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Foreword

The struggle for wealth has always been a concern, expressing the interest of the individual, community, society in general for changing the living conditions, in a gradual way. The desire to increase the standard of welfare is also the source of individual and society change.

The concerns regarding the EU integration process was born out of careful evaluation of this measure's proposals with equal economic and social effects.

Economic and social role of the state is discussed again and socio-economic policies prove often insufficiently anchored in reality.

Undoubtedly, it is useful and necessary to address social issues in the context of space and economic diversity and the perspective of going through the common social, economic and political road reveals the theme and configuration of modern social conflict. The development of the society is equally conditioned by economic and social progress.

Currently, social policies insistently return into the attention and into the concerns perimeter of policy makers as a result of the widening of socio-economic European space. In this respect, convincing arguments are related to the expansion of social issues, the removal of limitations on social rights (especially for people coming from the East), the protection of the individual against socio-economic insecurity, the reasons for social security access.

Competitive market shares, major social and political transformations, can equally contribute to economic progress and development only if the issue of the individual overlap and correlate with the economic. The understanding and the awareness of the social component importance of human economic development requires the coordination of social systems at community level.

Employment and labor migration at EU level, profesional training in compliance with the European standards, labor flexibility and social protection in the face of economic restructuring, the need to increase revenues at the level of European salaries, etc. are a few of the economic challenges designed to boost community-based social policy decisions.
When *economic growth* and *social progress* enter the same area of “turbulences”, change is required. It becomes clear the fact that going forward requires a serious and thorough review of social rights, their evolution in the new context, and in the spirit of which will appear a new package of social policies.

Editor-in-Chief
Professor Mariana IOVIȚU, Ph.D.
The Cash Flow Panel Instrument for Reporting and Analysis of Activity of the Economic Entities

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Cash flow arising from relationships with third party entity that occur in connection with fighting money mutual rights and obligations are known as cash flows. Accordingly to the three types of specific activities of economic entities, we find three of its essential functions, namely: operating, investing and financing, each of these features contribute to the variation in cash. In Romania, the cash flow statement is considered part of the annual financial statements since 2001, with the entry into force of the Gazette 94/2001 for approval of accounting regulations harmonized with the Fourth Directive of the European Economic Community and International Standards Accounting.

Keywords: financing, investing, operating, cash flow panel

JEL Classification: M1, M5

Introduction

Any economic entity is an open system that has multiple and complex relationships with both its structural components and the outside environment, generating, real flows and cash flows.

Treasury's flows arising from the relationship with a third party entity that occur in connection with fighting money mutual rights and obligations are known as cash flows (Onofrei, 2006).

According to the three types of specific activities of economic entities, we find three of their essential functions, namely: operating, investing and
financing, each of these features contributing to the variation in cash.

The continental accounting system, applied in our country and in the Anglo-Saxon countries as well, recognize three categories of cash flows, classified by the type of what they generate in: cash flows from operations, cash flows from activities investment, cash flows from financing activity.

**Treasury of economic entities**

Any economic entity represents an open system that has multiple and complex relationships both with its structural element and with exterior environment, which generates real flows and cash flows.

*Cash flows* coming from the relationships that the entity has with the third part occurring in connection with the termination of rights and obligations of mutual funds are known as treasury flows (Halpern, P., Weston, J. F., Brighman, E. F., 2000: 78).

There are three essential functions, namely: operational, investment and financing, which correspond to all three types of activities specific to an economic entity, each of these functions contributing to treasury variation. Both European accounting system, applied in our country, and the Anglo-Saxon system recognize the three categories of treasury flows, classified according to type of activity that divides them into: treasury flows from operation activities, treasury flows from investment activity, treasury flows from financing activity.

For liquidity management, used a document called cash flow forecast which will highlight future cash flows on the three types of activities of the economic entity.

In Romania, the cash flow statement is considered part of the annual financial statements since 2001, with the entry into force of the Gazette 94/2001 for approval of accounting regulations harmonized with the Fourth Directive of the European Economic Community and International Standards Accounting.

Current regulations in force, respectively Gazette 3055/2009 approving accounting regulations consistent with European Directives repealed Gazette 1752/2005 which was made a number of changes in accounting reports did not contain specific provisions related to its preparation, which allows enforcement existing international practice. International Accounting Standard IAS 7 Cash flow statement, cash flow sets (the context of our work and cash flows) as the entrances or exits of cash and cash equivalents and cash flow by drawing panel
is intended to provide a base of users of financial statements to assess the economic entity’s ability to generate cash and cash equivalents and its needs to use those cash flows.

In the cash flow statement, according to the functional approach to the economic entity’s activities, flows are grouped together, as I said, in three categories:

- flow generated by operating activities (operating);
- investment flows from the activity;
- flows generated from financing activity.

Corresponding to all three types of activities specific to an economic entity, we observe its three essential functions, namely: operational, of investment and of financing, each of these functions contributing to treasury variation. Both European accounting system, applied in our country, and the Anglo-Saxon system recognize the three categories of treasury flows, grouped according to nature of activity that divides them into: treasury flows from operation activities, treasury flows from investment activity, treasury flows from financing activity. Thus, treasury of economic entity may be analyzed in terms of flow, namely money collections and payments during a certain period, but also in terms of stock, that is the treasury of an economic entity, at a certain point, the connection between both variables being achieved like: treasury at the beginning of period + collections of period – payments of period = treasury at the end of period.

Cash flows proceeding from operation activities are the consequence of the main activities that produce the economic entity incomes, the first resulting from transactions that get together to give the net result. The value of cash flows that come from operation activities is a key indicator of the extent to which the economic activities of the economic entity have generated sufficient cash flow to repay loans, maintain the operating capacity of the entity, pay dividends and make new investments, without recurring to external financing sources. As well, used along with other information, values of cash flows related to operating activities may be useful for forecasting future cash flows related to operations. 7 IAS (International Accounting Standards) illustrates some of the cash flows generated by operating activities: cash receipts from the sale of goods and performance of services, cash receipts from royalties, fees, commissions and other income, cash payments made to suppliers of goods regarding taxes and charges, payments and cash receipts generated by the purchase / sale of securities purchased for speculative purposes (investment or
trading), given that they are assimilated to stocks.

*Cash flows arising from investment activities.* Investment activities consist of the acquisition and transfer of long term assets. In this category appear: cash payments for acquisition of land and fixed assets, intangible assets and other such long-term assets, cash payments resulting from construction done for its own purposes, cash receipts from the sale of land and buildings, plant and equipment, intangibles and other such long-term assets, cash advances and loans made to other economic entities not if the economic entity is a financial institution which grants an advance, proceeds from the repayment of advances and loans made to other parties (if not a financial institution).

*Cash flows arising from financing activities.* Financing activities are activities that consist of changes in the size and composition of equity and debt of economic entities. This category includes: cash receipts as a result of issuing shares, cash payments to shareholders to purchase or trade in shares of the economic entity, cash receipts as a result of the issuance of bonds, proceeds of loans obtained, cash repayments of loans. Statement of cash flows can be made, in accordance with IAS 7, using either direct method, that information relates to receipts and payments in their rough sizes or indirect method that the net result is corrected with influence monetary transactions with nature, with elements. Revenue and expenses associated with cash flows covering investment or financing activities, to influence changes in working capital items required for the treasury.

Economic entities are encouraged to report cash flows from operating activities using the direct method, since it provides information useful in forecasting future cash flows and are not available, the indirect method.

Although IAS 7 should use the direct method, especially for informational needs of investors who can make a better forecast of future cash flows, most economic entities prefer using the indirect method because the method of calculation closer to accounting reporting format and to the more discreet in the publication of financial statements required by the cash flow statement direct method would not benefit image entity.

We propose, for example, developing cash flow statement using direct method, for 2011, SC TELEDIGI S.R.L. Constanta, based on data from financial statements (Table no.1):
Table 1: The cash flow panel  
Source: annual accounts of economic entity SC TELEDIGI S.R.L Constanta

<table>
<thead>
<tr>
<th>Element name</th>
<th>Financial year</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Previous 2010</td>
<td>Current 2011</td>
<td></td>
</tr>
<tr>
<td><strong>Cash flows from operating activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receipts from customers</td>
<td>7,166,698</td>
<td>6,688,848</td>
<td></td>
</tr>
<tr>
<td>Proceeds from short-term loans</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Payments to suppliers and employees</td>
<td>5,537,580</td>
<td>4,949,235</td>
<td></td>
</tr>
<tr>
<td>Interest paid</td>
<td>22,287</td>
<td>17,307</td>
<td></td>
</tr>
<tr>
<td>Payments to consolidated budget</td>
<td>80,959</td>
<td>206,168</td>
<td></td>
</tr>
<tr>
<td>Proceeds of insurance against earthquakes</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Net cash from operating activities</strong></td>
<td>1,525,872</td>
<td>1,516,138</td>
<td></td>
</tr>
<tr>
<td><strong>Cash flows from investment activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of shares</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Purchase of tangible fixed assets</td>
<td>838,028</td>
<td>470,111</td>
<td></td>
</tr>
<tr>
<td>Proceeds from sale of tangible</td>
<td>61,612</td>
<td>62,943</td>
<td></td>
</tr>
<tr>
<td>Interest received</td>
<td>10,831</td>
<td>31,409</td>
<td></td>
</tr>
<tr>
<td>Dividends received</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Net cash from investment activity</strong></td>
<td>-765,585</td>
<td>-564,463</td>
<td></td>
</tr>
<tr>
<td><strong>Cash flows from financing activities:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from issue of shares</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Proceeds from long-term loans</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Payment of financial leasing liabilities</td>
<td>247,861</td>
<td>121,044</td>
<td></td>
</tr>
<tr>
<td>Dividends paid</td>
<td>131,917</td>
<td>143,900</td>
<td></td>
</tr>
<tr>
<td><strong>Net cash from financing activities:</strong></td>
<td>-379,778</td>
<td>-264,944</td>
<td></td>
</tr>
<tr>
<td><strong>Net increase in cash and cash equivalents</strong></td>
<td>380,509</td>
<td>686,731</td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents at beginning of period</td>
<td>-</td>
<td>380,509</td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents at end of period</td>
<td>380,509</td>
<td>1,067,240</td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

Although IAS 7 should use the direct method, especially for informational needs of investors who can make a better forecast of future cash flows, most economic entities, from Romania, prefer using the indirect method because the method of calculation closer to accounting reporting format and to the more discreet in the publication of financial statements required by the cash flow statement direct method would not benefit image entity.

The presence of the cash flow statement helps not only to improve information for users but also to strengthen the prime source of accounting information, due to the basis of any strategic and financial analysis.

References

2

Life Insurance - Their Characteristics Importance and Actuality On The Romanian Market

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For the twenty-first century life, there cannot be a real, long-term and sustained progress, without insurance. Let’s only consider the avalanche of natural disasters and acts of terrorism in recent years that have affected many parts of the world, brought suffering to millions of people and caused huge economic losses.

