been studied infrequently. The results indicate that perceived support, job fit, and organizational identification are important variables related to salesforce turnover.

Key words: organizational identification, perceived support, job fit, turnover

INTRODUCTION

Potential detrimental consequences associated with employee turnover is an important problem facing managers of many businesses (2; 25). Much research has been conducted analyzing variables influencing turnover (e.g., 26; 28; 36). The meta-analysis by Griffeth, Hom, and Gaertner (26) indicated that several categories of variables are related to turnover. These variables included education, training, cognitive ability, job satisfaction, organizational factors and work environment factors such as compensation, leadership, co-workers, stress, and chances for promotion, and an external factor such as other job opportunities.

Turnover is especially relevant in professional selling where turnover can be twice as high as in other professions (43). The costs of recruiting, interviewing, and hiring new salespeople are between $75,000 and $300,000 per salesperson (16). While the direct costs of salesforce turnover is high, the indirect costs may be even more important (21). These indirect costs include "ramp-up" time for new salespeople to establish and maintain customers and the potential loss of current accounts due to a new salesperson occupying the territory (8).

Given the importance of reducing employee turnover, the number of studies that have examined the antecedents of turnover is not surprising. While the antecedents of turnover have often involved looking at employees' attitudes (job satisfaction and organizational commitment), recently research has examined how perceived support employees receive from the organization and their immediate supervisor influence turnover (10; 14; 37).

According to perceived organizational support theory (POS) (27), employees develop beliefs regarding the extent to which the organization cares about them and appreciates their contributions to achieving the firm's goals. Employees who perceive that the organization supports them and cares about their well-being will feel an obligation to reciprocate the favorable treatment through behavior that the organization values (22). A reciprocal relationship will occur wherein the employee and the organization develop performance-reward expectancies (42).

In addition to perceived organizational support, employees develop perceptions regarding the degree of perceived support they receive from their supervisor (perceived supervisor support - PSS). Similar to POS, PSS is related to important employees' attitudes and job outcomes (23; 34; 37).

This study has three purposes. First, while perceived support has been the focus of many studies, it seldom has been analyzed with regard to salespeople. The research that has investigated perceived support within the salesforce has reported that it is related significantly to salespersons' job satisfaction, organizational commitment, and performance (17; 40; 45). Since many studies have shown that perceived support is related to important job outcomes with non-sales employees, additional research involving salespeople appears to be warranted. Second, most of the research examining the relationship between perceived support and organizational identification has included only POS and not PSS. This study makes an important contribution to salesforce turnover by including both measures of perceived support and organizational identification in a model of turnover intentions. Last, this study examines job fit as a mediator between perceived support and turnover intentions. One recent study (14) indicates that job fit is a mediator between perceived support and turnover intentions. This study will explore this relationship with an expanded model. The proposed relationships are shown in Figure 1. Support for the hypothesized relationships is presented below.

LITERATURE REVIEW

Perceived Support

Eisenberger et al. (21, p. 501) define perceived organizational support (POS) as "the extent to which employees perceive that their contributions are valued by their organization and that the firm cares about their well-being." The basis for POS is social exchange theory (7; 24). Blau (7) states that social exchange involves "voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others" (pp. 91–92). An important part of social exchange theory is the norm of reciprocity (24), which states that when parties receive favorable outcomes in an exchange relationship, they will feel obligated to continue doing favors for the other party. For example, in a business environment when employees perceive that their socioemotional needs are being met, they will feel an obligation to reciprocate this behavior or favor through increased commitment to the organization and performance (42).

When the employee receives support and rewards from the organization for behaving in a particular manner, he/she will be encouraged to continue the behavior in order to receive future rewards. The company, in turn, will feel obligated to reciprocate the employee's behavior through continued rewards (17). Another example of organizational support, providing employees with challenging assignments, as a means of reducing voluntary turnover was studied with the results finding that those employees who were given challenging assignments had reduced turnover intentions (41).

Perceived support can involve both organizational support and supervisory support. According to Rhoades and Eisenberger (42), supervisors act as agents for the organization in directing and subsequently evaluating employees' performance. Hence employees' favorable or unfavorable opinion of their supervisor translates to their perspective of the organization's level of support. According to Rhoades and Eisenberger (42), supervisors are agents of the organization. Employees' image of the organization is based on how they are treated by their supervisor. Therefore, they concluded that perceived supervisor support is an antecedent to perceived organizational support. Subsequent research has found support for this relationship (10; 37).

H1: PSS IS RELATED POSITIVELY TO POS.

Organizational Identification

The concept of organizational identification (OI) derived from the work on social identity theory (49). According to social identity theory, individuals classify themselves into various social groups that have emotional significance and whose members have similar characteristics (48; 50). This classification allows people to identify with a certain group that is distinct from other groups. Membership in the group elevates an individual's self-esteem (50). In order to enhance their self-esteem group members will seek positive ways to distinguish themselves from other groups (49). The degree of emotional significance attached to membership in the group determines the degree to which people identify with the group (4).

Ashforth and Mael (4) defined OI as "the perception of oneness with or belongingness to some human aggregate" (p. 21). It represents the distinct and enduring attributes of an organization that distinguishes it from other organizations (1). OI involves the extent to which people define themselves regarding membership in an organization for which they are employed (5). OI is an influential social consequence, because it signifies a positive psychological bonding between the employee and the organization (4). Employees are more likely to identify with their organization when they perceive the attributes that distinguish the organization and its employees are similar and when it provides them with a distinct and positive identity (19).

The extent to which employees identify with the organization has important implications. Research indicates that positive outcomes arise when employees report higher OI (5; 11; 15; 52). For example, in his meta-analysis Riketta (44) reported that OI was significantly correlated with higher job satisfaction, extra-role performance, and job involvement and lower absenteeism and turnover intentions.

Theoretically, employees who perceive they receive greater support from the organization should identify more strongly with the organization. However, few studies have examined this relationship. Most research has investigated the relationship between perceived support and organizational commitment (42). The studies that have investigated this relationship report that POS is related directly to OI (20; 47; 53). The lack of research investigating the link between OI and perceived support indicates a need for further study. Prior research appears to indicate that POS is related to OI. In addition, research indicates that OI and turnover are related significantly (e.g., 13; 51).

H2: POS is related positively to OI.
H3: OI is related negatively to turnover intentions.

JOB FIT

Cable and DeRue (9) define job fit as "judgments of congruence between an employee's skills and demands of a job" (p. 875). Job fit is distinct from person-organization fit, which examines the similarity between the organization's culture and employees' personal values (9). Job fit involves employees' perceived comfort or compatibility with their organization including rewards (33). According to Mitchell et al. (39), the employee's career goals and personal values must be compatible (i.e. fit) with the organization's culture and demands of the job.

Both PSS and POS should be related to salespersons' perception of job fit. Perceived fit involves employees' opinion of the degree to which the organization strongly considers their goals and values, cares about them, and shows concern for their well-being. These issues are similar to aspects of transformational leadership (6). Transformational leaders inspire followers and care about their needs and concerns. An important aspect of a sales manager's job is to provide coaching and mentoring to their salespeople, which are traits of a transformational leader (46). The sales manager defines the salesperson's role and provides feedback with the goal of increasing the performance of the sales force.

Employees perceive a better fit with their organization when their values are congruent with the supervisor's and organization's values. Although no previous research could be found that has tested the direct relationship between PSS and job fit, since research has shown that transformational leadership is related to job fit (12; 27), PSS should theoretically also be related to job fit.

H4: PSS is related positively to job fit.
H5: POS is related positively to job fit.

Most prior research has analyzed the relationship between job fit and job satisfaction and/or organizational commitment (33) or have investigated how person – organization fit influences OI (18; 16). Cable and DeRue (9) did report that fit perceptions were related positively to OI. Theoretically, employees' who perceive their values are compatible with the organization's values should identify highly with their company's goals. In their meta-analysis Kristof-Brown, Zimmerman, and Johnson (33) reported that job fit is correlated with OI.

H6: Job fit is related positively to organizational identification.

SAMPLE AND DATA COLLECTION METHOD

The data for the study were obtained using a direct mailing list of 300 sales managers. The data were collected in several steps. As has been done in previous research (38), a letter along with the questionnaire was sent to each sales manager describing the purpose of the study. The letter asked them to participate in the study by encouraging all of their salespeople to complete the questionnaire. Twenty-two of the surveys were undeliverable. Of the remaining 278 sales managers, 98 of them agreed to participate in the study. To ensure confidentiality, the sales managers were asked to provide the mailing address for each salesperson. Questionnaires were then mailed to each salesperson along with a return envelope. An average of about four salespeople reported to each sales manager. A total of 302 surveys were returned. However, due to missing data, only 296 were used in the study.

The demographic profile for the sample of 296 salespeople is as follows: their average age was 33.9 years; they averaged 8.8 years in sales and 5.4 years in sales with their present employer; slightly more than 70 percent of the sample were male.

MEASURES

A copy of the questionnaire appears in the appendix. All of the scales except turnover intentions were measured using a 5 point Likert scale ranging from strongly disagree (1) to strongly agree (5). The turnover intentions scale ranged from very unlikely (1) to very likely (5). Organizational identification was measured using the six-item scale developed by Mael and Ashforth (35) ($\alpha = 0.87$). Turnover intentions were measured using three items developed by Konovsky and Cropanzano (32) ($\alpha = 0.91$). Both Perceived Supervisor Support and Perceived Organizational Support were measured with five items from the widely used scale developed by Eisenberger et al. (21). As has been done in previous research, the word "organization" was replaced with "supervisor" when measuring perceived supervisor support. The six item scale for Job Fit was developed by Mitchell et al. (39).

RESULTS

The results were analyzed using LISREL version 8. The means, standard deviations and correlation among the variables appear in Table 1. In analyzing the results the first step was to test the measurement model. The results of the confirmatory factor analysis (CFA) indicated the data fit the model well ($\chi2 = 442.38$, df = 265, p = .00, GFI = .90, AGFI = .88, NFI = .97, RMSEA = .045). The hypothesized model next was assessed. The overall fit for the hypothesized model was good ($\chi2 = 459.88$, df = 269, p = .00, GFI = .90, AGFI = .88, NFI = .97, RMSEA = .046). The results indicated support for all of the hypotheses: H1 – PSS is related positively to POS ($\beta = .57$, t = 9.83); H2 – POS is related positively to OI ($\beta = .36$, t = 5.64); H3 – OI is related negatively to turnover intentions ($\beta = -.53$, t = 9.02); H4 – PSS is related positively to job fit ($\beta = .21$, t = 3.19); H5 – POS is related positively to job fit ($\beta = .36$, t = 5.42); and H6 – job fit is related positively to organizational identification ($\beta = .24$, t = 3.89).

CONCLUSIONS AND IMPLICATIONS

The purpose of this study was to extend salesforce turnover research by analyzing variables seldom included in models of salesforce turnover. Understanding variables associated with salesforce turnover is important given the direct and indirect costs of replacing a salesperson (8). Specifically, this study examined how job fit, perceived support, and organizational identification influence salespersons' intentions to leave their organizations. The results make important theoretical and managerial contributions to our understanding of salesforce turnover by showing how these variables either directly or indirectly influence salespersons' turnover intentions.

While perceived support has been the focus of much research during the last 30 years, it rarely has been the focus of salesforce turnover research. In addition, its relationship with job fit in any model of turnover has seldom been explored. The results in this study support prior research showing that PSS is related directly to higher levels of POS (10; 37). When salespeople perceive their sales manager considers their goals and values and their well-being, they report higher levels of POS.

The results also indicated that POS is an important variable in the turnover process. This study's results confirm previous research that the relationship between POS and turnover intentions is mediated by other variables (22). When the organization notices salespeople are performing well and shows concern for them, they will identify more with the organization. An important theoretical implication of these results is that while both PSS and POS are important variables related to salespersons' turnover intentions, their relationship to turnover is indirect through other variables rather than direct.

Another important implication is the role of organizational identification. OI influences employees' attachment to their organization (19) and why employees choose to stay with their organization (5). They feel insulted and embarrassed when someone criticizes their company and view the company's successes as their own. Salespeople who identify highly with their company are more psychologically bound to the organization. The results confirm that salespeople who reported that they identify highly with their company stated that were less likely to leave for another sales position.

The last important contribution of this study is the inclusion of job fit in a model of salesforce turnover. This study confirms the results of prior research showing that job fit influences turnover intentions through POS (14). But, it also extends prior research by examining how job fit is related to turnover intentions through OI. This relationship has seldom been examined and to the best of our knowledge this study is the first one to examine the relationship among job fit, organizational identification, and turnover intentions.

The concept of job fit also has practical implications to organizations. When salespeople perceive a good fit between their goals and needs and those of the organization, they will feel more part of the organization (higher organizational identification). In addition, when their sales manager provides a supportive relationship (PSS), they will feel a need to reciprocate that behavior thorough positive behavior, which leads a lower desire to leave the company.

LIMITATIONS AND FUTURE RESEARCH OPPORTUNITIES

Several limitations need to be mentioned. First, this study was the first one to test a model of salespersons' turnover intentions that included job fit, perceived support, and organizational identification together. Future research needs to test the model to confirm this study's results. Second, the study was cross-sectional. Future research may want to test the model within a single organization. Third, since this study was cross-sectional only turnover intentions rather than actual turnover were measured. A future research study could investigate how the variables in the model influence actual turnover. Fourth, this study looked at only one aspect of job fit. Other studies should include multiple measures of job fit and/or include other types of fit (e.g. organizational fit). Last, this study was limited in scope. An interesting future study would be to investigate how ethical leadership or ethical climate are related to job fit, perceived support, and turnover.

In conclusion, the results indicate the importance of perceived support and job fit in the turnover process among salespeople. Hopefully, these results can be used to decrease turnover among salespeople by showing organizations the importance of these variables in the turnover process.

Correlations Matrix, Means, and Standard Deviations

Job Fit						
OI	.41					
POS	.48	.48				
PSS	.42	.31	.57			
Turnover Intentions	-.22	-.53	-.25	.44	-.14	
Means	20.76	20.25	16.71	18.08	21.97	6.82
Standard Deviations	4.62	4.94	4.48	4.24	4.93	2.90

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APPENDIX - QUESTIONNAIRE ITEMS

Job Fit

1. I like the members of my work group.
2. My co-workers are similar to me.
3. My job utilizes my skills and talents well.
4. I feel like I am a good match for this company.
5. I fit with the company's culture (values and beliefs).
6. I like the authority and responsibility I have at this company.

Organizational Identification

1. When somebody criticizes your company, it feels like a personal insult.
2. I am very interested in what others think about my company.
3. When I talk about this company, I usually say "we" rather than "they."
4. This company's successes are my successes.
5. When someone praises this company, it feels like a personal compliment.
6. If a story in the media criticized this company, I would feel embarrassed.

Perceived Organizational Support

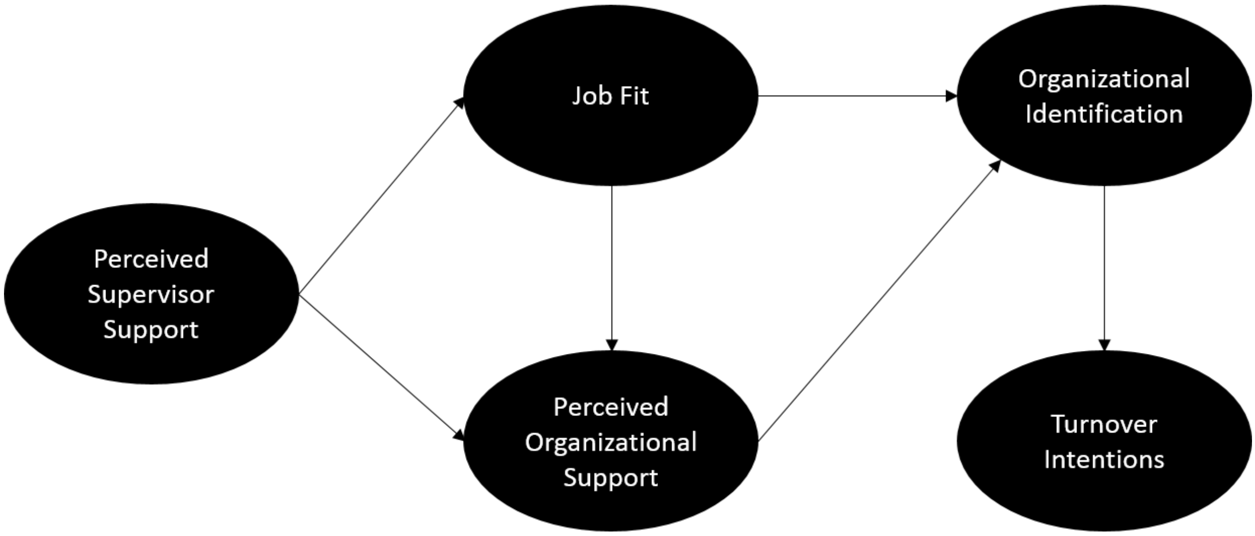
1. The organization strongly considers my goals and values.
2. The organization really cares about my well-being.
3. The organization is willing to extend itself in order to help me perform my job to the best of my ability.
4. Even if I did the best job possible, the organization would fail to notice. (R)
5. The organization shows very little concern for me. (R).

Turnover Intentions

1. How likely is it that you will look for a job outside of this organization during the next year?
2. How often do you think about quitting your job at this organization?
3. If it was possible, how much would you like to get a new job?

The words "the organization" was replaced with "my sales manager" for the PSS scale.

Hypothesized Model



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On The Principal-Agent Modelling Of Parties and Electoral Markets

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Abstract

How to account for the recent sharp augmentation in electoral volatility in Western Europe? Parties are basically coalitions of people looking for political power and whatever comes with it. This is the essence of the Schumpeter (1942) model of democracy as competition between party entrepreneurs, or elites in the political market place. It is more suited for understanding party politics in the post-modern society than the classical political sociology model of Lipset and Rokkan (1967). The economic model offers a dynamic model of the party system with an emphasis upon incentives, whereas the sociology model entails a static perspective – the "frozen" party system hypothesis. The concept of voter volatility is central in a theory of elections as principal-agent contracting that restrains the groups of political entrepreneurs we call "parties" in the electoral markets.

Key Words: political parties as coalitions, frozen party systems, electoral volatility, principal-agent interaction, transaction cost minimizing mechanism, multiple equilibria in N-person games, Schumpeter, Lipset and Rokkan.

INTRODUCTION

One could argue that political parties have become the most spoken of actors in well-ordered Rawlsian societies besides government itself. Thus, one can hardly avoid the question: What is basically a political party? Political parties constitute a multifaceted set of phenomena with regard to size, strength of organisation and ideological orientation. But why create and maintain parties? One needs to theorise motivation (micro) and function (macro) in order to explain the fundamental role of political parties in constitutional democracies.

Here, I focus upon the implications of transaction costs for the party system in a country. Transaction cost theory has contributed considerably to understanding economic institutions. It is also relevant for understanding political organisations like the political party. A political party consists fundamentally of two sets of people, the principal (voters, members) and his/her agents (politicians, parliamentarians, officials).

According to the logic of the principal-agent model, the principal offers a set of resources to his/her agents on the condition that their work effort transform these inputs into outputs that are to the benefit of the principal (Rasmusen, 2006). This entails a contractual approach covering the value of the output to the principal against the remuneration of the agents with the underlying question about whether the outputs are beneficial as well as correspond to an acceptable level of work effort and whether the remuneration is just? When this is not the case, the principal will seek out another set of agents.

The principal-agent approach is well suitable for an application upon the politics in a well-ordered society, but one must add some transaction cost saving mechanism hindering too many parties to be operating in a party system. Transaction cost analysis (Alchian, Coase) is a key to understanding why there is a small finite set of parties as well as why parties maintain government coalitions. It accounts for the basic finding in N-person game theory – multiple equilibria or the general lack of a unique equilibrium (Riker and Ordeshook, 1973), on the one hand and the absence of political chaos in democracies on the other hand. Politicians take transaction costs into account when they create the internal coalitions we call "parties", and they stick to the external coalitions they made in government for the same reason. Generally speaking, representation democracy would be impossible without a transaction cost minimising mechanism, like the political parties.

POLITICAL PARTIES: COALITIONS IN COMPETITION FOR COALITIONS IN GOVERNMENT

Political parties are not natural entities. Often they are spoken of as if they constitute actors, but that is merely a manner of speaking. Reification, or the fallacy of misplaced concreteness, is involved when parties are given a life of their own, with needs, survival, etc. Parties are just coalitions of people searching for political power by means of support from voters.

Political parties not only make coalitions with each other. They are essentially coalitions among human beings. Each party consists of men and women who make a coalition among each other to stand for a set of policy demands in elections and defend another set of policy supply when in government, more or less similar to the first demand set. The motivation driving these men and women to create a party and maintain it is entirely egoistic, in a narrow or broad sense.

To succeed in parliamentary politics, politicians need the support of a party, i.e. other politicians. Gaining access to the representative assembly opens up numerous accesses to valuable things like power, prestige and wealth. To receive support from other people, politicians seek to further the interests of groups who may vote for him/her. Self-interests and group interests constitute the motivational basis of parties. The key problem is the stability of these coalitions among men and women, which tend to be rather loose.

Internal party politics tends to be messy, involving both bargaining among different subgroups and voting at general assemblies. The risk is that the party is hurt be dissent to such an extent that a subgroup leaves the coalition and sets up its own party, in order to further either the interests of leaders or the subgroup it relies upon. The instability of coalitions within the party is well modelled by N-person game theory, which lacks equilibria.