The common knowledge that a country’s economic strength lays in banking and insurance needs no arguments. It is not accidental that the most stable economies, where even population’s prosperity is remarkable, are found in countries where insurance is well represented in economic life.

In a modern economy, insurances play an important role due to its contribution to financial stability, by promoting effective control of various risk categories and mobilizing people’s savings.

This paper plans to identify the main characteristics, trends and developments of life insurance products and their market, as well as the interactions between the insurance sector, banks and financial markets and to highlight some of the determinants of insurance demand. Also, another topic addressed is the current economic context, and the effects of inflation and economic recession on this sector.

Finally, this paper contains a short observation of the evolution of this particular market, striving to make a “prediction” of the immediate prospects of this activity.

Keywords: life insurance, insurance contract, insurant, insurer, protection, insured risk, risk transfer, financial sustainability, solvency, inflation, financial stability, risk management.
Introduction

Over time, many wise people have made references in their thoughts on insurance. The reason people care is about the present and especially future. It is a natural part of prevention and providing a sense of belonging to which is a part of tradition, education, the natural way of thinking ahead and even of instinct.

The insurance sector has an important role in the economic development of a country, mainly by its role of intermediary and provider of financial services and by identifying the risk transfer of the society.

Due to the broad scope and diversity of insurance, the continuing inventiveness if insurers, reinsurers and brokers to offer new forms of risk protection for more and more varied risks that sometimes go beyond the classical definition of insurance, studying this field is limitless and requires a growing interest. It is a very dynamic and comprehensive field, both in quantity and in quality, whose development marks the economic and technological progress and, why not, the progress of mankind in general.

Moreover, the insurance companies facilitate long-term investments, thus offering financial stability and encouraging the accumulation of new capital while providing both individuals and corporations with insurance in front of different risks that may affect their activity in different ways.

The demand for life insurance grew rapidly in recent decades, due to socio-economic changes, extension of life expectancy and improvement of financial education. All this contributed to an increase of dependency costs and provided a reason for covering it through insurance. Also, the limits of social welfare and the pressure of taxing are widely seen as stimulators of life insurance consumption, as the the public institutions will cover increasingly less of the financial needs of the population. Furthermore, development of financial savings for retirement age is seen as a factor that strongly sustained the demand for life insurance.

A short history of life insurance

Society development is marked by people’s effort and drive for their own prosperity and for their defence against events which may jeopardize their existence and becoming. No matter how much we try to avoid problems, nobody can ever be sure of success. Some adverse events (calamities of nature,
accidents, loss or reduction of work capacity following illness or old age) imply trauma or significant financial loss.

Life insurance has emerged just from the man’s need of protection in the face of danger and finding appropriate solutions to remove them.

Long ago, people felt the need of compensation for a person who died. The oldest forms of insurance are common since antiquity and date back about 6,500 years. Egyptian craftsmen stone cutters, established a relief fund, formed by everybody’s contribution to cover the damage caused by various calamities that struck community members.

In ancient Rome a burial association was constituted, based on a Regulation of the funeral Board of Lavinium, that work on the basis of fees for registration and regular payment. Thus, Association members were insured to have a pyre and a grave when they died.

However, the first insurance contract discovered is dated 18 of June 1583 and was completed in England, as a life insurance policy on the name of William Gibbons, worth £ 383. The contract had a term of 12 months, during which the amount had to be paid if the owner died. On May 8th, Mr. Gibbons died, so that the sum was paid.

In the next 100 years, life insurance existed mainly in the form of short-term policies issued by mutual associations, in which members contributed to a pool that provided the amounts payable in the event of death. As mutual associations grew and had profits, more insurance offices were created in England, starting with the seventeenth century.

Another form of insurance was the system of granting life annuities, called tontines’, which emerged in France in the seventeenth century and then spread to Holland, England and Germany. The system was based on the principle of life insurance, but participants received life annuities instead of the insured amounts. At the end of the eighteenth century, life insurance companies that did not share their profit with the policy owners were constituted. In these companies, profits were distributed to the shareholders. In 1762 it was signed, for the first time, a life insurance based on mortality tables.

Emerging in Europe, life insurance also expanded rapidly on the coast of America, where the insurance industry was dominated by British insurance companies. Elizur Wright created several American insurance companies and supported the enactment of state control over insurance companies. He helped

1 Tontines are associations established for a period of time (eg 15 years) consisting in a number of adherents who give to the common fund an annual fee that vary according to age.
develop a method for calculating the correct premium reserve of life insurance and appropriate tables necessary in the field of life insurance. In 1859, there were 18 life insurance companies functioning in USA and Canada. Laws were changed and a series of government regulation were obtained.

Nowadays, life insurance companies have seen a strong development, focusing on diversification of products for the customers. Marketing has become a widely used concept, while companies realized they must focus their efforts towards the customers. Sale forces began to have a significant share in this industry. Products became more complex and began to perform other functions besides that of insurance in case of death.

U.S. market is the largest in the world, over 65% of their population having a life insurance. Another developed market is that of Great Britain, in which over 61% of the population insured their life. Emerging markets include Eastern Europe, China, India and Brazil.

In Romania, the guilds from Transylvania, founded in the 16th century, were the first organizations that practiced a form of insurance on the principle of mutuality and mutual assistance. In the 19th and 20th century, following the development of society and the increasing complexity of activities, people’s interest in the insurance also grew. The first actual insurance organization was established in Brasov in 1844 by the Craftsmen Association and it was named “The National Institute of Pensions”, being specialized in life insurance. Historical conditions in Transylvania allowed that, under the influence of important insurance companies of the time (Assicurazioni Generali and Riunioni Adriatica di Sicurta), the population of this part of Romania to acknowledge the insurance institution before other parts of the country.

In the second half of the 19th century and first half of the 20th century, following the economic development of the country, the insurance sector also grew and a number of insurance companies such as Transylvania-1866, Dacia-1871, Romania-1873, National-1882, General-1887, Agricola-1906, Urania, Patria, General Insurance Bank-1911. After moving the headquarters to Bucharest, General insurance company diversified insurance Operations especially in the life insurance industry, having around World War I a prosperous financial situation.

In 1923 the insurance company Romanian-Insurance was established and had a rapid growth through the introduction of popular life insurance without medical examination. It should be noted that until World War I foreign insurance companies only participated as shareholders in Romanian insurance
companies and after 1918 they opened their own agencies and branches. Since 1940 there was a massive penetration of the German capital on the Romanian market by companies like Victoria, Vatra Dornei, Allemania, Dacia-Romania, Nationala, Steaua-Romaniei, Transilvania.

In 1930 in Romania operated 44 insurance companies, out of which, following the competition on the market in 1936 only 23 were still working. In terms of state intervention in the insurance area it is noted that in 1915 The Insurance Company of Interior Ministry was founded and was reorganized in 1936 and in 1942 the Autonomous Direction of Insurance was established.

The communist period of 45 years has brought important changes in Romanian economy and society. First of all we remember the nationalization and socialization of property, the establishment of centralized management of economy and society, economic subordination to one-party political leadership, the transition from the market economy to planned economy, centrally directed, etc.

The insurance sector underwent a period of changes, some positive others imposed by the quality of monopoly that the state has imposed. A first step was made in 1948 when insurance companies were nationalized and handed over to the state. Their entire portfolio and technical and mathematical reserves went to the Soviet-Romanian insurance company, Sovromasigurare.

In 1952 the State Insurance Administration was created, ADAS, who took over the business of the State Reinsurance and reinstated the practice of insurance by law. Sovromasigurare insurance company practiced optional insurances. In 1953 Sovromasigurare was liquidated and its portfolio was taken over entirely by ADAS. ADAS practiced insurance of goods, people and legal liability in two forms: a) insurance by law, b) optional insurance.

Along with the transition to market economy the insurance industry has also entered a process of profound transformation. Starting January 1, 1991 ADAS has ceased operation. Insurance portfolio and heritage of this company was taken over by the first three stock insurance companies, newly established, state-owned (Romanian Insurance, Astra and Carom). In the summer of 2000, Astra also introduced in its portfolio the practice of life insurance with capital accumulation.

After 1990 on the Romanian insurance market appeared a number of private insurance companies, some with Romanian capital, some with mixed

capital and some with foreign capital, all trying to grab as much as they could of the Romanian insurance market.

In conclusion, the insurance in Romania experienced a slow evolution as being due to economic, political and social conditions of each period. The nature of under insured market with a lack of knowledge of the advantages brought by protection through insurance still remains today. People insurance on a contractual basis also registered a limited development and diversification, not covering the needs or the ability of national economy. Moreover, the mere state insurance mechanism could not be competitive enough to stimulate the development of a sector so important for any national economy.

**The concept of life insurance. The specificity of life insurance products**

Life insurance is a form of protection of the dependants or of other people designated as beneficiaries in the event of the insured person’s death (the person whose death risk is insured), that gives financial security to the family so that after the insured person dies the family can be able to manage financially.

In terms of the insurance company, life insurance is a way to transfer the financial risk attached to the loss of life or health of an individual to a group of individuals, exposed to the same risk. In terms of the individual, life insurance can be defined as an agreement through which the insured pays a certain amount of money – the insurance premium – and in exchange to that the insurer will pay a certain amount of money – the insured sum – in case of death or compensation.

Life insurance is a way of financial protection of an individual and his family. As a way of individual protection, life insurance generates an extra income for a certain moment in life by ensuring a capital or a pension. The purpose of life insurance is to guarantee the payment of a sum of money by the insurer, in case of an event related to the insured person: injuries, illness, death or his survival. Life insurance, unlike general insurance, has certain characteristics:

- The capitalized value is a fund that accumulates during the entire duration of the policy and to which the policy holder can have access in many ways;
- Financial difficulties within life insurance are determined by what
money is needed for the funerals, ensuring some financial resources to the successor, after the insured dies, moral recovery after the death;

- The reasons for which people make a life insurance are: stress, personal motivations, their idea about death;
- Risk is defined by most economists as an actual loss, or loss caused by negligence that may have consequences on an individual or on a property;
- The insured amount is determined at a flat rate by the insured, according to his needs and financial possibilities;
- Insurance indemnity is the sum of money that the insurer pays to the insured if the insured risk happens;
- The insurance contract it is concluded in writing (by completing a statement of insurance);
- Termination of the insurance contract is done in the following ways: the usual way is when the contract expires at the end of the period for which it was enclosed; the contract also ends if the ensured risk occurs;
- Denunciation shall be made by the insurer if the insured did not communicate, in writing, the changes in the contract about the data considered in the signing of the contract;
- Cancellation means temporary termination of the contract because one of the parties din not accomplished their obligations out of reasons that can be charged to them. Effects of the contract to termination shall remain valid.

Nullity of the contract may be caused by inaccurate or incomplete statements made by the insured, or lack of insurable interest from the contractor, upon its conclusion. Today, life insurance is practiced in many forms, most of which occurred in recent decades, and are based on increasingly varied needs of people.