It has been argued by Riker that solidarity keeps a party together, but this is hardly the case. What reduces the number of party splits is simple the need to minimize transaction costs. Party feuds or splits may be excessive costly and abortive, also for the dissenters, The leadership of a party possesses a set of strategies to employ to protect the integrity of the coalition, given the transaction costs involved: bolstering one platform, clarifying ideological issues, co-optation of opposition leaders, elimination of internal dissidents, etc. Transaction costs are likewise decisive when splinter groups decide to go it alone, which may prove a failure.

External party politics is determined by the parliamentary position of the party, namely its strength in terms of seats and its capacity to attract coalition bids from other parties. Access to the representative assembly, which depends upon voters as well as election rules, presents the party with two strategic options, namely to concentrate upon policy demands or engage in policy supply, the choice between the two policy - demand or supply - being related to the power index of the party (0-1).

Parties with no koalitionsfähigkeit will concentrate upon policy demands to respond to their electorate, whereas parties with koalitionsfähigkeit will manoeuvre in order to form a government coalition so that it may influence the supply of policies. Supplying policies in government allows parties to satisfy its basic goals of rewarding both themselves and their support groups in the electorate.

The problem of instability surfaces again in the external party politics, especially in the multi-party systems in Western Europe. Who to make the coalition with? Rational choice suggests the minimum winning model (Riker), but it has to be expanded to take into account transaction costs, as with the minimum distance principle. The idea of oversized coalitions is difficult to reconcile with these two principles: minimum winning and transaction cost saving. The same actually applies to the principle of minimum sized coalitions that may cover extremist parties.

Party politics in Parliament is basically a zero sum game, which with more than two parties involved becomes an N-person game. The only solution to the game is the power index of a party, where one may distinguish between the ex ante power index after the election and the ex post power index after the formation of a government. Ceteris paribus, parties aim fundamentally to maximise the power index scores, but they are crucially dependent upon their principals. But first a few sentences about the role of parties in policy demand and policy supply.

Although seldom recognized in the constitution of a country, political parties play the major role in demanding policies as well as supplying them. Besides civil society and non-profit organisations, policies are handled by parties in representative democracies. With the exception of major popular decisions to be decided in referenda, West European democracies except Switzerland relies upon the parties to formulate demands for policies and parties in government to supply policies. In fact, political parties are the transaction costs saving mechanism in democratic policy-making.

FIRST ORDER COALITIONS: POLITICAL PARTIES

If one looks upon the political party as a set of men and women in coalition aimed at the political process, then one understands the fragility of parties as well as their fear of infighting and splits. After all, coalitions among human beings tend to be temporary and not always smooth. Often increased volatility goes hand in hand with internal frictions and dissent,

Parties develop different strategies to cope with internal and external uncertainty:

- Mass parties (Rokkan): Since they are fairly large, they are not so vulnerable from internal dissent and personal defections. They try to protect their organisation by underlining huge support groups and outside stable contracts like business communities, trade unions, youth movement, women associations, etc.
- Catch-all parties (Kirschheimer): A large party may try to ride upon the swings in public opinions, searching for support in more than one cleavage structure. This may return a large electoral victory, but also lead to splinter groups.
- Pivot parties (Keman): Small parties in the centre can stabilise their situation by exercising power as a coalition partner, as measured by the power index method. However, they are not always safe against sudden movements in the electorate, with e.g. the flash parties.
- Cartel parties (Mair): This concept was introduced to capture some features of party behaviour when the mass parties faced decline and catch-all strategies failed. A cartel party is basically a coalition of politicians supported by the state (generous funding

programs). Despite this state party support in West European democracies, are they not vulnerable to major changes in voter preferences?

Political parties, small or large, cannot survive without voter support in elections. How dependent are parties upon their electorates? The famous Lipset-Rokkan theory of West European party systems claims that parties are closely connected with social groups. Lipset's and Rokkan's well-known Cleavage Structures. Party Systems, and Voter Alignments: An Introduction (1967 argues that the fully developed party systems in West European democracies are "frozen", i.e.

1. Voters tend to be loyal in one election to another;
2. Voters frame their choice of party on the basis of their position on a cleavage line: ethnicity, religion or class;
3. The cleavages in society are finite and change very slowly, if at all;
4. The central cleavages in the fully blown industrial democracy include: class, religion and region.

In the literature on party systems (Sartori, 1975; Keman and Budge, 1988), the classical focus is upon the number of parties – fractionalisation - and the effects of the electoral institutions – two-partism against multi-partism. However, once one move to a dynamic analysis of rapid change in party systems, the focal interest will be upon volatility. What restrains too much of volatility is the workings of a transaction cost minimising mechanism. It is costly to change parties entirely from one election to another, both for the politicians involved and the voters.

Table 1 documents the long-run trend towards more and more of volatility.

Table 1. Net volatility in Western European elections

Summery of Volatility

Decade	Mean	Std. Dev.	Freq.
1970-79	10.591514	6.5865799	55
1980-89	10.231104	6.9730458	58
1990-99	11.483612	5.9708036	53
2000-09	11.738517	5.9025244	55
2010-15	18.529448	10.333016	24
Total	11.734261	7.1916167	245

Gross volatility is likely to be twice the size of net volatility. Only the principle of minimising transaction costs restrains the instability typical of election games.

OLIGOPOLISTS AND INTRUDERS

Do we find the very same parties when comparing elections around 1970 with elections about 2005 in West European states? A few attempts have been made to map the existence and strength of various political parties that may be used for evaluating the Lipset-Rokkan theory. One such classification targets the size of Left and Religious parties – the mass or cleavage parties: socialist – left-socialist-communist-agrarian and religious parties.

Diagram 1 shows the combined size of the Lipset-Rokkan cleavage parties 1970 and 2000.

Diagram 1. Mass parties: Left + Religious + Agrarian

Note: LR-ALT measures the support for socialist + left-socialist + communist + agrarian + ethnic parties

Source: Based on data available from Armingeon et al. (2013)

One observes the decline of the cleavage parties in Diagram 1, providing evidence of party system change. Most of these mass parties are to be found below the 45 degree line.

Dynamic analysis of party systems would involve measuring the size of new parties (Diagram 2). The category"Others" designate political parties that are NOT socialist, conservative, agrarian, communist or liberals (Sundberg, 1999). Again, one may note that these parties are mostly above the 45 degree line in Diagram 2.

Diagram 2. New Parities

Note: Following Sundberg (1999) OTH measures the support for new parties as 100 – (socialist + agrarian + conservatives + communists + liberals)
Source: Based on data available from Armingeon et al. (2013)

In the political sociology literature, the static approach to party systems in Western Europe has long dominated with the established theory of Lipset and Rokkan. It is a true political sociology hypothesis, linking in a strong and firm manner parties and electoral groups among voters. However, it is not in agreement with predictions from N-person game theory, enlarged with asymmetric information as with principal-agent modelling. In fact, it is strategically naïve, given that the parties have their own agenda, namely the search for power that opens the doors to prestige, wealth and influence. The static theory entails that electoral volatility is low, both net and gross volatility. The same parties – oligopolists - receive much the same levels of support over time and the dominating parties prevail constantly over the minor ones. Moreover, this theory claims that the electorate is permanently structured behind the parties in accordance with social, ethnic and religious cleavages. This cleavage pattern is also frozen, dating back in history long before the democratic dispensation was introduced around the end of the Great War. The parties in West European constitutional democracies were locked in with the groups in the population in a one-to-one set of interactions.

On the contrary, the dynamic framework emphasizes gaming, i.e. strategy on the one hand and autonomy on the other hand. The voter behaviour is influenced by expectations, evaluations and forecasts. A rational expectation voter takes the available information into account, all the time updating his/her information about promises and outcomes. He/she is prepared to become a party-switcher when expectations are dashed. Only transaction costs limit voter shifts from one election to another.

Correspondingly, parties need to be aware of how voter expectations evolve. As loyalty and legacy count for less than intentions and projections with voters, parties have also to update themselves continuously about attitude changes, being all the time prepared to take action in terms of policy demands or policy supply. Despite the fact that voter influence is always proportional to 1/N, most voters enjoy the election game and thus update themselves on outcomes and new party proposals.

ELECTORAL MARKETS

Parties are similar to enterprises in that they compete for the support of the citizens/consumers. Political competition is as brutal as economic competition, leaving few winners and many losers. Politicians may benefit handsomely from the electoral game, becoming immensely rich, like Tony Blair or Bill Clinton. However, many politicians are not so successful, as they only are able to capture a decent salary and pension, which though often is above their reservation price outside Parliament.

The Lipset-Rokkan model identified a situation in West European politics when the political parties managed to stabilize their fortunes, acting like oligopolists. However, this cosy market structure would not last, as intruders entered the electoral arena from both Right and Left. Understanding political markets, the central concept is voter volatility – gross and net.

Table 2 has the scores for the 1970s against the 2000s. Net volatility has risen considerably, from between 5-10 per cent to 15-25 per cent. Net volatility results from gross volatility, or party switching among voters, being usually or often twice or trice as strong as net volatility.

Table 2. Volatility 1970-2010: Net and Gross

Country	net_1970	net_2000	gross_1970	gross_2000
Austria	2,6	16,6		
Belgium	6,9	15,5		27,0
Denmark	15,6	10,8	23,0	29,3
Finland	7,7	9,9	22,0	24,0
France	17,7	20,6	28,0	42,0
Germany	5,0	9,9	12,0	25,5
Greece	23,1	13,6		17,0
Iceland	12,6	12,9		30,9
Ireland	8,5	21,2		24,0
Italy	6,1	13,4		32,0
Luxembourg	12,3	7,2		
Netherlands	13,2	22,7	20,0	39,8
Norway	15,2	14,2	22,8	33,3
Portugal	11,7	11,4		16,5
Spain	12,1	11,2		10,0
Sweden	6,3	13,5	17,3	33,5
Switzerland	7,7	8,9		27,7
United Kingdom	8,3	7,0	18,3	17,8

Note: Net volatility: The gains and losses of political parties participating at two elections as measured by the Pedersen index. Gross volatility: measured as party switching by voters changing parties over two consecutive elections.

Sources: Net volatility: Based on data presented in Ersson (2012) Gross volatility: See Ersson: Appendix.

One may point out that the rise in volatility is sharp in some countries that used to be well-known for their electoral stability: Sweden, Switzerland, Denmark, the Netherlands and Norway.

SECOND ORDER COALITIONS: GOVERNMENT FORMATION

If political parties are made up of coalitions among politicians in the first place, then it is also true that parties enter coalitions with other parties, mainly to form a government. Such external coalitions could be short or long lasting. They crop up in legislative voting deals between parties, but they also constitute the bedrock for multi-party governments. Very few parties reach the 51 per cent threshold for forming a single party majority government – a party in coalition with itself! Thus, coalition formation is a major type of interaction between political parties in a representative democracy, like in Western Europe.

Figures 3 and 4 show two patterns of government formation. In a frozen party system, PR techniques are bound to result in minority governments at times. No political party receives a majority of seats in Parliament for itself, but a large party may still be reluctant to enter into a coalition due to historically given animosities – a form of path dependency reinforced by the election system. Figure 3 shows that minority governments were more frequent around 1970 than 2000.

Figure 3. Minority governments

Note: MIN measures the per cent of time a minority government has been in power.
Source: Based on data in Andersson et al. (2014)

In Western Europe, PR methods have in a few countries been used as the basis for so-called consociationalism (Lijphart, 1968, 1984), meaning an effort to bring all players, or most of them, on board for consensus policy-making. The creation of grand coalitions would in a cleavage dominated society constitute a tool for the political elite to minimize conflict and avoid any tendency to civil war between the so-called camps (zuilen, pillars). Oversized or grand coalitions make little sense except actually (Figure 4).

Figure 4. Oversized Coalitions

Note: SURPLUS measures the per cent of time an oversized coalition has been in power.
Source: Based on data in Andersson et al. (2014)

When a party system is dominated by two large parties that cannot form a simple majority government or a minimum winning coalition, then they may temporarily resort to the oversized format - Austria. Only Switzerland employs the collegiado as a matter of principle. The Swiss practice of collegiado - “formule magique” - is often explained as an historical legacy, but it may just as well be accounted for strategically, given the obvious need for government to counter-balance the powerful instrument of people's initiative in the referendum dispensation (L. Neidhart).

CONCLUSION

The concept of volatility, gross and net volatility, is a most powerful indicator on party system change, showing the basic rise in the autonomy of parties in relation to social forces/cleavages. When political parties are looked upon from the perspective of the principal-agent model, then sooner or later changing the agents becomes crucial in order to bolster the influence of the principal. As a matter of fact, the more changes of the situation of the agents, the more vital the democratic regime is. Yet, too many changes of the political agents would run up against the basic principle of transaction cost minimisation

Political parties operate in electoral markets under a dynamic principle-agent interaction between the voters and their agents. Politicians set up parties before the election through internal coalitions with others aimed at providing power in the legislative assembly, and serving as tools for government formation. Thus, after the election, these coalitions enter external coalitions with other parties to exercise government power. The micro motivation is influence, prestige and wealth. Yet, the macro force is the minimising of transaction costs in a representative democracy – an unintended and un-recognized function, in the classic language of M. Levy (1952).

Volatility is the break upon Schumpeter's theory of democracy as the competition among elites. When volatility rises, then politicians have all the reasons to tremble.

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Do Consumer Demographics Affect Dynamic Price Markdowns of Seasonal Goods?

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Abstract

In this research we investigate the consumer demographics impact on consumer strategic purchase behavior of seasonal goods. Our findings would be beneficial for retailers and firms in the fashion industry to help them decide how to do their price markdowns during the season. We develop different demographic segments as these segments react differently to price markdowns based on the factors that they have in common, and the elements which differentiates them. We use demographic factors to identify different market segments for seasonal products. We show that reducing the prices based on the expected response of different demographics segments in the market would help the retailer to plan the price markdowns in the seasonal goods industry, and also would help them in capturing the most out of different demographic segments in the market. Our findings can particularly be useful in terms of generating and managing demand, and selling the product in their best possible price.

Keywords: Dynamic pricing, Choice models, Consumer strategic behavior, Demographics, Marketing research, Consumer research

INTRODUCTION

The decisive factor regarding the seasonal (short life cycle) goods has always been their availability in a finite time horizon, which is usually accompanied by small (sometimes zero, for hotels for instance) salvage value by the end of time horizon. Focusing on fashion clothes, relatively long lead times makes capacity almost constant which can be increased at a high marginal cost. In other words we are facing fixed supply, in a limited period of time in fashion industry.

It may be in the interest of firms to decide on frequency and depth of price markdowns through a dynamic pricing mechanism to capture more profit, and at the same time minimize the over stock costs at the end of period. Obviously the retailer has to markdown the prices in order to not to face an excess inventory at the end of the period. There also has always been a risk of stock out as a result of uncertain and changing demand which may or may not end in less profit, and that may also need dynamic pricing tools to help them come up with the right and effective pricing decisions.

Previous research show that carrying fewer inventories would bring more profit to the firm at the end of the horizon (Soysal and Krishnamurthi 2012). Thinking of more than one fashion product in the seasonal time horizon made us think of how to capture the relationship between customer's strategic behavior as a response to price markdowns and the demographics that make the strategic behavior. We model the consumer strategic behavior from expectations of future prices and markdown in prices based on the demographic properties of the segment that they belong to.

The impact of demographics on consumer price sensitivity has been discussed in previous literature. Kim, Srinivasan, and Wilcox (1999) show that household level demographic data does not show that much of predictive validity in determining household price sensitivity. Hoch, Montgomery, and Rossi (1995) show that household demographics variables explain for the 67% of variation in price response. Up to our knowledge no research has not studied the relationship between consumer demographics and consumer price sensitivity for fashion goods. Following Soyal and Krishnamurthi (2012) model and Hoch Montgomery, and Rossi (1995) results we develop our hypotheses.

LITERATURE REVIEW

As Elmaghraby and Keskinocak (2003) categorize the pricing across markets, replenishing the inventory during the selling season is usually not possible because of the long procurement lead times in the fashion industry; which is also the case for most short-life-cycle products. From the perspective of dependency of demand over time, they note that since for the fashion goods the selling horizon is usually very short, customers do not get the chance to collect knowledge and learn about the product that is being supplied in the market, so there is not enough knowledge to impact the demand, as a result the demand stays independent of consumers knowledge over time.

Based on these two important facts, which are also the case for our research, it is obvious that the seller has a fixed inventory on hand and faces a pricing decision on the finite horizon (the season for example) to make the most of the products and also not face the stock out or excess inventory issues.

Pashigian (1988) focuses on clearance sales, and Pashigian and Bowen (1991) mention demand uncertainty and price discrimination as two hypothesis to explain pricing practices. With the assumption of consumer’s myopic behavior; the following researches are done. Lazear (1986) assumes a number of customers arrive at each period and each know their reservation price which is unknown to the distributor. Feng and Gallego (1995) model the demand as time invariant Poisson process. This research was generalized by assuming the demand to be non homogeneous in the researches done by Bitran, Caldentey, and Mondschein (1998), Bitran and Mondschein (1997), and Zhao and Zheng (2000).

Focusing on fashion goods, Smith and Achabal (1998) study how inventory level for a seasonal good affects demand. Mantrala and Rao (2001) provide a Decision Support System to help the retailer with the optimal markdown pricing and initial inventory level. Gallego and van Ryzin (1994) show that an increase in inventory is followed by a decrease in price, also longer selling periods make the optimal price to rise while keeping the inventory level constant.

It has been shown that different patterns for prices may be seen if the price is allowed to move in both directions. Works by Lazear (1986), Bitran and Mondschein (1997), and Gallego and van Ryzin (1994) incorporate this finding. In this research since we are studying the mark down pricing and our basic assumption is the optimal price decreases over time.

In another stream of litreture some papers have focused on consumer’s strategic behavior and consumer forward looking. Erdem and Keane (1996) present a structural dynamic choice model, also Erdem, Imai, and Keane (2003), and Hendel and Nevo (2006a) study scanner panel data.

In this paper since we focus on seasonal goods. We may need to mention some literature done in this field through high tech products. Those type of products are similar to the seasonal goods because they both have declining pattern over the life-cycle of a product which makes consumers delay their purchase based on future expectation of cheaper prices in future. Researches in this field are done by Melnikov (2000), Song and Chintagunta (2003), and Nair (2007).Besanko and Winston (1990) show that strategic consumer behavior makes the firm to lower its prices.

Su (2007), Aviv and Pazgal (2008), Dasu and Tong (2008), and Cho, Fan, and Zhou (2006) find the factors that can explain early purchasing by some consumers even though prices are expected to be reduced in the future. Liu and van Ryzin (2008) show that under stocking for monopolist who faces strategic consumers might end up in more profits. Also dynamic pricing of seasonal goods had been studied by McAfee and te Velde (2007), and Sweeting (2008). The latter research show that early buying can be explained by some factors such as uncertainty about future prices and availability. From the aspect of the impact of stock out and product availability on demand previous research is done by Gönül and Srinivasan (1996), and Erdem Imai, and Keane (2003), Bruno and Vilcassim (2008), and Musalem et al. (2010)

Up to our knowledge no research has not studied the relationship between consumer demographics and consumer price sensitivity for fashion goods. We explain our theory and hypotheses formation in the nest section.

THEORY AND HYPOTHESES

In this paper we assume that consumers are rational and in each period they have an option to buy vs. not buy the product. In addition to being rational, we also assume that they show strategic behavior; meaning in each period they include their expectation of future prices when they decide to buy, not buy the product and based on that they maximize their utility function. Obviously consumers from less price sensitive demographics may choose to purchase earlier in the time horizon, while consumers from more price sensitive demographics may delay their purchase based on the type of strategic behavior that may exist in their demographics segment.

Since consumers are heterogeneous, in each period and based on their demographic background, they make their decision of purchasing vs. not purchasing.

From one side they make more utility waiting for lower prices through the time horizon, from the other side their utility is reduced as they delay their purchase and wait more for lower prices. Not only reduction in utility occurs because of having less time to "use" the product (because the product is seasonal), but also they also face the risk of stock out for the product. So they face a trade off, in our model we are trying to reveal how demographics play a rule in this forward looking behavior and how can firms use that in order to make their dynamic markdown pricing decision. Assuming consumer heterogeneity gives the retailer the chance to set the prices dynamically to capture different consumers from different demographics segments.

We are assuming there are a finite number of goods (N), N>1, and there exist only a single color for each good. Consumers who choose to purchase each product leave the market for "that" product but still have the choice of purchasing "other" products offered by the retailer. So the market for each product shrinks during time horizon. The consumer choice on different products is assumed to be independent from another (i.e. choosing to buy a specific product does not affect the consumer's choice of other products). In other words we are not allowing for substitutions and complementarily effects in our model.

In general, sales increase in the periods where prices are marked down but decrease immediately after the markdown period.

In our model, we have focused on seven demographic variables, which are education of the head of the household, ethnic background, household annual income, household size (number of people in the household), employment status of head of the household, whether the household owns the home or not, and consumer's age.