The main life insurance products may include or not, next to a component of insurance, which is an insured guaranteed sum in the event of the insured person’s death, a component of “cash”, which can be a savings plan or an investment one. The latter presumes an insurance premium (the amount paid to the insurer in exchange for the protection and savings that they offer to the insured) considerably higher.

Consequently, the most important types of life insurance are term insurance and those with savings or investment component. Besides these main categories there are other forms of life insurance that are sometimes separated policies (eg, accident insurance) or appear as clauses attachable to
the above listed types of insurance or have benefits for a greater number of people (shared life insurance, group insurance).

*Term life insurance* provides protection for a specified period, usually a short one, for a specified premium. In this case, there is no accumulation of capital and protection refers mainly to covering the risk of death. Insurance premiums for such policies are generally small, as it is considered that the possibility of death of the insured in the contractual period is relatively low.

Regarding term insurance, the insured amount can remain constant over the whole duration of the contract or may decrease, the premiums remain constant or increase and the duration of contract is generally of several years. If the insured dies during the period of the contract, the beneficiary designated in the policy collects the death benefit called indemnity insurance. If the insured does not die during the period of the contract, the beneficiary does not receive anything and the policy ceases without any obligation of the insurer. Death following suicide of the insured is covered only after two years of contract.

*Savings insurance* can be on indefinite period, mixed, rent for studies, dowry, unit-linked or annuities. Savings insurance are usually made for longer periods, may remain in force until maturity and do not cease unless the owner stops paying the premiums. This type of insurance requires constant deposit of amounts which, over time, decrease the risk assumed by the insurers to pay compensation if the insured event happens. The owner can have access to the money through various types of withdrawals or redemptions.

• Indefinite term insurance covers the risk of death over a longer period than the term insurance (e.g. up to 95 years). Usually, the condition is that the premiums to be paid until retirement. The main advantages of this type of insurance are the guarantee of a benefit at the moment of death and an amount of money for survival. On the other hand, the premiums are inflexible, much higher than term insurance and the amount of money for survival does not offer a proper gain, but the insured amount indexed to inflation.

• Mixed life insurance allows capitalization, thus covering not only the risk of death but also the survival. The protection component of the policy guarantees an insured amount payable to the beneficiary named in the contract, when the insured dies. On the other hand, if the insured does not die, the beneficiary named to survival receives the same sum and the capitalization.

• Dowry or studies insurances are similar products, set up to accumulate an amount for the child, accessible at the time of marriage or studies, to provide support for an independent life. By this type of contract, the parent makes
sure that in the event of his death the child (beneficiary) will receive the sum insured, at the time of marriage or a certain age or the study rent starting at the age established in the contract. The amount paid by the company is made in a single tranche for dowry and sequenced for rent of studies. If the beneficiary dies, the policy becomes a mixed life insurance.

• Unit-linked insurance (UL) is a relatively new product that covers the protection component of life, but also offers the possibility of a medium and long term investment. Thus, the insurant protects his family in the event of his death, but has the opportunity to add a gain to what he saves and can receive a surplus to what he deposits. Some of the insurance premium is used to cover the costs related to the risk of death of the insurant and most of it is invested in units of the insurer’s investment programs, as determined by the insurant (owner). The investment accumulates in an account of units. When signing the policy, the insurant chooses the investment type of his first premiums, but during the contract he can change the selected program or programs. The protection component implies the existence of an insured amount of money guaranteed by the insurer over the period of the contract, in case the insurant dies. The advantage of investing through an UL type insurance is the fact that being done on medium and long term, the client can obtain a reasonable gain.

• Annuities do not represent a life insurance in itself, but a means by which a person can use their already accumulated capital, over a longer period of time, usually after he ceased to produce other income (retirement age). Annuity is paid by the company periodically to the annuity receiver (person receiving an annuity). This payment can be made throughout the life of the annuity receiver or over a shorter established period. For setting up the authority to receive annuity, the client deposits money either through a single premium or installment premiums. The main advantages of the annuities are the safety in maintaining a living standard through periodic amounts paid by the companies, enabling a financial stability for the whole family and that can transformed into funds to cover death expenses and funds for the descendants.

The only authority empowered by law with powers of authorization, prudential supervision and control of the insurance business / insurance brokerage in Romania is the Insurance Supervision Commission (CSA). CSA has the duty of issuing norms for the application of insurance laws. Insurance Supervision Commission operates under Law no.32/2000 regarding the insurance activity and insurance supervision, with the subsequent amends and supplements. This law regulates the organization and functioning of
insurance companies, insurance-reinsurance and reinsurance as well as the
insurance brokerage, the organization and functioning of the Insurance
Supervision Commission, supervision of insurers and reinsurers that operate
in or from Romania, supervision of the activity of insurance and reinsurance
intermediaries and other activities in connection therewith.

The role of the Insurance Supervision Commission consists mainly
regulating and monitoring this type of market, in terms of financial stability,
fair play and honoring the assumed obligations. Also, this authority is the one
that monitors the insurance market indicators such as liquidity, establishment
of technical reserves and solvency in order to detect early any major problems
that could affect the financial capacity of insurance companies. In a still very
fragile economic environment, the supervisory authority of the insurance
market is interested in the development and implementation of standards and
solid principles of risk management.

The current economic context of the insurance market,
evolution and perspectives.

Life insurance demand has increased rapidly over recent decades,
significantly exceeding worldwide income. The socio-economic changes,
the increasing life expectancy and the improving of financial education
contributed to this growth. In addition, the limits of social welfare through
taxes, reaching a critical point, are being anticipated as stimulators of the life
insurance consumption, the more so as the public institutions will cover less
and less of the financial needs of the population.

Opening domestic markets to foreign competition has resulted in the
emergence of increasingly diversified and attractive life insurance products.
Also, the acknowledgement of the needs to save for retirement is another
factor to support the growing demand for life insurance in rapidly maturing
economies. Along with this we can enumerate and evolution of disposable
income, life expectancy, number of dependents, level of social security
spending, inflation and the real interest rate.

In Romania, the insurance market it is still in an early stage of
development, mostly seen in the developing countries that in a country that is
an EU member3. In contradiction to some optimistic prognosis, a turnover of

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3 A report on the insurance market and the activity of CSA 2010, www.csa-isc.ro, publication issued by
CSA, June 2011
10 billion euro in 2010 and approximately 20 billion euro in 2020, its standard it’s still low, of only 2.4 billion euro in 2008. The contribution of the insurance industry to the GDP is under the European average.

Because life insurance contracts are long-term, the negative effects of the inflation on the insured value have been increasingly felt. While the life insurance products are designed to offer protection against premature death, inflation and the rising cost of life can undermine this protection.

In a time when the world’s economy was rising, the insurers focused more on promoting their products in order to generate revenue and less on risk control. This subsequently led to great loss (2008, 2009) and to a drop of this market, many insurance companies merging or temporarily suspending their activity.

A decrease in the population’s revenues, because of unemployment, reduced the ability of consumers to finance the insurance costs. Also, investment market decline and the reduction of the pace of economic growth, limited the capacity of insurers to generate income. A decrease in the population’s revenues because of unemployment, reduced the ability of consumers to finance the insurance costs. Also, investment market decline, the reduction of the pace of economic growth, limited the capacity of insurers to generate income.

However, the insurance had a stabilizing effect due to long term investments and prudent, even conservative investment policy, largely dictated by the requirements of solvency. The profitability of insurance decreased due to the crisis, mainly in life insurance, by a reduction of investment performance because of a drop in stock indexes and financial market volatility. Solvency margin for the insurance field remained, generally, very good.

In the euro area countries, Japan and the U.S., the levels of interest of the government bonds issued for a period of 10 years reached record low levels. The infusion of cash made by governments of various countries in the financial system to save the banking system, had an adverse effect on insurance market, due to reduced interest rates, especially on those life insurance products whose liabilities are affected by the interest rate.

However, there were also positive effects of the crisis on the insurers' activity that came from need to survive and to continue their business. Thus, product offer continued to grow and products to exploit the opportunities for expansion have been launched, compensating for the reduced demand of traditional insurance with a rapid development of products that were more flexible and less costly for the clients.
Diversification of the distribution channels with more emphasis on online sales, communication and better service and quality for customers, lower costs and greater flexibility are, therefore, effects of the crisis and led to more flexibility in the behavior of insurers.

The Romanian insurance market has also seen some effects of the crisis, not very different from those in other countries, but weighted by market size: reduced sales, termination of a much larger number of life insurance policies, insurers shift to alternative solutions for new products, new facilities for existing insurances, new distribution channels and another way of communicating with the clients.

Insurance will bear long-term effects of the crisis, by affecting consumer behavior, a temporary reduction in sales of unit-linked insurance and annuities in favor of increasing sales of guaranteed products with emphasis on safety.

In 2010 the life insurance sector began to recover and in 2011, only in the first three quarters, an increase of 8.43% over the same period of the past year was recorded, a significant share being held by the traditional insurance products (7.6%) against (0.83%) those with an investment component. This increase in the percentage of life insurance agreements is due, on the one hand, to a better information of the population about the benefits of such products. The value of the gross premiums in late 2011 was about 1.29 billion lei, which represents an increase of 5.38% compared with the end of 2010. However, even in 2011 the expectations did not exceed the stage of hope, the market suffering declines for the third year in a row, according to CSA (Insurance Supervisory Commission)4.

Estimates on the evolution of financial markets have become increasingly difficult. Besides the significant influence that the evolution of the other economic sectors exert on the financial industry, we must also take into consideration the living standards of the consumers of financial products, their expectations about the trends of their income in the future and the scarce trust they have in these markets. Insurance industry has experienced a bit later the financial crisis. Therefore, the return to a sustainable growth trend of the market will take place with some delay to the overall economic recovery.

It is premature at this point to say that 2012 will be the year of market re-entry on the upward trend. Rather, this year should be one in which the insurance market as a whole - supervisor, insurers and intermediaries - should

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4 in Buletin CSA, no. 5, March 2011, pe site-ul www. csa-isc.ro
create and implement strategies tailored to the structural economic changes, as they derived from the financial crisis. 2012 is the fourth year when the insurance sector faces new and old challenges, a year when it will have to overcome other obstacles caused by the domestic and international economic and financial context. These being the circumstances, 2012 started under the spectrum of increase pressure on the market, the intensification of the investors’ policies in reducing expenses to increase efficiency and / or profit. Concepts such as underwriting, prudence, pricing policies, objectives such as portfolio cleaning also repeat in the insurers’ words this year.

**Conclusions**

The Romanian market is still very strongly under-insured, with a small amount of premiums and very low advance compared to both the mature European markets and the countries of Central and Eastern Europe. Low insurance advance level below 2%, compared to an average of 8% in Europe and about 3% in countries in the region can lead us to the conclusion that there is still a potential uncovered.