In Table 1 to Table 6 different levels of each of the demographics variables are explained:

Table 1. Levels of head of household education

Level	Education
Level 1	Below high school
Level 2	High school
Level 3	College
Level 4	Masters
Level 5	PhD

Table 2. Levels of household ethnic background

Level	Race
Level 1	Black
Level 2	white
Level 3	Asian
Level 4	Hispanic
Level 5	other

Table 3. Levels of household annual income

Level	Income
Level 1	$0 - $19,999
Level 2	$20,000- $39,999
Level 3	$40,000 -$69,999
Level 4	$70,000 - $99,999
Level 5	$100,000+

Table 4. Levels of household size (number of people in the household)

Level	Household size
Level 1	1
Level 2	2
Level 3	3
Level 4	4
Level 5	5+

Table 5. Levels of head of the household employment status

Level	Employment status
Level 1	Unemployed
Level 2	Part time
Level 3	Full time

Table 6. Levels of household home ownership status

Level	Home ownership status
Level 1	Own
Level 2	Rent

Having the demographic variables of our model defined and assuming that consumer's utility increases by purchasing the product in compare to not purchasing that, we continue by introducing the model.

Consumer *i*'s indirect utility from consuming product *j* at time *t* is defined as Equation 1:

$$U_{ijt} = \alpha_j + \beta_{ip} * p_{jt} + \beta_{im} * d_{jt} + \beta\mathrm{edu}_{it} * \mathrm{Edu}_{it} + \beta\mathrm{eth}_{it} * \mathrm{Eth}_{it} + \beta\mathrm{inc}_{it} * \mathrm{Inc}_{it} + \beta\mathrm{fam}_{it} * \mathrm{Fam}_{it} + \beta\mathrm{emp}_{it} * \mathrm{Emp}_{it} + \beta\mathrm{home}_{it} * \mathrm{Home}_{it} + \beta age_{it} * \mathrm{Age}_{it} + \varepsilon_{ijt} \quad (1)$$

The variables used in the model are defined as following:

α_j : Intrinsic utility for product *j*

p_{jt} : Price of product *j* at time *t* (we are assuming N products to be available in the market)

d_{jt} : Markdown dummy (i.e. whether the product was sold in full price/ markdown)

β_{ip}, β_{im} and βage_{it} : are price sensitivity, markdown sensitivity and age sensitivity parameters respectively

Edu_{it} : Education dummy variables, the five levels of education will be covered by four dummies

Eth_{it} : Ethnicity dummy variables, the five levels of ethnicity will be covered by four dummies

Inc_{it} : Income dummy variables, the five levels of will be covered with four dummies

Fam_{it} : Family size dummy variables, the five levels of family size will be covered with four dummy variables

Emp_{it} : Employment status dummy variables, the three levels of employment status will be covered by two dummy variables

Home_{it} : Home ownership status dummy variables, one dummy will cover for two levels of home ownership status.

Age_{it} : Consumer age

ε_{ijt} : Stochastic error term with zero mean

Study by Hoch Montgomery, and Rossi (1995), even though done on grocery goods, but still gives some insights on further research for different types of goods. They show education, owning a home and, smaller family size reduce the consumer price sensitivity for grocery shopping. They also show that black and Hispanic consumers are more price sensitive than the other ethnic groups. Having that insight we form our hypothesis for seasonal (i.e. fashion) goods.

Normally fashion goods have more fans in the younger generation. When a new fashion cloth is launched into to the market (or sometimes even before that), a group of consumers already know about the product and waiting to purchase that. On the other hand the younger generation is not usually that wealthy, so they maybe have to wait for the price markdowns to reduce the price. One may ask which of the “age” and “income” effect makes the consumer to make the decision of purchasing early or late.

We except them both to have significant impact on consumer’s choice to either postpone the purchase for the price to reduce more as buy it as full/almost full price, but since they are young are do care about the fashion it might be rational to assume that the effect of “age” is stronger than the effect of “income”. With this discussion we can form out first hypothesis:

Hypothesis 1: Income level and age of the consumer both have significant impact on consumer’s choice in the sense that, the more the income the less patient the consumer for price markdowns and the more the age the more patient the consumer for price markdowns. Between these two, we expect younger consumers with less income show less patience for the prices to go down and hence have a higher probability of buying at full/almost full price in compare to older consumers with higher incomes.

Fashion cloths are more considered as “luxury” goods and not really a need for the basic life a common person. Usually more educated people (faculty members, medical doctors etc) don’t follow fashion clothing that much. Hence it would be rational to expect them to have less willingness to pay for the fashion clothes and so be more patient for the prices to be marked down. Based on this idea the second hypothesis is formed:

Hypothesis 2: the higher the education level of the household, the more patient them for the prices to go down (i.e. the greater the probability of purchase in the mark down price)

Research by Hoch Montgomery, and Rossi (1995) show that owning a larger, more expensive home would reduce the price sensitivity, and the explanation behind that is those households have more space to stockpile and keep the goods. For fashion goods the same explanation would not necessary hold because fashion goods normally do not take that much of space.

In that sense we have looked for other explanations that may connect these two, besides in this research owning a home is being studied not the size of the home owned. Based on that we argue that not all the home owners are from the educated level of society, but it would be rational to expect that home owners are form the high income level of society. With that intuitive assumption we would expect owning a home to have an impact more similar to the impact of having high income rather than having high levels of education on consumer strategic behavior for fashion goods. Based on what was discussed earlier we have formed out third hypothesis.

Hypothesis 3: owning a home makes the consumer less price sensitive for fashion goods.
Having demographic data from a fashion retailer would help to test these hypotheses and explore the relationship between price markdowns and demographics variables.

Research Contributions

The model developed in this paper can be used in the fashion industry to give some insights on how to run the permanent markdown pricing based on the customer’s demographics that each store faces according to where it is located.

Also it helps the firm to identify the most influential demographics in the fashion industry, which would indeed be helpful is segmenting their customers.

And finally it would give some insights on the optimal level of inventory to keep in the season to reduce the inventory and stock out costs.

LIMITATIONS AND FURTHER RESEARCH

The most important limitation of this paper is "lack of data". Having no access to appropriate data did not let the author to test the hypothesis. Further empirical research would be a major step to explore those relationships in practice.

Another major further research would be studying the "online" markdown pricing for fashion sales and see if those are different from the "in store" sales. Demographics may have a different impact on consumer strategic behavior in online environment. One explanation for that could be different levels of access to information about the product offered by competitors at the time of purchase based on the different demographic group.

The third idea for further research could be studying price mark down combined with other "temporary" promotions. That would give insight to store managers on how to combine these different types of promotion together and take the benefit of that.

Another area for further research would be estimating the demand function to reduce its uncertainty; that would give very useful insights for segmentation and different price sensitivity levels from different segments in the market.

Finally the last further research idea would be allowing the consumer choice to be dependent to his choice for other products. In other words purchase of one product has the potential to impact the consumer choice for the rest. The degree of this dependency may also vary among different products.

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Climate Variability Impacts, Diseases and Human Health: The Case of Morogoro Municipalities, Tanzania

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Abstract
This study assesses the impacts of climate variability in water quality and its subsequent effects to human health through diseases in Morogoro Municipality. It assessed the standard/quality of drinking water and how it is affected by the impacts of climate variability in the study area. Primary data were obtained through interview and questionnaire covering two hospitals namely Nunge and Saint Thomas Hospital, whereby each hospital provided 75 respondents through questionnaires to make the total of 150 respondents in the study area. These primary data were supported by secondary data which were collected from TMA and MORUWASA. Quantitative data were edited, coded and analyzed using statistical package for social science (SPSS version 16 and Microsoft Excel Sheet. Qualitative data were analyzed through content analysis, summarized and presented in the text. The analyzed data were presented into tables and graphs. The findings of the results show that the climate of Morogoro municipal is varying, then quality of drinking water is not good and people are much affected by water borne diseases. However, climate change and its variability has played both direct and indirect role for water deterioration, though there are other factors which bring to synergetic effects to climate change, like population density, human activities and economic factor which make human health more vulnerable to climate change impacts.

Key Words: Climate variability, Water quality, Human health.

INTRODUCTION

Background Information

Climate variability has numerous negative effects on the stock of fresh water. On the other hand deteriorated fresh water increases the incidence of waterborne disease due to increased temperature and reduced precipitation (IPCC, 2001). Domestic water treatment plants may be susceptible to climate change leading to human health risks. For example, droughts may cause problems with increased concentrations of effluent pathogens and overwhelm water treatment plants; aging water treatment plants are particularly at risk. Urbanization of coastal regions may lead to additional nutrient, chemical, and pathogen loading in runoff (ibid).

Findings from different research show that there is a close link between climate and the occurrence of disease dangerous to human health due to contamination of water, air and food. In short, the main effect of affected water is water born disease. Some of the effect may lie ahead if they increase in a very extreme extent. With increase in temperature and change in rain pattern the situation can lead to water born diseases such as cholera and diarrheal caused by organism such as giardia and salmonella (IPCC, 2001).

People in Morogoro municipality mainly use tap water from Mindu Dam (Paavola, 2006). The availability of tap water has significant public health benefits, because specific chemical compounds are often added to tap water during the treatment process to adjust the pH or remove contaminants, as well as chlorine to kill biological toxins. Tap water remains susceptible to biological or chemical contamination due to the event of contamination which deemed dangerous to public health. Government officials typically issue an advisory regarding water consumption. In the case of biological contamination, residents are usually advised to boil water before consumption or to use bottled water as an alternative. In the case of chemical contamination, residents may be advised to refrain from consuming tap water entirely until the matter is resolved (Lee, 2009). The problem is that not all people treat water at their home. Also, not exactly that water is well treated from the source. Even though, climate seemed to interfere with the quality of water; sometimes lead to contamination in the pipe during transportation or in tanks where water is stored.

Problem Statement

It has been said that the climate is not promising due to its irregularity. Also, this seems that its irregularity has played a great role in the deterioration of water quality which in turn may lead to increase in the spread of water born disease. Furthermore, the increase in temperature and precipitation may cause the emergence of more disease in regions that did not previously host disease or disease carrier" (IPCC, 2007). In the tropical region where contamination due to temperature and rainfall, eruption of diseases like typhoid, cholera and meningitis can easily happen. These diseases have pronounced negative impacts to both family and community level (IPCC 2007). However, it can be difficult to explore to what extent does deterioration of water quality due to climate change has affected human health in Morogoro district (ibid). Therefore, assessment of climate change impacts to deterioration of water quality is more significant to avoid the eruption of diseases due to contamination.

Objectives

General objective

The main objective of this study is to assess the impacts of climate variability to water quality and subsequently the affect to human health in Morogoro municipality.

Specific objectives

Specific objectives are:

i. To assess the quality of drinking water in the study area.
ii. To assess the impact of climate variability to water quality in the study area.
iii. To determine the effect of polluted water to human health in the study area.

Research Questions

i. What is the quality of drinking water taken by the people of Morogoro municipal?
ii. What is the relationship between climate variability and water quality?
iii. To what extent deterioration of water quality has affected human health?