The same feature occurs in the case of insurance density, which is not yet 100 Euro / capita, compared to an average of 2000 Euro at European level. These data should be viewed in the context of Romania’s population average income, because the level and structure of income and expenditure in the EU and Romania are very different. The major differences between our country and the EU also appear in the share of both classes of insurance in total collected premiums. If in the EU life insurance holds about 60% of total premiums, in Romania they do not exceed 20% of total written gross premiums. The reasons are largely related to insufficient or no tax incentives, lack of financial resources, understanding the need for insurance or the tradition of life insurance. To this, add the specific reasons related to the impact of the economic crisis, the high debt rate accumulated by the population years before the crisis, reduced credit, lower income levels and uncertainty about financial security, losses from insurance products that have an investment component and even lower confidence in this field.

Above all of this, there are also the differences regarding the capital’s structure of the companies on the market - in Romania companies with foreign shareholders prevail, the high degree of market concentration, the large number of companies compared to market size, a lower and less diversified
insurance products range, quality of customer service, business practices on the market.

We still have many differences that can be mitigated by stimulating the growth of the insurances and their role in the economic progress, increasing professionalism, ethics and discipline of all those working in this industry and by increasing customers' requirements and their level of understanding insurance.

When referring to what should happen in the market during this period, measures should be taken to promote security and development of the insurance sector, support business growth, increase market confidence in the insurance system, promoting greater transparency, introducing or increasing the deductibility for certain insurance categories that help clients (life insurance, health insurance, private pension, housing insurance - with limits higher than the existing ones), more emphasis on financial education and, more importantly, increase professionalism, discipline and ethics on the insurance market.

The greatest strength of this industry is financial stability, ensured by the presence of strong shareholders with international reputation, which is reinforced by regulations in conformity with European legislation. Insurance industry had a loss of image in recent years because of the quality of services offered to consumers. This is one of the main weaknesses caused by some practices in handling and payment of claims, which have seriously affected consumer confidence in insurance.

The biggest opportunity of the local insurance industry is the significant growth potential it has, if we think about the low level of protection in Romania. Therefore, the professionalism of the insurance industry should be intensified, given the asymmetry between the consumers’ knowledge, the products and services becoming more complex and the information received by the clients.

The experience of financial crisis showed the disastrous effects that can arise from a poor risk management both on the financial sector and on the real economy in general.

Volatile macroeconomic and socio-political environment determined a rapid change in the needs and expectations of consumers of financial products and in the characteristics of the risks taken by the insurance industry. These significant changes, combined with the slow economic recovery prospects, should motivate insurers to rethink their internal processes and operational
strategies and development, adapting them to current market conditions.

Nowadays, insurance companies face challenges arising from an increased frequency of assumed risks, aspect that will require an analytical discipline of existing portfolios and a very high level of risk management practice.

Another challenge which the insurance market in Romania will have to cope with is finding a balance between the real costs of the assumed risks and the prices to which they are sold to consumers, because they have an important influence on service quality and not only.

Insurance market imperfections also occur as a result of selling prices of the products that not always reflect the true economic costs of insurers. These include, besides the cost of risk, all the other expenses of the insurers for their products. A price that is set without a strategic vision, but only based on the moment’s interest to increase market share, not reflecting the real total costs of a product, will adversely affect both profitability and especially their ability to meet the obligations to policyholders.

In preparation for the transition to the new solvency regime (Solvency II), insurers will be forced to rethink their business models and product mix, depending on the expected capital requirements, determined using either a standard formula or by using internal models, complete or partial. Therefore, the new supervisory philosophy of CSA focuses on anticipating trends and future prospects and on stimulating the development of an adequate risk management.

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Potential of Artificial Neural Network Technology for Predicting Shelf Life of Processed Cheese

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Radial basis (fewer neurons) artificial neural network (ANN) models were developed for predicting the shelf life of processed cheese stored at 7-80 C. Mean square error, root mean square error, coefficient of determination and nash - sutcliffe coefficient were applied in order to compare the prediction ability of the developed models. Soluble nitrogen, pH; standard plate count, yeast & mould count, and spore count were the input parameters, while sensory score was output parameter for the developed model. The developed model showed very good correlation between actual data and predicted data with high coefficient of determination and nash - sutcliffe coefficient besides low root mean square error, suggesting that the developed model is quite efficient in predicting the shelf life of processed cheese.

Keywords: artificial neural network, artificial intelligence, radial basis (fewer neurons), processed cheese, shelf life, prediction

Introduction

Processed cheese is very popular dairy product generally prepared from medium ripened grated Cheddar cheese, and sometimes a part of ripened cheese is replaced by fresh cheese. During its manufacture some amount of water, emulsifiers, extra salt, preservatives, food colorings and spices (optional) are added, and the mixture is heated to 70° C for 10-15 minutes with steam in a cleaned double jacketed stainless steel kettle, which is open, shallow and round-bottomed, with continuous gentle stirring (about 50-60 circular motions per minute) with a flattened ladle in order to get optimum
consistency and unique body & texture in the product. An artificial neural network (ANN), usually called neural network is a mathematical model or computational model that is inspired by the structure and functional aspects of ANN. ANN based computing method is an adaptive system that changes its structure based on external or internal information that flows through the network during the learning phase. In ANN based intelligent computing, simple artificial nodes called “neurons” are connected together to form a network of nodes mimicking the biological neural networks (Wikipedia ANN Website, 2011). A radial basis function network is an ANN that uses radial basis functions as activation functions. It is a linear combination of radial basis functions. They are used in function approximation, time series prediction, and control. Radial basis function network consists of one layer of input nodes, one hidden radial-basis function layer and one output linear layer (Mateo et al., 2009). Shelf life studies can provide important information to product developers enabling them to ensure that the consumer gets a high quality product for a significant period of time after production. Since, long time taking shelf life studies do not fit with the speed requirement, hence new accelerated studies have been developed (Medlabs Website, 2011) for many food products. Goyal and Goyal (2011a) implemented brain based artificially intelligent scientific computing models for shelf life detection of cakes stored at 300°C. The potential of simulated neural networks for predicting shelf life of soft cakes stored at 100°C was highlighted by Goyal and Goyal (2011b). Cascade single and double hidden layer models were developed and compared with each other for predicting the shelf life of Kalakand, a desiccated sweetened dairy product (Goyal and Goyal, 2011c). For forecasting the shelf life of instant coffee drink, artificial intelligence models have been suggested (Goyal and Goyal, 2011d; Goyal and Goyal, 2011e). Artificial intelligent scientific computer engineering models for estimating shelf life of instant coffee sterilized drink were successfully applied by Goyal and Goyal (2011f).ANN for predicting the shelf life of milky white dessert jeweled with pistachio were applied by Goyal and Goyal (2011g). The shelf life of brown milk cakes decorated with almonds was predicted by developing artificial neural network based radial basis (exact fit) and radial basis (fewer neurons) models (Goyal and Goyal, 2011h). Also, the time-delay and linear layer (design) intelligent computing expert system models have been recommended for predicting the shelf life of soft mouth melting milk cakes (Goyal and Goyal, 2011i). Computerized models predicted the shelf life of post-harvest coffee sterilized milk drink (Goyal and Goyal,
The proposed study aims at developing the radial basis (fewer neurons) ANN computing model for predicting the shelf life of processed cheese stored at 7-8 °C, which would be very useful for consumers, manufacturers, retailers, and other concerned agencies.

**Materials and method**

Experimentally obtained 36 observations for each input and output variables were used for developing the models.

**Figure 1:** Input and output parameters for ANN models

The dataset was randomly divided into two disjoint subsets, namely, training set having 30 observations (80% for training), and validation set consisting of 6 observations (20% for testing). The input parameters used in developing the ANN model were the experimental data of processed cheese relating to soluble nitrogen, pH; standard plate count, Yeast & mould count, and spore count. The sensory score assigned by the trained panelists was taken as output parameter (Fig.1).

\[ MSE = \left[ \sum_{1}^{N} \left( \frac{Q_{exp} - Q_{cal}}{n} \right)^2 \right] \]  

(1)
\[ \text{RMSE} = \sqrt{\frac{1}{n} \sum_{i=1}^{N} \left( \frac{Q_{\text{exp}} - Q_{\text{cal}}}{Q_{\text{exp}}} \right)^2} \]  
(2)

\[ R^2 = 1 - \left[ \sum_{i=1}^{N} \left( \frac{Q_{\text{exp}} - Q_{\text{cal}}}{Q_{\text{exp}}} \right)^2 \right] \]  
(3)

\[ E^2 = 1 - \left[ \sum_{i=1}^{N} \left( \frac{Q_{\text{exp}} - Q_{\text{cal}}}{Q_{\text{exp}} - Q_{\text{exp}}} \right)^2 \right] \]  
(4)

Where,

\( Q_{\text{exp}} \) = Observed value; \( Q_{\text{cal}} \) = Predicted value; \( Q_{\text{exp}} \) = Mean predicted value; 
\( n \) = Number of observations in dataset.

Mean Square Error MSE (1), Root Mean Square Error RMSE (2), Coefficient of Determination \( R^2 \) (3) and Nash - Sutcliffo Coefficient \( E^2 \) (4) were applied in order to compare the prediction ability of the developed models.

Results and discussion

ANN model’s performance matrices for predicting sensory scores are presented in Table 1.

<table>
<thead>
<tr>
<th>Spread Constant</th>
<th>MSE</th>
<th>RMSE</th>
<th>( R^2 )</th>
<th>( E^2 )</th>
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<tr>
<td>10</td>
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<td>0.051575367</td>
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<tr>
<td>60</td>
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<td>70</td>
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<td>0.999087741</td>
<td>0.999999168</td>
</tr>
<tr>
<td></td>
<td>Sensory Score</td>
<td>Validation Date</td>
<td>ASS</td>
<td>PSS</td>
</tr>
<tr>
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<td>---------------</td>
<td>-----------------</td>
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<tr>
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**Figure 2:** Comparison of ASS and PSS for radial basis (fewer neurons) model

The comparison of Actual Sensory Score (ASS) and Predicted Sensory Score (PSS) for the developed ANN models are illustrated in Figure 2. The results showed that the developed model with 70 as spread constant (MSE: 8.32216E-07; RMSE: 0.000912259; R²: 0.999087741; E²: 0.999999168) got best simulated with a high coefficient of determination and low root mean square error, suggesting that radial basis (fewer neurons) ANN models are useful for predicting the shelf life of processed cheese.
Conclusions

Radial basis (fewer neurons) ANN models were developed for predicting the shelf life of processed cheese stored at 7-80 C. The inputs variables used for developing the ANN model were soluble nitrogen, pH; standard plate count, yeast & mould count, and spore count, while the output variable was sensory score. The experiments results revealed very good correlation between the experimental data and the predicted values, with a high determination coefficient, establishing that the developed ANN models are able to analyze non-linear multivariate data with excellent performance. From the study it is concluded that radial basis (fewer neurons) ANN model is very efficient for predicting the shelf life of processed cheese.