Problem Justification

Water is an essential ingredient to economic growth and a basic need to human life (Mwanza, 2004). Safe and clean water creates a good condition to the development of economy and poverty reduction to the poor. This is because safe and clean water can ensure good health status of the people (UN, 2005). Hence, the population can remain healthy and energetic enough to participate well in the production. Improving the quality of drinking water is an essential pre-condition to the attainment of other Millennium Development Goals. Health and environmental or income targets cannot be achieved unless action is taken to address water problems. Makule (1997) asserted that with water scarcity due to climate variability, lower quantities and qualities of water are consumed by people. This attributes to waterborne diseases as sanitation becomes low. A sick society cannot contribute towards economic growth or poverty alleviation. Time and resources will be used in taking care of the sick. Long distance to water sources occupies and consumes the time of those involved that could be used for other productive activities.

Therefore, this study has determined to what extent does human health been affected by the change of water quality due to climate variability in Morogoro municipality and provided some measure like simple techniques of treating water at home, such as chlorination, filters, and solar disinfection, and storing it in safe containers could save a huge number of lives each year. This is in line with the UN millennium development goals (MDG), such as to reduce by half the proportion of people without access to safe drinking water and eradication of extreme poverty (UN, 2008). It is also reflecting PRSP (URT, 2000), that elimination of poverty will not be done without ensuring every person with access to clean and safe drinking water.

LITERATURE REVIEW

Climate

If the earth's climate were to become more erratic, it could have more implications to human beings. A change in the hydrological cycle could mean that an area which depends strongly on rainfall for agriculture could start to see differences in the duration and intensity of seasons, and farmers would have to plan how to overcome the repercussions of floods or droughts. Water quality will also be affected by the change of weather patterns. When water levels are low, as in a drought; pollutants become more concentrated. During flood, sediments and others pollutants can wash out into the drinking water sources (Sufford, 2007).

Water Quality

Water quality is the physical, chemical and biological characteristics of water (Makule, 1997). It is a measure of the condition of water relative to the requirements of one or more biotic species and/or to any human need or purpose. It is most frequently used by reference to a set of standards against which compliance can be used (IPCC, 2007). The most common standards used to assess water quality relate to health of ecosystems, safety of human contact and drinking water (ibid). The raw or treated water is analyzed by testing their physical, chemical and bacteriological characteristics: Physical Characteristics of water to be determined are turbidity, color, temperature taste and odour. Chemical Characteristics of water are pH, acidity, alkalinity, total hardness, chloride, sulfates, iron, solids, and nitrate (UN, 2008). The bacteriological characteristic of bacterial examination of water is very important, since it indicates the degree of pollution. The polluted Water through sewage contains one or more species of disease producing pathogenic bacteria. Pathogenic organisms cause water borne diseases, and many non pathogenic bacteria such as Ecoli, a member of coliform group, also live in the intestinal tract of human beings. Coliform itself is not a harmful group but it has more resistance to adverse condition than any other group. So, if it is ensured to minimize the number of coliforms, the harmful species will be less. Hence, coliform group serves as an indicator of contamination of water with sewage and presence of pathogens. About 1.1 billion people lack access to an improved drinking water supply, 88% of the 4 billion annual cases of diarrheal disease are attributed to unsafe water and inadequate sanitation and hygiene, and 1.8 million people die from diarrheal diseases each year (WHO, 2007). The WHO estimates that

94% of these diarrheal cases are preventable through modifications of the environment, including access to safe water.

Safe Water

Safe water means water that will not harm living organism especially human being if comes in contact with it. The most common use of this term applies to drinking water, but it could also apply to water for swimming or other uses. To be safe, the water must have sufficiently low concentrations of harmful contaminants to avoid sickening people who use it. The list of harmful contaminants includes disease-causing microbes such as bacteria, viruses, and protozoan's. Defining safe water becomes a matter of risk assessment, in which you consider the chance of illness or injury from drinking water, in comparison to the risk of illness or injury from the many other hazards (EPA, 2003).

National Health Policy 1990, emphasize the need for adequate supply of water and basic sanitation to minimize water born and water related diseases, which are among the major health problem in this country, and reorganize that the health of individual, the family and the community at large depending on the availability of safe water supply, basic sanitation and improved hygiene practices.

Everyone needs safe water to drink, and people often have questions regarding the quality of water from their well or public utility. Due to the deterioration of water quality water born disease has become a major problem. Worldwide 1.2 billion people do not have access to clean and safe drinking water, and 2.4 billion people lack sanitation (Alumn, 2008). Every year, 5 million people die of waterborne diseases (ibid).

Water Born Diseases

Water-borne diseases are infectious diseases spread primarily through contaminated water. Though these diseases are spread either directly or through flies or filth, water is the chief medium for spread of these diseases and hence they are termed as water-borne diseases. Infectious diseases caused by pathogenic bacteria, viruses and protozoan parasites are among the most common and widespread health risk of drinking water. People are introduced to these microorganisms through contaminated drinking water, water drops, aerosols and washing or bathing. Some waterborne pathogenic microorganisms spread by water can cause severe, life-threatening diseases. Examples are typhoid fever, cholera and Hepatitis A or E. Other microorganisms induce less dangerous diseases. Often, diarrhea is the main symptom. People with low resistance, mainly elderly people and young children are vulnerable to these diseases as well (Alumn, 2008).

Morogoro Town Water Supply

Morogoro town is served by two gravity fed water supply systems which have two sources. These are Morogoro and Ngerengere rivers and treated at Mambogo and Mafiga water station respectively. Ngerengere river collected from Mindu dam then pumped to Mafiga before distribution. During the dry season the levels of the two sources of water goes drastically down. This makes the supply of adequate water to be a problem. Yet the town is growing fast and industries are demanding an increasing supply of water. At 65% Coverage residents of the town rely to a significant extent on unsafe open water systems wherever they can be found. This is particularly so during the dry seasons (Moloch, 1997)

CHAPTER THREE

RESEARCH METHODOLOGY

Study Area Description

Location

Morogoro Region is one of the 24 regions in Tanzania Mainland. The region lies between latitude 5o 58" and 10o 0" to the south of the Equator and longitude 35o 25" and 35o 30" to the east. It is bordered by seven other regions namely Arusha and Tanga regions to the north, the Coast Region to the east, Dodoma and Iringa to the west, and Ruvuma and Lindi to the south. It occupies a total of 72,939 square kilometers which is approximately 8.2% of the total area of Tanzania mainland. Morogoro municipality is located about 190 km west of Dar es Salaam, it is situated on the lower slopes of the Uluguru Mountain sand covers an area of 260 km². Research will be carried in two hospitals found in different wards in Morogoro municipal. The hospitals are STH and Nunge found in Kilakala and Mjimpya ward respectively.

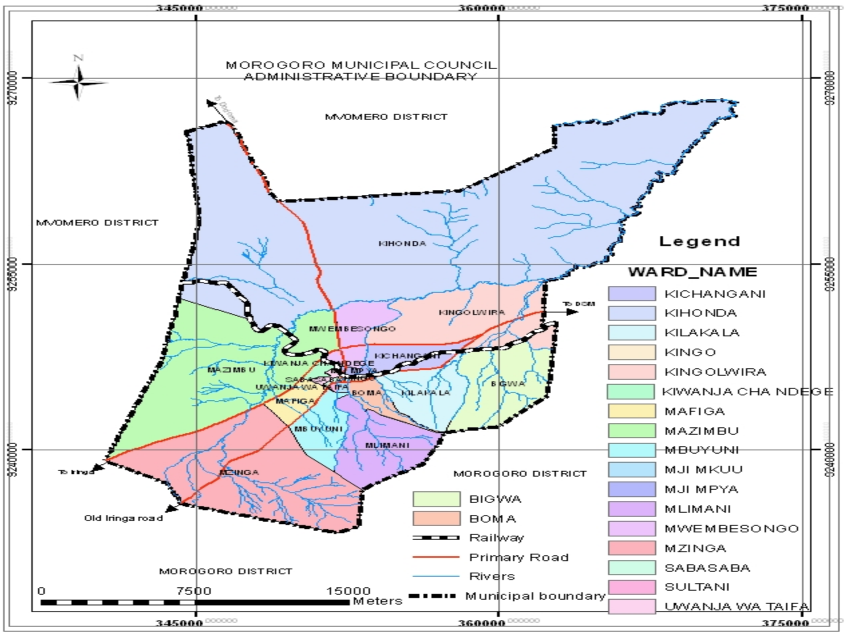

Figure1: Morogoro Municipal Map
Source: Field Data Survey (2012)

Climate

The annual rainfall ranges from 600mm in low lands to 1200mm in highland plateau. However, there are areas which experience exceptional droughts (with less than 600mm of rainfall and these areas are in Gairo and Mamboya divisions in the North of Kilosa District and Ngerengere Division in the East of Morogoro Rural District). The mean annual temperatures vary with altitude from the valley bottom to the mountain top. The average annual temperature varies between 180C on the mountains to 300C in river valleys. In most parts of the region, the average temperatures are almost uniform at 250C. In general the hot season runs from July to September.

Population
According to the 2002 population and housing census, Morogoro region had a total population of 1,753,362 male being 873245 and female 880117 with total of 385269 households (URT, 2006).

Socio-economic activities
The economy of the region is dominated by agriculture and the allied activities. The major activities include: Small Scale farming (food and cash crops production subsistence farming) cattle keeping, plantations and estates (sisal, sugar). However, there is growth of small capital intensive urban sector whose main activities include: Manufacturing and provision of services - offices, hotels, petty trading etc. However, agriculture is the major economic activity in the region. It engages about 80- 90 percent of the region's labor force. Agriculture involves both small and large scale farmers. Large scale farms are the Kilombero and Mtibwa sugar estates. Sisal estates are large scale paddy farms in Dakawa, Morogoro Rural District, and Mgeta in Kilombero District and Kilangali in Kilosa.

Transport and communication
The region has a total road network of 3,742 km. Out of these total 55 km are trunk roads, 961 km regional roads, 1043 km district roads and 1,179 km feeder roads. See Table III.1. The trunk and regional roads are in good shape, although they still need some maintenance. District and feeder roads are in a poor state. The Postal service in Morogoro region boasts of 10 regular post offices and 21 other postal agencies with a total of 6,625 letter boxes. The telephone service has the installed capacity of 4,010103 service lines out of which 3,169 have been taken up. There are also 102 Fax lines, 35 Telex lines and 8 e-mail lines in operation.

Research Design
Both primary and secondary data were collected and cross sectional involving both qualitative and quantitative data. Participant Observation, Questionnaire and Key informant interview were used to collect data so as to get enough, relevant and useful information to achieve the objectives of this study.

Primary data were collected using structured closed questionnaires to probe the link between climate variability and water quality in affecting human health. Sources of information were patients who have already attended in the hospital. Also, doctors and nurses in the hospital were interviewed in order to cross-check the data.

The secondary information was collected from TMA, MORUWASA and STH. Furthermore, literatures and documentary searches from SNAL, SMC and Morogoro Regional Library were consulted to get a more detailed and well researched in formations.

Data collection tools
Data were obtained through the use of questionnaires, key informant interviews. These tools were supported by secondary data collected through extensive review of public documents that included climate, water quality and human health.