References


Digital Mapping as a Business Opportunity: Exploring Albania

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Albanian economy is strictly connected to the fluctuations economies of its neighbor countries. The conducted research aim at creating a web based GIS platform working as a communication and information source to the prospective of managing a future potential category of investors. The paper outlines the importance of digital mapping technology as a powerful tool which can lead into interesting solutions. We are introducing a set of models regarding specific sector categories explaining how integration of GIS technology can result a perfect liaison bridge between this group of businessman’s and their new terrain of investment, mitigating their hesitancy due to the lack of information and recognition. GIS technology serves as a mirror to evaluate options, opportunities and probabilities. Through GIS tools they can get involved into the economic situation in the country by tracking customers and competitive businesses. Geographic data must be considered as the basic framework of entire organizations.

Keywords: GIS, analyze, business, organization, information, database, digital mapping

Introduction

Albanian economy is very sensitive to the Europian market fluctuations. Since 1991 with the fall of the regime Italy and Greece have become the main partners in Albanian developing economy. Without going into deep approach in the investments these countries have made, must be mentioned a
considerable number of Albanian citizens working in these countries, around 1.2 million which is a considerable number compared to the total population number. It is obvious that the economic crisis that affected these countries will have an inevitable effect on the Albanian economy, not only in the investments but also in the number of Albanian emigrants forced to interrupt their working arrangements or business activities due to the lack of market demand, causing this way a constrained return in the country.

According to statistics more than 66% of the emigrants declared a possible return in Albania in case they found suitable conditions to develop an economic activity. This mass of population will make efforts to integrate into the Albanian market primarily through establishing small businesses. In this case information is of vital importance for succeeding. The long period away from the country creates a great handicap to understand and organize the way to manage their activity. We will concentrate our research considering this category which we are going to call “new” potential businessmen’s and their possible approach to the Albanian market.

“Business intelligence” is a business management term that refers to applications and technologies that are used to gather, provide access to, and analyze data and information. A Geographical Information System (GIS) is a business intelligence tool comprised of a collection of computer hardware, software, data, methods and key personnel that help create, manipulate, analyze and present information that is tied to a spatial location (Karen A., 2007).

Digital mapping consist of a substantial part of GIS technology. A GIS takes the traditional map to new heights and may be described by its process, data, and analytical capabilities. The GIS process involves encoding, storage, processing and display of computerized (digital) maps (Grant M., 2000).

Experience refers to some of the most serious companies in the world that changed their business policy into a deeper approach toward GIS technology with the scope of maximizing the use of available resources (that a company has) to supporting more analytical and complicated decision making. It is very important to understand that by using GIS technology business managers or administrators have the opportunity to go into a higher step of just analyzing information, it is about integrating geographic data (distance, location, direction, etc.,) into the series of tools which can be helpful for future decisions.

**FedEx:** is one of the leading companies in the world that provides
customers and businesses worldwide with a broad portfolio of transportation, e-commerce and business services. FedEx Express is known for its wide usage of GIS technology with the aim of solving complex business problems during the delivery process regarding both planification and execution (Conger R., 2009).

*Nike:* is one of the leading companies in the shoe market. Nike sportswear company through the implementation of GIS technology succeeded to gain a lot of valuable information about the demographic distribution of population, history of sales, distribution (location) of schools and colleges which have popular sports teams in their organic or study areas where the average age of the population was relatively young (Esri, 2010).

**Levi Strauss & Co.:** encompasses the company's largest region and employs approximately 3,100 people throughout the United States, Canada, and Mexico. LS&CO. wanted a tool that would geographically display its existing authorized retailers, potential retailers, and the customers they distribute serve. Through digital mapping the company would ensure that new stores would not adversely impact the sales opportunities of existing stores (Esri, 2007).

**Framework, Web Based GIS Platform**

GIS technology brings every business one step forward towards the others. This group of “new” businessmans which could possibly share a considerable part of the Albanian market may turn in the near future unvalued with their investments and experience. Most of them after several efforts to perform any research about the potentialities of the mart still remain in great disadvantage due to the lack of digital information compared to analogue business competitors which compense this handicap with years of active terrain experience.

A survey (figure 1) was performed with the goal of understanding the reaction and terrain knowledge this new source of investors have about the Albanian territory. Taking into account that the major part declared a possible return in case of a well organized and managed reintegration process primary based through opened possibilities for terrain investments, the results of the questionare turn decisive for their future decision. As we can see from the results most them have less or unknowm knowledge about the Albanian market terrain in a vast range of aspects. This shows there is much work to do and
much efforts to accomplish.

**Figure 1:** Survey, terrain knowledge performance of new investors

Integration of GIS technology into E-commerce in Albania is strictly connected to the basic problematics the economy situation is facing. Still remains determinant the increasing role the government is playing through substantial reforms which aim to develop internet utilities in a large scale environment in Albania. According to statistics the last five years have been followed by a substantial increase of internet usage in Albania. During 2005 for the first time more than 5% of the population was using internet. Now after 5 years we have reached over 43.5% of the population which is a sustainable and rapid increase (ODA, 2012). Now we have the neccessary tools to aim at developing GIS image in the market and institutional levels. Terrain for GIS technology expansion in the Albanian mart is already in a mature point.

**Figure 2:** Web Based GIS Platform acting as a communication and information guidance; (Data Source Units: Governmet structures, Private organizations, University Institutions, etc; Web Users: Business entities, profitable and non-profitable organizations, researchers, etc)
The developed research focus on structuring a GIS platform (figure 2) working as a communication and information bridge, managing multiple source entities providing updated and reliable data such as universities, private institutions or governmental units in order to lead a visionary and forecasting perspective for future potential investments.

This platform should work as a regulatory and guidance mirror able to persuade and disseminate a positive clima not only for this new category of Albanian businessmans but for any other foreign investor.

**Business Opportunities**

Important sectors in Albania like construction, tourism, energy, media, agriculture, transport (INSTAT, 2011) are eager to benefit from GIS utilities (figure 3). Analyses due to several developed surveys lead to the creation of mapping forecast for different scenarios.

A guidance through offered possibilities or indexed evaluations is the missing step for a successful business policy (Hysenaj, 2011). Through management of updated data with mapping layout this new category will be able not only to catch the integration process but also start a new cicle giving a strong development to the economic procedures in Albania.

GIS is a problem solver in many areas of business such as marketing, business process optimization and segmentation analysis also GIS works as a great predictive tool for making recommendations about future business decisions (R.K.Sahoo 2008).

**Figure 3:** Basic Development Fields
Following we are going to present a set of digital maps, surveys and statistical diagrams according to their specific business sector, with the goal of creating a set of information acting as a future source for the web based GIS platform.

**Sales and Marketing**

Shortening of distances, time saving, large scale control of the territory are among the basic columns the research market process requires. All of them are strictly connected to mapping. Every businessman is trying to retrieve the largest amount of data through the implementation of the above mentioned factors. Marketing research process is a set of six steps (figure 4) which defines the tasks to be accomplished in conducting a marketing research study.

These include problem definition, developing an approach to the problem, research design formulation, field work, data preparation and analysis, and report generation and presentation (Malhotra, Naresha K., 2002). The market research process in Albania is in its initial phase of development based primarily through interviewer network.

![Figure 4: Stages of the Market Research Process (SMRP)](image)

Due to the lack of dynamic mapping the last two steps, data analysis and presentation, require additional features to complete the cycle. These two categories strongly reflect the absence of updated data and most of all integration of these data into geospatial softwares. Benefits from the statistical point of view will be partially perceived unless connected to geographic entities.

“Albania in the age of internet” is the latest reform the government is implementing, which aims to inform young people in rural areas, developing ICT infrastructure basically in public schools and state offices. After that the online transaction sector recognized an immediate development. In Albania there are more than 120 web pages acting as an informative product guidance
including a vast range of products as terrains, houses, cars, etc.

Still their database function tend to be more as a repository data rather than connected to a digital map which would complete the informative process. That’s why the next step consist in collecting these data, integrating them into a GIS software able to show not only the statistical point of the request but also the geographical connection. This way we benefit from the visual description of the query. Calculate distances, directions or implement comparisons, pan or zoom on the map to discover more information about the area are only some of the utilities we can take advantage.

Tourism

In many countries of the world tourism activity is considered more important than manufacturing activity both economically and socially. Albania has a great potential in the sector of tourism. Especially the last years tourism in Albania has developed vigorously. According to statistics (figure 5) during the year 2010, more than 2.3 million tourists visited Albania which is quite significant compared to the 2.8 million (PHC, 2011) of the contry population.

The hotel industry recognized a rapid development. The number of hotels increased by 19% from last year. Based on these data, the capacity of hotels in Albania are not adapted to the increasing influx of foreign visitors. For this reason it can be deduced that accommodation for part of the visitors is made in private homes in an unregistered way. This means that there is a high demand for a powerful development in the hotelier sector.

All this scenario shows us the great potential Albanian market reserves vigorous investments for the future. On the other hand due to the lack of a detailed study we miss the presence of a categorizing structure expressing an indexed list on dynamic maps according to the areas and their possible potential of development and investment. Detached data exist on formats like Excel, about visitors number, origin, destination, expenditure but not a real inventory database connected to a digital mapping system which will offer a detailed management plan of the territory’s resources and capabilities. The most usual tactic relays on personal surveys and queries, collecting data and trying to support decision-making through inconsistent information.
Due to this situation it is difficult to create an exact policy action. Mapping querying is missing and fast-logic actions delayed. Investing in tourism sector is as profitable as delicate because it requires detailed analysis of the territory, climate, distances and movements. Digital mapping is essential in performing all these tasks in the fastest and reliable way.

**Energy**

Albania gets 95% of its electricity from hydroelectric plants, but has exploited only about a third of its potential hydro resources that means there are huge reserves of renewable energy in the country. The Albanian hydrographic territory is about 44,000 km², that is about 57% more than the national country area (NANR, 2008). Albania is considered a country with great potentialities in the investment of new energy infrastructure.

One of the best examples is the Ashta hydropower plant which is Albania's first major hydropower plant construction in 30 years and the Government’s first large public-private partnership in the energy sector (IFC, 2009). Until now only 35% of Hydro-Energetic potential of the country has been utilized (figure 6), this means that there is a considerable percentage of exploitation possibilities for new potentially hydropower areas.

Using dynamic mapping and remote sensing technology able to analyse natural resources, physiographic characteristics and socio-economic indicators, and most of all the hydrographic network of a certain area will allow us to make a detailed analysis of which are the most appropriate areas to
build the future hydropower plants in Albania. GIS plays an important role in every stage of planning, development and implementation. In Albania many of the conventional projects are characterized by an unclear structuring process where geospatial data is poorly managed, maps lack the updated information, data retrieval and sharing run into technical problematics. Using GIS, we can manage all variables with reference to location, and can provide a clear picture about the hydropower project area and its impact zone (Pathak. M., 2008).

![Image]

**Figure 6:** Administrative status and geographical distribution of HPP in Albania

**Construction**

Perhaps one of the most interesting aspects of GIS is its ability to integrate diverse data sets, databases, and applications, also it's an appropriate technology for many engineering related projects (Howes D., 2009). Construction sector is one of the most important pillar of the Albanian economy. During communism more than 80% of the population lived in the rural areas. After 1991 Albania faced a demographic boom of population settlement living in remote areas of the country, to more developed areas of the country, and the trend of abandonment of rural areas to move into central developed urban areas, a process which was associated with economic and social consequences. Construction in the urban areas developed rapidly. The last decade has faced a vigorous increment of the statistics regarding construction. In Albania in 2010...
were given 1,845 building permissions, or 21% more than the previous year.

An auxiliary factor to better understand construction trend is to make a parallelism (figure 6) between construction enterprises acting in a specific area and construction permissions granted by responsible authorities. Through digital mapping it is possible to highlight the difference or uniformity of these two issues, increasing the possibility of a well organized decision-making process.

Another important issue is the Albanian population and Housing census closed on October 2011 which has been held after ten years from the last one (2001). The overall objective of the project is to contribute to the strengthening of the Albanian statistical system with the implementation of a Population and Housing Census. In Albania the need for a census is perhaps greater than anywhere else calculating dynamic changes that characterized Albania in the recent years. The outcome of the census will answer many important questions the category of “new” businessman’s have, regarding the construction sector. Updated information about demographic movements, population density, tendency are only some of the reference points for business developing.

Figure 7: Construction Enterprises acting in Albania, 2010; Construction permissions, interval period 2005-2010 - Comparative level; Data organized at district level.
All these data combined with statistics showing the construction trend during period of times or districts are of great importance to delineate the right policy to follow. Through satellite images we can benefit updated maps which combined with the above mentioned information will show us the areas with the highest potentiality in the construction sector. Businessmans can define which are the most suitable zones to invest their money according to the profile of construction. Cadastral maps also can vastly benefit from the usage of GIS utilities presenting updated data, increasing this way the effectiveness of the information.

**Media and Communication**

The fact that GIS communicates geographical information in digital form merely illustrates its consistency with contemporary media, which now make widespread use of digital encoding at various stages (Daniel S., Michael G., 2001). The fact is that geospatial technology must be considered as part of a communication process since we deduce our results from the presented paper or screen. On the other side there is a symbiotic connection since mass media relies potentially on GIS utilities. A survey involving 1000 students was made (figure 7).

The outcome of this survey intended to define the relation between their approach toward GIS technology. Students were asked to mention their most interactive web sites in the sense of communication and learning opportunities. The top five were ranked. Interestingly “Google Map” is among these web sites. Which means that students are looking forward to interact with dynamic maps and not just navigate in the internet.

![First Choice Web Sites](image_url)

**Figure 8:** Survey, Approach toward GIS Technology
Albania is widely known as a country with a developed media sector compared to the total number of population, including a large number of newspapers, private television companies and radio stations. It is easily conceived the importance of geographic data in this case. Through surveys and queries we can benefit from GIS utilities to manage data related to the density of population, the average age for each of the districts and the trends for the type of media chosen. The population behaviour incline in reflecting vigorously their political views toward their everyday habits and actions.

Statistics show up that the factor of impact that specific media have related to specific districts varies to a large extend. Due to this phenomenon their sales data are geo-dependent. Through mapping surveys we can combine the political trends of the population with their density producing indexed mapping showing the possible potential market of a specific media in that district. As a descriptive example of the situation we can utilize data retrieved from one of the newspapers (figure 8) which has the highest printing copies in the market. We present interesting data showing the strong relation between sales inventory and the political trend of a specific area.

**Figure 9:** Impact factor (political) influence toward newspaper sales

### Conclusions

Experience has told that businesses that relied their strategy on GIS usage have been much more successful than their similar. The world is growing fast and “information is power”, and this is what GIS does best “analyse information in order to improve decision-making” (Hysenaj M., 2011).

In this research, we have tried to initiate the first steps in developing a GIS platform through the participation of several source entities such as
government structures, university institutions or private organizations. The platform must be object to continuous updates with the scope of positioning itself as a reliable and accurate source of information.

Source entities especially government units must work as prime actors in the population awareness process. GIS allows us to better understand and evaluate the data by creating graphical presentation through information derived from geodatabases.

A set of business opportunities fields have been presented. Meanwhile through maps, surveys, statistics and a number of outlined examples, the analyse carried out intended to highlight the importance of digital mapping technology as a reliable and effective solution to business management.

Although the research was conducted based on a wide spectrum of business opportunities taking advantage of digital mapping technology still there is specific work to be done. As a perspective for the future a further enrichment of the web based GIS platform is needed. A larger set of indexed digital maps, surveys, diagrams and statistical data should be exploited.

The platform should serve as a communication and information bridge not only for a specific category but for a large scale of population acting as a standart regulatory with general rules. Simplicity and readability should be primary issues for further development followed by periodically efforts in enlarging the information source entities.

The scope of this research was to outline the importance of integrating GIS technology as digital mapping as a business opportunity, but in the same time as e future and prospective vision it aims at developing GIS technology in Albania for a vast range of issues such as natural hazards, advanced research methodology, knowledge management and organizational strategy.

References

Change in Strategy - The Answer to Overcome Global Downturn

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In terms of overcoming the global downturn, innovative business strategy has three major dimensions namely, ‘Innovative Promotional Practices’, ‘Social and Organizational welfare’, and ‘Ethical behavior’. Fortunately most strategic dimensions in business and management are measurable so as to facilitate development ratings in order to compare and highlight the different levels of overcoming the global downturn. My research paper on the role of innovative business strategy in overcoming the recession and succeeding in the post-recessionary period basically focus on the different categorical elements of business strategies and its direct or indirect impact on the medium and small scale organizations. For the better understanding of the term ‘INNOVATION’ I have carried out a letter by letter scrutinization of this golden term. It goes like this:

I-Ideas
N-New Plan or Design
N-Noticeable changes
O-Optimum change valuation
V-Variety
A-Adaptation to the New Environment/New Business
T-Thought Process for Planned Changes
I-Ideological Developments in Business
O-Optimization of the changes
N-Numero Uno (How Innovation helps in Securing the topmost position).

In order to understand the impact of innovative business strategies in combating the downturn I have formulated four important and innovative strategies. These
strategies are:

1. HBS Strategy (Holistic Business Strategy).
2. PBS Strategy (Polymorphic Business Strategy).
3. GBS Strategy (Green Business Strategy).

By following these innovative strategies an enterprise can reach the zeniths of success and successfully combat the global downturn.

Keywords: CCBS, GBS, HBS, PBS.

In my research paper I have formulated four important innovative strategies for business development. They stand as:-

**Country club business strategy**

CCBS mainly holds good for business and organizations which are already in a developmental phase. CCBS can also be defined as a Human oriented innovation i.e. its main concentration and consideration is on the human factors (MANPOWER). This strategy mainly involves the complete and innovative utilization of the manpower and focuses on 5 important elements :-

- **a. Human nature.**
- **b. Human behavior.**
- **c. Gross productivity at human level. (SMIRNOFF analysis).**
- **d. Employee productivity quotient.**
- **e. Innovative MEDICATION.**

The study of human nature and human behavior is the key for any kind of business and organizational success. Conducting various researches within the organization easily helps us to understand the modifications and modulations in the behavior of the employees under different situations. By the help of suitable strategies the behavior can be made cognitive i.e. suitable to give 100% under any given situation.

Gross employee productivity: - The gross employee productivity within a particular organization can be studied by the help of SMIRNOFF analysis:-

- **S – Survey**
- **M – Monitor**
- **I – Ideas**
R – Research.
N – Negotiations.
O – Optimizations
F – Feedback analysis.
F- Future endeavors.

By the help of this SMIRNOFF analysis technique one can easily determine the gross productivity of an employee and can modify it according to the requirements.

Employee productivity quotient: - The employee productivity quotient can be defined as the amount of productive word done by an employee within an organization. It is basically an innovative method to study the potential productivity of the employees and also helps in appraisals.

Medication Technique

In addition to these tools, I have formulated a MEDICATION technique for the CCBS:-

M – Motivation.  
E – Encouragement.
D – Dedication.
I – Innovations.
C – Cumulative efforts.
A – Association.
T – Technical development.
I – Ideologies.
O – Optimizations.
N- Notions and forecasting.

By the help of this MEDICATION technique the manpower can be handled in the best possible way and can be utilized to the zenith.

Polymorphic Business Strategy (PBS):-

Polymorphic Business strategy is mainly applicable for business which is already on the path of development. PBS mainly focuses on “overall or all-round growth” i.e. to reach the zenith. PBS strategy has the motto that SKY IS THE LIMIT.

“From top of the hill everything seems to be very small and tiny below
“and this is the blunder which developing companies make. Instead of seeing/labeling others to be small, they should crater for more heights. Rather than labeling others as small and tiny, they should focus on having a HELICOPTER analysis i.e. they should have a focus that from top of the hill they can view everything at the bottom. By having a helicopter analysis one can identify the positives as well as the loopholes within an organization. Helicopter analysis directly helps in analysis, imagination, research and modifications required for allover development within the organization.

Tools for PBS strategy:-

a. PBS strategy involves techniques such as SA and SD techniques–SELF-ANALYSIS and SELF-DEVELOPMENT. Self analysis helps an organization to identify HOW HIGH THEY ARE? and Self-development helps the organization to forecast HOW HIGH THEY CAN GO?

b. Maintaining ‘FREE-REIGN’ kind of business strategy where the employees have sufficient DECISION MAKING POWERS.

c. **HAILR ANALYSIS**- HAILR Technique involves:-

  H – Helicopter strategy.
  A – Analysis.
  I – Imagination.
  R- Reality.
  L – Leadership quality.

Thus Polymorphic Business strategy mainly focuses on the fact that since some organizations are already on top, instead of labeling others as small they should focus on reaching bigger heights and aim for the sky.

**Green Business Strategy (GBS):**

GBS strategy is perhaps the most realistic and practical innovation which can be practiced by both developing as well as developed organizations. This technique follows the strategy that “Change is the rule of the nature”. Its main application lies in the Retail and FMCG business.

It involves changes and modifications in the complete” PRODUCT LINE”i.e modifications in the product length, product width and product width etc. At the same time there are dramatic changes in the evaluation strategy for product development. The 2 important strategies under GBS strategy are:-

a. **M**ARCO-POLO strategy :

M – Modification areas.
A - Applications of modifications.
R - Room for innovation.
C – Catchment analysis.
O – Opportunity analysis.
P - Pre-modification requisites.
O – Optimization of the modifications.
L - Localization of the modifications.
O – Omnipresence of the modification.

By the help of MARCO-POLO analysis a business can easily bring about the modifications and apply it in according to the requirements.

b. **SWOT analysis**: - SWOT analysis is a common tool used for studying the business environment in order to understand the position and the requirement of the modifications and the modulations. SWOT analysis basically implies :-

- **S** – Strength.
- **W** – Weakness.
- **O** – Opportunities.
- **T** – Threats.

By doing a suitable SWOT analysis a particular business can understand what the possible opportunities are and scope for modifications and modulations.

These are the 2 innovative tools which directly help in product modification and product modulations which directly results in strategic business development.