Sample size
Data were collected purposively from two hospitals found in different wards which were Nunge at Mjimpya ward owned by the government and STH at Kilakala ward owned by private organization. In each ward 75 patients was interviewed which make the total of 150 respondents.

Sampling procedure
Multistage sampling was used to collect data of patients from hospitals. Two hospitals were selected purposively. A total of 75 respondents were randomly selected in each hospital making a total of 150 respondents. Data were collected for five days where 30 respondents were interviewed per day.

Data Analysis and Presentation
Data were analysed at Sokoine University of Agriculture. Quantitative data were coded and analyzed by Statistical Package for Social Science (SPSS) version 16, and Microsoft Excel Sheet. Qualitative data were analyzed by content analysis, summarized and presented in the text. Microsoft Excel Sheet was used for analysis of secondary data .The results were presented into graphs, tables, figures and charts.

RESULTS AND DISCUSSION

Introduction
This chapter present and discuss the results of the assessment on climate variability to water quality and how the polluted water affects human health in Morogoro municipality. The results from Figures 1- 4 show the proportions of respondents in terms of age, sex, level of education and place of origin. These figures show that about 33 respondents or (22%) were females while 117 respondents or 78% were males. The percent of male response was low while that of female was high this implies that women are more vulnerable than men as they are found sick (patient) in hospitals. In term of originality, the results show that about 62% of respondents have born and live in Morogoro and 38% are not born in Morogoro. In term of age, the respondents had the age ranging from 10 to 58 years, the majority (50%) range from 21 to 30 years. Furthermore, the majority respondents have primary education comprising 62%. Those with secondary education constitutes 28%, those with post secondary education were 6% while informal education forms 4%. This shows that, the majority respondents were not educated to secondary or post secondary education due number of reasons including poverty as most of the people are from poor families that failed to take them for further studies.

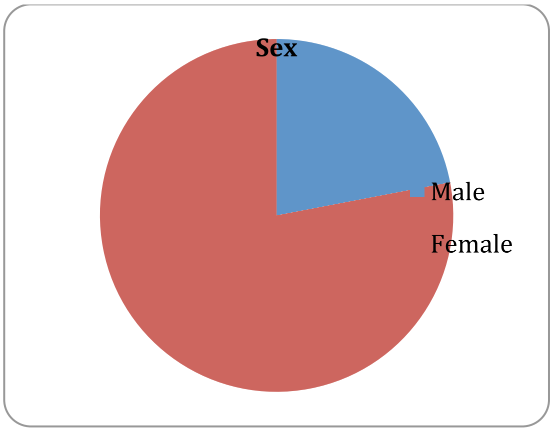

Figure 1: Sex of Respondents
Source: Field Survey Data (2012)

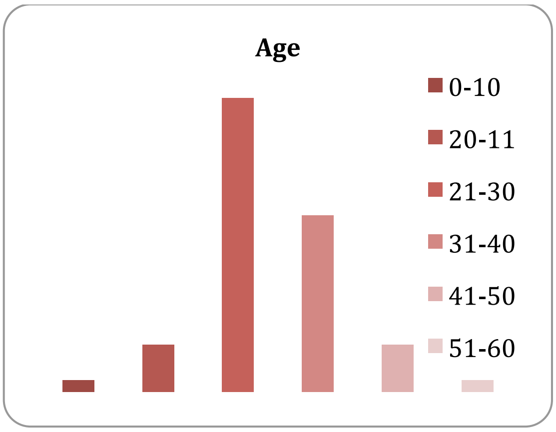

Figure 2: Age of Respondents
Source: Field Survey Data (2012)

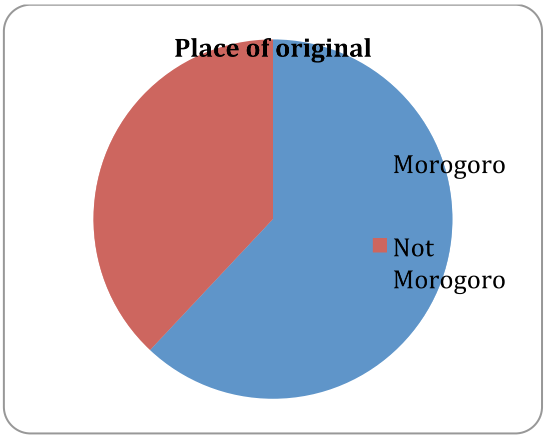

Figure 3: Origin of respondents
Source: Field Survey Data (2012)

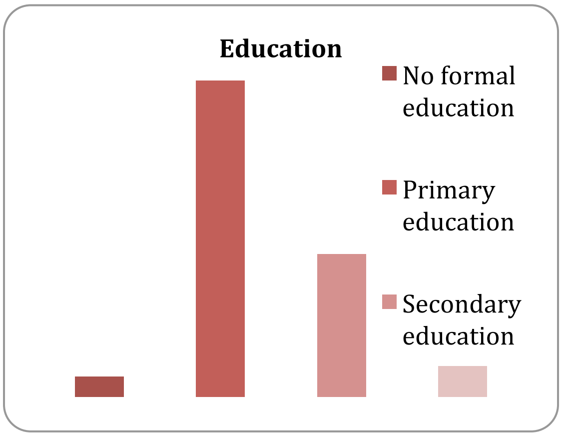

Figure 4: Educational level of respondents
Source: Field Survey Data (2012)

Climate Variability and Water Quality

Perception on Rainfall

The study show that 3% of respondents said that rainfall is increasing, 46% said it is decreasing, 40% said that it is fluctuating and 8% said they do not know about the trend of rainfall as shown in Table 1 below.

Table 1; Respondents Perception on Trend of Rainfall

Parameter	**Distribution**	**Percentage (%)**
Rainfall	Increasing	6
	Decreasing	46
	Fluctuating	40
	Do not know	8
	Total	**100**

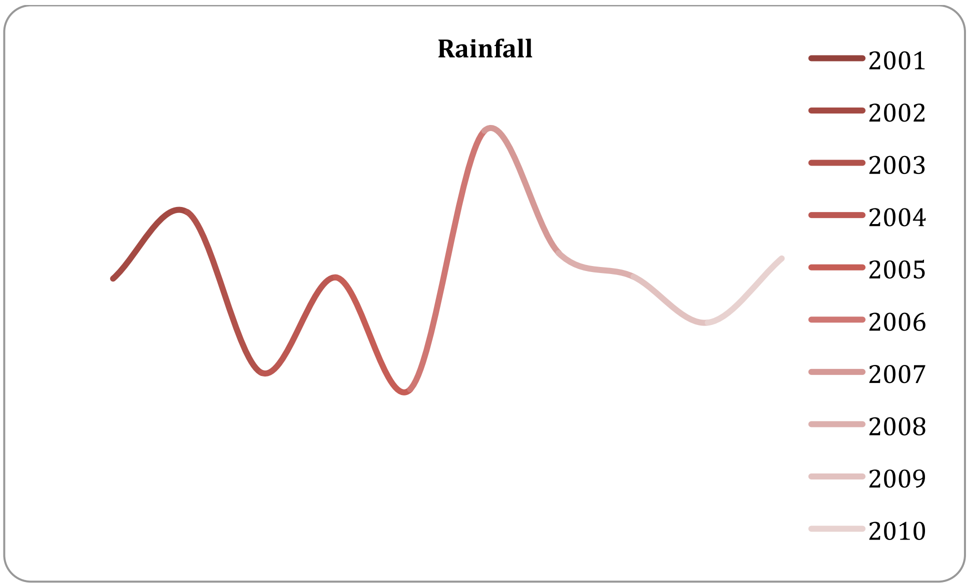

Figure 5: Trend of rainfall from 2000 to 2012
Source: TMA (2012)

The findings presented in both Table 1 and Figure 5 shows that the trend of rainfall is highly variable at the decreasing trend. However, people from TMA (Figure 5) above shows that the trend of rainfall is fluctuating. In the years 2003 and 2005 there was very low average rain per year which is 41.2 and 37.3 respectively, while 2007 was having high average rainfall of 98.5 per year while 2001,2004,2008 and 2010 were having rainfall ranging from 63.5 to 69.6. 4.2.2. This implies that the rainfall pattern varies. The variation of rainfall has impacts to socio-economic livelihoods of the people especially health and poverty.

Temperature

The study findings from Table 2 below show that 50% of the respondents said that temperature is increasing, 18% said it is decreasing, 20% said that it is fluctuating and 8% said they do not know.

Table 2: Respondent Perception on Climatic Condition

Parameter	Distribution	Percentage (%)
Temperature	Increasing	50
	Decreasing	18
	Fluctuating	20
	Do not know	12
	Total	**100**

Source: Field Data Survey (2012)

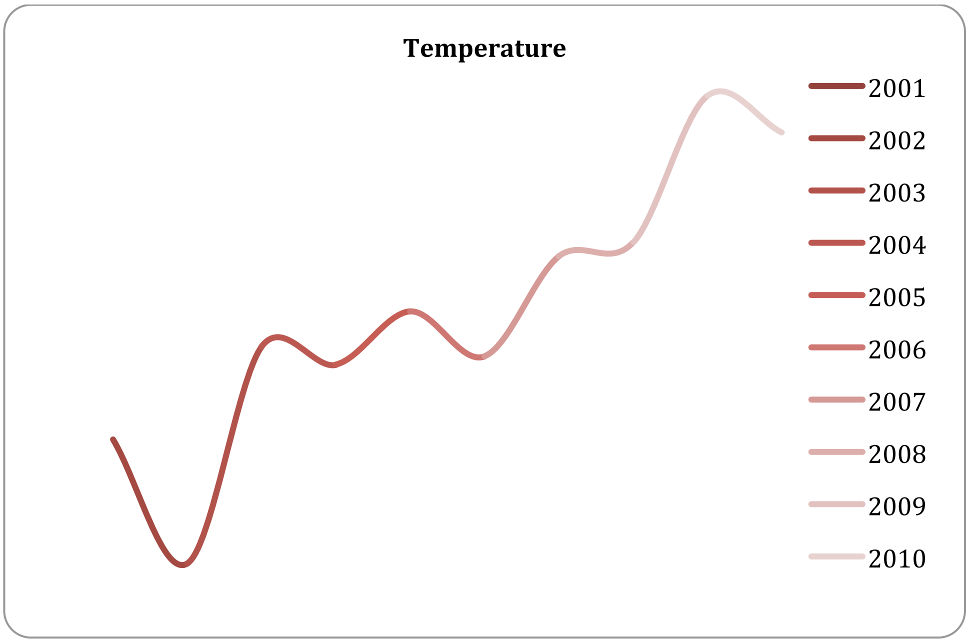

Figure 6: Trend of temperature from 2000 to 2012
Source: TMA (2012)

The result findings from both the study area (respondents) and TMA; show that the trend of temperature is increasing in the study area. The average temperature per year showed to increase from 21.78 0c in 2002 to 25.10c in 2009. These variations imply that climate of Morogoro municipal is not static; it varies referred as climate variability. This variation has lead to eruption of diseases of water born diseases especially cholera and typhoid as a number of patients have been found and admitted to the two hospitals in the study area suffering from those diseases.

Water quality

From the study findings, 88% of the respondents said that the color of water during rainy season is not clear (not clean) and 12% said it is clear. Also about 92% said that the color of water in summer is clear (clean) and the rest said it is not clear (not clean). Then the results from analyzed data from MORUWASA as seen in Figure 7 below shows that pH, color, NO3 and turbidity are varying depending on the season of the year, but fecal coliform showed to be zero. It implies that the changes in these water parameters can be due to variability in climate that regardless the water treatment the parameters are varying. These results give evidences that, water in the study area is not readily safe unless are treated by the user (boiling).

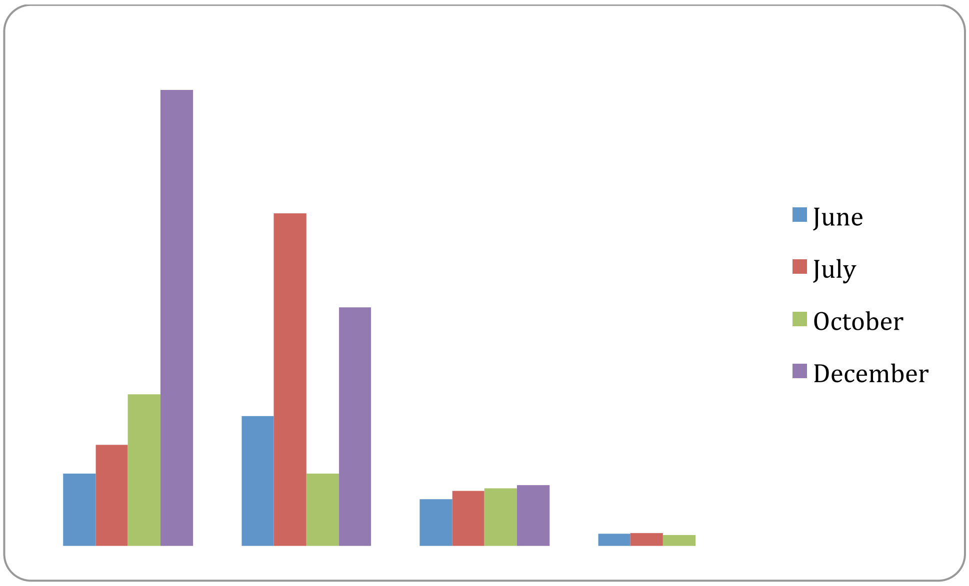

Figure 7: Water Quality Data
Source: MORUWASA (2012)

However from the research done by SUA in Department of Veterinary Microbiology and Parasitology and Department of Food Science and Technology looking the quality of drinking from different sources in Morogoro municipal including Sabasaba, Kiwanja cha ndege, Kichangani and Mjimpya public taps respectively, showed that faecal coliforms, Escherichia coli, faecal streptococci and Clostridium perfringens for a period of 6 months. Chlorinated pipe borne water were found contaminated with microorganisms in the order of 3 8 x 101 to 4 95 x 103, 3 2 x 101 to 4 5 x 103, 10' to 6 4 x 101 and 1.2 x 101 to 25 x 102 in 100 ml of water respectively (Msangi, et el, 1991). This implies that either there was mistake in experiment done by the MORUWASA people or water is well treated from the source but the problems are in water pipes. These findings indicate that there is a need for further treatment of water before consumption in order to avoid potential health hazards.

Human Health

This study shows that 86% of the respondents suffered from water born diseases, 32% suffered from typhoid, 40% suffered from Diarrhea and 14% suffered from dysentery. Apart from water born disease Malaria is a vector born disease 14% of respondents were suffering from malaria as presented in Table 3 below. One of the clinical doctor at STH said “Malaria is one among the diseases which are due to climate change but the government has provide a great support in it, in such a way that its vulnerability has decreased compared to typhoid and other gastroenteritis”.

Table 3: Respondents Health Conditions

	Distribution	**Percentage (%)**
Disease	Typhoid	32
	Diarrhea	40
	Dysentery	14
	Malaria	14
	Total	**100**
Symptons	Stomachache	80
	Headache	18
	Nausea	2
	Total	**100**

Source: Field Data Survey (2012)

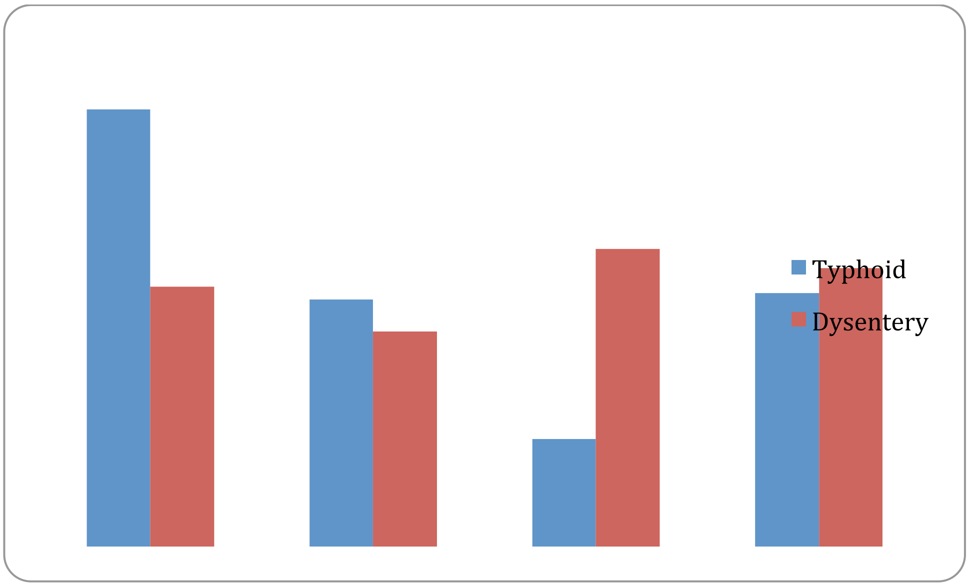

Figure 8: Typhoid and Dysentery Data
Source: STH (2012)

The results from Figure 8 above shows that most of the people (80% of the respondents) who were suffering; the main symptoms was stomachache. To assess the potential risk of deterioration of water quality to human health the adaptation of climate variability to water quality were considered.

Human Health and Climate Change

Data from STH and TMA (Figure 9 below) when combined to compare graphically the relationship existing between diseases associated with water born diseases and climate variability in year 2010 where the results show that the average rainfall from June and August were approximately zero and temperature was low compared to other months, the rate of dysentery were high and typhoid were low compared to others months and the rate of typhoid was higher between January and March when temperature and rainfall were moderate.

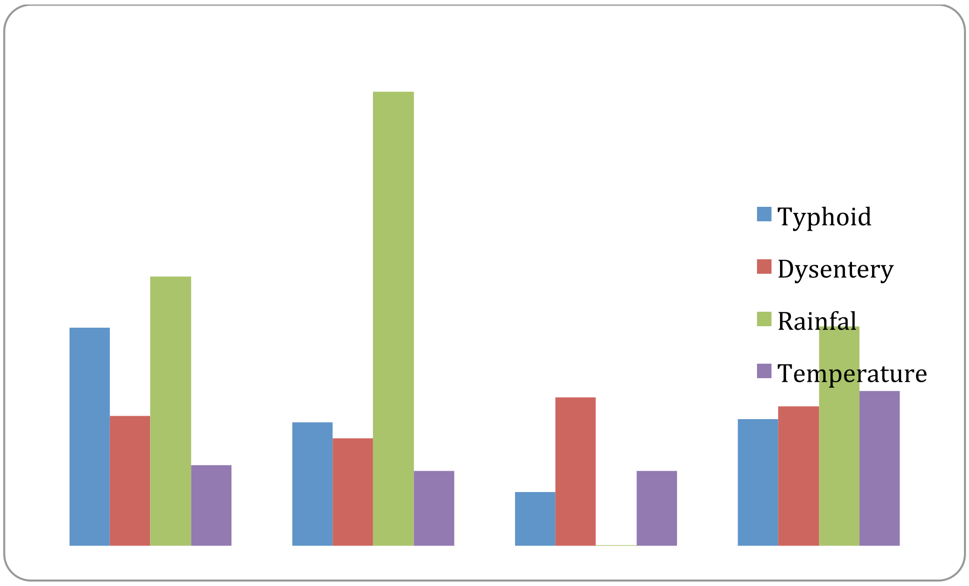

Figure 9: Data of Rainfall, Temperature, Dysentery and Malaria
Source: STH and TMA (2012)

This shows that there is relationship between the amount of rainfall and temperature to typhoid and dysentery pathogens. Mr. Peter, a doctor from STH said "The rate of water born diseases is high due to climate variability even though other factors like environmental pollution and agriculture activities are considered".

In connection to that, a doctor from Nunge hospital said "pastoralism near water sources and deforestation are among the factor for deterioration of water quality affecting human health and measure taken are like planting tree surrounding water sources, educating the community on the importance of treating water from the individual level"

Furthermore, Mr. Edger, a student from Muhimbili said "typhoid and dysentery are heard much in rain seasons because it's when most of waste are taken to the water body through run off even though typhoid can also be cause by poor prepared food because typhoid is both water and food born disease"

In general the results show that climate change and variability has contributed in water quality deterioration. During rainy season agricultural wastes are taken with water as runoff and deposited to the water body. Which deteriorate water quality as a result affecting the human health through diseases.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The findings show that the climate of Morogoro municipal is varying, quality of drinking water is poor and people are much affected by water borne diseases. Water quality has been affected by climate change and variability in term of its appearance (physical condition) plus biological and its chemical condition. This in turn has affected human health as water has been contaminated. This imply that climate change and variability indirectly play part in water deterioration even though there are other factors which bring to synergetic effects to climate change, like population density, human activities such as pastoralism and other economic factors. This is to say that there is a great link between climate change and variability, water quality and human health and cannot be separated but thought how to combat them. Among the ways to combat climate change and variability is to be able to adapt change and in order to ensure good health water should be re treated in house hold level to reduce the risk of diseases.

Recommendations

- Water should be well treated before being supplied and during seasons which makes water more vulnerable to pollution and cause human health problems; there is a need to take all recommendation precaution to reduce impacts.
- Pipe line supplying water to different households should be regularly monitored.
- The government should put effort in ensuring good water supply and action should be taken when found distributed water is not safe either due to poor treatment or irregularity of pipe line monitoring.
- Government also should assist the health sectors by reducing cost for the treatment of these diseases example typhoid.
- Lastly every person should take precaution that is, treating water before consuming in household level.

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