**Holistic Business strategy (HBS):-**

Planning and forecasting are like the 2 eyes of a man, since they directly help in visualizing and foreseeing the future of the present business. For the successful operation and profit maximization in any business suitable planning and forecasting is hugely important. In my research paper I have formulated 2 innovative strategies for the PF technique:-

a. **CATAPULT planning**: CATAPULT planning mainly focuses on the various requirements for a planning process and the different phases of a PLAN. It stands as :-

- **C** – Cognitive/Situational planning.
- **A** – Adaptive planning.
T – Technical planning.
A – Associative planning.
P – Pro-active planning.
U – Unified planning.
L – Localized planning.
T – Tentative planning.
Thus, CATAPULT technique mainly defines the different qualities a proper planning should possess. It explains the different dimensions of a plan.
b. PERFECT forecasting – PERFECT forecasting technique basically deals with the different dimensions of a forecasting process. It stands as :-
P – Profit forecasting.
E – Efficient forecasting.
R – Rigorous forecasting.
F – Futuristic forecasting.
E – Environmentalist forecasting.
C – Competitive forecasting.
T – Technical forecasting.
Thus by PF technique a business can put everything in order and can do “RIGHT THINGS AT THE RIGHT TIME “and at the same time can forecast for the future.
Thus a proportional blend of I- Ideas, N- New plans, N- Noticeable changes, O- Optimum valuations, V- Varieties, A – Adaptations, T-Thought processes, I- Ideological developments, O- Optimizations a business can surely become N- NUMERO-UNO.
Hence” INNOVATION” is like an “OASIS” in the desert of corporate business.

References

Women and Men in Entrepreneurship

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This paper of female entrepreneurship has been inspired by gender equality issues. Today research and policy have been more and more fuelled by the idea that female entrepreneurs are important for economic progress. Female entrepreneurs were assumed to experience gender-related discrimination and to experience more difficulties when starting up and running a business than their male counterparts. Even when issues such as barriers and obstacles to female entrepreneurs are raised in the gender and entrepreneurship debate, this is usually done from the perspective that female entrepreneurs are an untapped resource and have potential to contribute to a country’s economic performance. Indeed, although gender equality is one of the arguments underlying the support for female entrepreneurs within the European Union, the argument that female entrepreneurs (have the potential to) contribute to economic performance continues to play a role here. The global growth of female entrepreneurship in the last decades has been accompanied by an increase in the number of studies on female entrepreneurship.

Keywords: managing diversity, female entrepreneurship, economic performance, gender differences, entrepreneurial diversity

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Introduction

In the present thesis there is an implicit assumption that studying gender differences is important. However, several arguments have been brought forward why the study of gender differences in entrepreneurship would not be very useful. A related argument is that the differences among women and among men are larger and more important than those between women and men, and accordingly, that research should focus upon these intra-group (or in-group) differences instead of intergroup (or between-group) differences (e.g., Kimmel, 2000; Ahl, 2002). In this respect, Moore (1999, p. 388) advocates that: “It is time to stop clumping entrepreneurs together in one group. Much is to be learned by studying women entrepreneurs as members of various groups”. Also, there are likely to be differences between female entrepreneurs of different generations. Moore (1999) distinguishes between ‘traditionalists’ (i.e., female entrepreneurs with traditional values, adhering to stereotypical female work roles) and ‘moderns’ (i.e., later generation female entrepreneurs who are more similar to than different from their male counterparts other words, there may be a generation effect which outweighs the gender effect, where female entrepreneurs from earlier generations are different from those of later generations. Indeed, over time gender differences have become less pronounced. We see a gender convergence rather than divergence, and women and men nowadays are far more alike than they were some decades ago (Kimmel, 2000). Obviously, there will be a range of other factors including age, educational background, firm size and sector, that may be more important in explaining differences between entrepreneurs than gender. The present paper incorporates studies on gender differences in entrepreneurship, spanning different aspects of entrepreneurship at different levels of analysis, including the individual, the organization and the environment.

The Economic Contribution of Female Entrepreneurship

Measuring Female Entrepreneurship

There are different ways in which female entrepreneurship (whether in established businesses or in new venture creation) can be measured. First,
one can investigate the number of female entrepreneurs per (female) labor force (i.e., female entrepreneurial activity). Second, one can have a look at the female share in total entrepreneurial activity (i.e., female entrepreneurial participation). Whereas the first measures female entrepreneurship vis-à-vis the number of women in the labor force, the second measures female entrepreneurship vis-à-vis the total number of entrepreneurs. This paper will discuss female entrepreneurship from both perspectives, also distinguishing between self-employment and new venture activity. Because female entrepreneurship rates are not similar across countries, the present section also touches upon some country differences, but this is not the main focus of the present section. Although it is interesting to see where cross-country differences in female entrepreneurship come from, at the end of the day a more important question (in particular for policy makers) is whether these differences lead to variation in economic performance across countries. Hence, special attention is paid to the relationship between female entrepreneurship and economic performance.

**Entrepreneurial Diversity, Economic Performance and Gender**

The present thesis it is assumed that female and male entrepreneurs have a different profile, e.g., they have a different way of doing business and start and run different types of firms. Thus, female entrepreneurs can contribute to the diversity in entrepreneurial activity and economic performance by way of their distinctive characteristics. In terms of products and services it may be argued that female entrepreneurs tend to operate in niche markets. Female entrepreneurs often pursue a specialization strategy offering tailor-made goods and services (Chaganti and Parasuraman, 1996). Assuming that tailor-made products and services are different from other products offered within the industry, it can be said that female entrepreneurs offer new non-competition or complementary products, insulating them from competition. Because over time consumer demand has become more versatile (Brock and Evans, 1989), niche markets have become more important, i.e., diversity in demand has to be

2 Self-employment here refers to business owners (i.e., employers and own-account workers), excluding venture activity is measured in terms of Total Entrepreneurial Activity (TEA) as proposed by the Global Entrepreneurship Monitor (GEM). TEA refers to the share of people in the adult population (aged 18-64 years old) who are actively involved in starting a new business or in managing a business that is less than 42 months old (Reynolds et al., 2002, p. 5). Hence, whereas self-employment is a measure of established businesses, TEA can be seen as a measure of new venture activity

3 Several factors may account for these differences in entrepreneurship rates, including technological, economic, demographic, institutional, and policy factors. It is outside the scope of this introduction to further investigate the origin of country differences in total and female entrepreneurial activity
met by diversity in supply of goods and services. From this perspective it may be important to stimulate female entrepreneurship, in particular as at present the share of women in entrepreneurial activity is still below 50 percent. Hence, stimulating female entrepreneurship may be a way to increase entrepreneurial diversity.

**Overview of gender differences in entrepreneurship**

Within entrepreneurship research, female entrepreneurship can be considered a ‘separate’ field of study⁴. Researchers focusing upon the issue of female entrepreneurship have traditionally been female, and still continue to be⁵. In general entrepreneurship researchers appear to have become more aware of the possibility of gender differences, and gender is increasingly used as a control variable. To give an overview of the many studies undertaken in the area of gender issues in entrepreneurship, this section builds upon review articles by Brush (1992), Ahl (2002) and a review of studies identified in Gatewood et al (2003). The aim is not to provide a full picture of research in the area of female entrepreneurship, but rather to give the reader an idea of the state of research on gender issues in entrepreneurship. The subject of the present thesis is situated at the intersection of two broad fields of study: entrepreneurship and gender. Research on female entrepreneurship can be structured around different themes. Brush (1992) uses Gartner’s (1985) framework distinguishing between four key components of new venture creation: individual, process, organization, environment⁶. Here the same classification is used discussing

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⁴ Based on the number of researchers involved in female entrepreneurship research, the special issues in entrepreneurship journals (such as those in the journals Entrepreneurship Theory and Practice, and International Journal of Entrepreneurial Behaviour and Research, planned for 2005 and 2004, respectively), the Diana project (an international research consortium, consisting of renowned scholars in the field of female entrepreneurship), collected series of female entrepreneurship studies in books or edited volumes (e.g., International Handbook of Women and Small Business Entrepreneurship, edited by Fielden and Davidson), and the fact that gender or women in entrepreneurship has been a separate issue in the Proceedings of the Babson Kaufmann Entrepreneurship Research Conference, Frontiers of Entrepreneurship Research, from 1996 onwards (with the exception of the year 2000).

⁵ This is shown by the overrepresentation of female researchers and contributors within the Diana project; the gender section of several issues of Frontiers of Entrepreneurship Research and the International Handbook of Women and Small Business Entrepreneurship.

⁶ Gartner’s (1985) framework for new venture creation distinguishes between four key components of new venture creation and ownership: *individual* (e.g., demographics, education, experience, psychological characteristics of the entrepreneur), *process* (referring to activities of an entrepreneur, including opportunity recognition, resource accumulation, venture creation and sustenance), *environment* (referring to the interaction between entrepreneur and his/her environment, including availability of resources, government regulation and support, industrial structure, urbanization) and *organization* (referring to firm characteristics, including strategic decision-making, organizational structure, business profile).
gender differences with respect to the different subjects within the field of entrepreneurship\(^7\).

Most studies on female entrepreneurship focus upon the individual, covering topics such as motivations, demographics and background characteristics (such as education and experience). Up to the early 1990s research on female entrepreneurship identified gender differences with respect to individual characteristics. Brush (1992; p. 13) concludes that: “women business owners are more different from than similar to men in terms of individual level characteristics such as education, occupational experience, motivations, and circumstances of business start-up/acquisition”. However, contemporary research indicates that for a range of individual characteristics (including psychological, attitudinal and personal background factors) there are more similarities than differences between female and male entrepreneurs (e.g., Ahl, 2002). With respect to research intensity, the ‘individual’ studies are followed by studies on the environment, organization and process of entrepreneurship, respectively (Ahl, 2002)\(^8\). In particular the number of studies dealing with environmental aspects has increased since the early 1990s. The process of starting up and running a business as well as environmental influences on entrepreneurial activity seem relatively similar for female and male entrepreneurs (e.g., Ahl, 2002). However, in terms of organizational characteristics businesses of women have been found to be more different from than similar to businesses of men. In particular, this is found for sales volumes, management styles, goals, and the acquisition of start-up capital (Brush, 1992). Ahl (2002) finds that the scarce research (usually studies with few observations) focusing upon organization refers to a distinctive (relational) management style of female entrepreneurs as compared to that of male entrepreneurs. The most consistent gender differences are found for firm size and sector, where businesses of women are on average smaller than those of men (whether measured in terms of financial indicators or employees) and with female entrepreneurs being more likely to operate retail or service firms. In addition to studies that fall into one of the categories – individual, organization, environment, and process – there are studies that

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7 It should be noted that the use of the components of new venture creation as proposed by Gartner (1985) may not be ideal. The components of new venture creation are by no means exclusive. For instance, the process of new venture creation may not easily be disentangled from the entrepreneur, the organization and its environment (Steyaert, 1995).

8 As Ahl (2002, p. 97, footnote 1) argues: “the general tendency of focusing on the individual remained, with over half of the papers in this category”. “The rest were divided about equally between the other three headings ...”. 
are more comprehensive, taking into account and covering several aspects at the same time. For example, studies classified as mixed studies include overview articles and articles investigating individual and firm performance. In her review of performance articles, Ahl (2002) argues that the topic of firm performance has become more popular in female entrepreneurship studies in the past decade. Until the early 1990s this topic did not receive much attention. Discussing performance differentials between businesses of female and male entrepreneurs, Ahl (2002, p. 108) argues that “The 'female underperformance hypothesis' .... did not hold when put to rigorous tests accounting for structural factors”. And if preferences are taken into account there appears to be no support for the proposed gender differences in entrepreneurial performance. With respect to the particular subjects dealt with within each of the categories, it can be said that environment studies mostly focus upon resource availability and (to a lesser extent) support structures for female entrepreneurs. The organization studies emphasize business profile characteristics, such as sector, firm size and age. Process studies tend to focus upon the process of new venture creation, including topics such as networking and resource acquisition. In addition, most studies within the area of performance differentials focus upon firm performance. Although individual studies in the area of female entrepreneurship have a broad focus, they tend to focus upon

**Perspectives on Gender Differences**

The nature versus nurture

There are two basic schools of thought proposing different reasons for the existence of gender differences (in general): biological determinism (referred to as nature) and differential socialization (referred to as nurture), the latter of which has served as input for the social feminist perspective. Biological arguments for gender differences generally draw upon three streams of research, including evolutionary theory, brain research and endocrinological research on sex hormones. The implication of the biological determinism

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9 Because performance may not necessarily be classified as a component of new venture creation, but rather may be considered a consequence of new firm creation, its classification is not straightforward. This may also be the reason why Brush (1992) does not explicitly discuss female entrepreneurship studies from the perspective of performance. Nevertheless, when outlining directions for future research Brush (1992) argues that each of the suggested research areas should be studied also in combination with its effects on performance.

10 Ahl (2002) refers to divergent definitions of what constitutes an entrepreneur, heterogeneous samples and inaccurate referral practices
perspective is that because differences between women and men are attributed to their different biological nature, one automatically assumes that the existing societal arrangements between women and men are inevitable, dismantling the need for policy intervention and support structures. Social scientists refute the perspective that innate biological differences lead to behavioral differences which – in turn – construct the social, political and economic environment. They argue that gender inequality in society leads to observable differences in behaviors, attitudes and traits. The differential socialization school of thought assumes that women and men are different because they are taught to be different. In essence both the biological determinism perspective and the socialization view assume that women and men behave differently, and that they are different from each other. Moreover, both streams of thought assume that the differences between men and women are greater and more decisive (and therefore more worthy of study) than the differences within groups of women and men\textsuperscript{11}.

\textit{Social versus liberal feminism}

The identified gender differences in entrepreneurship research have been explained in different ways, either assuming that women and men are different from each other or that they are in essence the same and the environment causes them to behave in different ways. These perspectives are consistent with the social and liberal feminist perspective, respectively (Fischer et al., 1993). According to the social feminist perspective gender differences in entrepreneurship are due to differences in early and ongoing socialization. Hence, female and male entrepreneurs are inherently different, giving rise to different ways of viewing the world and, accordingly, different ways in which entrepreneurship is practiced. The liberal feminist perspective argues that in essence women and men are the same and that female entrepreneurs experience more problems or structure their firms in a distinct way (as compared to male entrepreneurs) because they are confronted with unequal access to resources and gender-based discrimination. To summarize, both perspectives expect female and male entrepreneurs to behave in a different way, either determined by situational differences and/or barriers (liberal feminism) or by dispositional differences and/or barriers (social feminism). A different way of explaining gender differences in entrepreneurship is by investigating situational factors

\textsuperscript{11} Also, these schools of thought assume that gender domination (males over females) is a result of gender differences (Kimmel, 2000, p. 4).
that are correlated with gender. Female and male entrepreneurs may behave in the same fashion, provided they have the same personal and business profile. For instance, because female entrepreneurs tend to have smaller firms, their firms are characterized by different performance rates and organizational structure. This perspective on studying and explaining gender differences may be more similar to than different from the two perspectives proposed above. Indeed, differences in the personal and business profile of female and male entrepreneurs may be explained by situational or dispositional differences.

Conclusions

The present thesis shows that female and male entrepreneurs differ significantly with respect to a range of aspects of entrepreneurship. The studies show that there is evidence of gender differences in entrepreneurship both at the macro and the micro level. At the macro level the present thesis shows that there is some evidence of a positive relationship between female entrepreneurship (vis-à-vis male entrepreneurship) and economic performance at both the regional and country level. With respect to the determinants of entrepreneurship at the macro level it is found that the factors influencing female and male entrepreneurship are similar rather than different. Most of the factors that influence entrepreneurship in general, also influence female entrepreneurship. However, differential effects have been found for unemployment and life satisfaction, suggesting that the female share in self-employment is influenced by those factors. At the micro level most of the gender differences are attributable to indirect effects, although some evidence has also been found for direct gender effects. Even though most of the micro-level studies find some evidence for the existence of direct gender effects, these may be residual effects that exist because it is virtually impossible to take into account all factors that influence entrepreneurship. The present thesis has studied the characteristics of the average female entrepreneur, the profile of which has been described in one of the previous paragraphs. However, it may be that new generations operate their businesses in a different way than older generations of female entrepreneurs. It is therefore interesting to investigate the (differences in) profile of younger and older female entrepreneurs. In

12 However, the exercises do not take into account a range of other factors influencing economic performance. In particular, the share of the service sector
general, the information on female entrepreneurship can be enriched by investigating different types of female entrepreneurs in addition to the average female entrepreneur. For example, part-time versus full-time female entrepreneurs; married versus single female entrepreneurs; female entrepreneurs with and without children; and women running service versus production firms. Distinguishing between different types of female entrepreneurs also enables the comparison with male entrepreneurs in similar circumstances. Furthermore, this thesis has studied gender diversity in entrepreneurship in terms of individual and business characteristics. Most of the studies deal with business structuring and the input side of the business, focusing upon time investments, financial structure, (human resource) management, and organizational structure. The output side has not been investigated and, although there have been several studies investigating performance differentials between businesses of women and men, there is still need for further research. First, research should explore the type of output female entrepreneurs produce and the extent to which these are unique and contribute to entrepreneurial diversity. For example, because female entrepreneurs tend to pursue combinations of goals, they may also be more likely to engage in social entrepreneurship. Second, we have seen that businesses of women tend to be small, and are less likely to experience growth. Arguing that female entrepreneurship is important for economic performance thus seems a paradox. Future research may be able to unravel this paradox by focusing both upon the quantitative and qualitative contribution of (female) entrepreneurs. To summarize, the relations between female entrepreneurship, entrepreneurial diversity and economic performance should be further explored in empirical studies. Measurement issues are crucial here as female entrepreneurship can be measured in different ways. If the aim is to investigate the link between entrepreneurial diversity and economic performance, researchers should take the female share in entrepreneurial activity (as a measure of entrepreneurial diversity) as a starting point. Using female entrepreneurial activity rates (measured vis-à-vis the labor force) is likely to only establish a link between entrepreneurial activity and economic performance, as countries with relatively high total entrepreneurial activity rates also tend to be characterized by relatively high female entrepreneurial activity rates. Finally, future research on gender issues in entrepreneurship should explore different ways of approaching and measuring gender. In the present thesis gender is measured by way of biological sex. In this way sex and
gender coincide.

References

Analyze of Environmental Disclosure Within European Union Countries

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The research is conducted as an empirical study which explains how environmental disclosure varies across European countries and reflects factors that explain this variation at the European Union level. The paper identifies and analyze five factors that explain the varies of environmental disclosure across European Union Countries: strength of auditing and accounting standards, government mandated disclosure of environmental performance and pollutant release, development, number of companies which had implemented ISO 14001/EMAS, eco-label awards obtained by companies within the country, environmental performance. After the empirical and theoretical analyze we can conclude that the introduction of mandatory environmental disclosure is the most efficient way to increase the quantity and the quality of environmental disclosure at the European Union level. This study is not a research of some particular entities regarding environmental disclosure. The paper discusses environmental disclosure as an average of all the environmental disclosure of all the entities within a European Union country. The paper is of interest to anyone involved in the process of environmental disclosure, either as entity or other user of environmental information's.

Keywords: environmental disclosure, European Union, mandated disclosure, audit and accounting standards, environmental performance, environmental regulations, ISO 14001/EMAS, eco-label awards, development

Introduction

Industrial development, whilst credited with contributing to economic and technological progress, has been criticised for creating greater environmental impacts, and calls have been made for greater responsibility by businesses. Companies are being urged to become accountable for their
environmental impacts (Hackston and Milne, 1996). During the last decade, the demand for environmental reporting has increased dramatically within the stock listed companies (Beretta and Bozzolan, 2004). A wide range of stakeholders such as shareholders are interested in corporate environmental performance and its disclosure. Financial institutions such as banks and insurance companies have become interested in appraising corporate environmental risk and performance when they invest money (Lee et al., 2002). In response, many corporations have begun to report their eco-friendly activities and environmental performance. Such environmental disclosure can either be included in the financial statements (balance sheet, profit and lost account), in the notes to the financial statements, in annual reports or in separated environmental or sustenability report.

However, in the absence of environmental accounting standards, the stakeholders are forced to rely on only on voluntary environmental reporting (Larrinaga-Gonzalez et al, 2002) which varies across companies, countries and continents. A large number of studies analyze the time and space variation of the environmental reporting, emphasizing the factors which are determinant for environmental reporting (Buhr and Freedman, 2001; Larrinaga et al, 2002; Deegan et al, 2002; O’Donovan, 2002; Holland and Foo, 2003; Cormier et al, 2005; Frost, 2007; Taylor and Shan, 2007; Sumiani et al, 2007).

In this study we have revealed how environmental disclosure varies across European countries. Using results from an international survey publish by World Bank we’ve analysed the differences between European countries regarding environmental disclosure by connecting corporate environmental disclosures with variables such as strength of auditing and accounting standards, government mandated disclosure of environmental performance and pollutant release, level of development, number of eco-label awards obtained by companies within the country, number of companies within a county which had implemented ISO 14001 or EMAS. Taking into consideration the results of some studies which indicate that environmental reporting is not related to corporate environmental performance (Ingram and Frazier, 1980; Wiseman, 1982; Rockness, 1985) we’ve compared the level of environmental disclosure with the level of environmental performance within a country in order to see if corporate environmental disclosure is reflecting environmental performance.
Literature Review

A review of the relevant literature reveals that corporate environmental reporting has received attention by researchers and professionals for many years. Examples include Wiseman (1982), Guthrie and Parker (1990), Harte and Owen (1991), Gamble et al. (1995), Gray et al. (1995), Gamble et al. (1996), Fekrat et al. (1996), Deegan and Rankin (1996), Brown and Deegan (1998), Neu et al. (1998), Adams et al. (1998), Perry and Teng (1999), Richardson et al. (1999), Larrinaga-Gonzalez et al. (2002), Deegan et al. (2002), O’Donovan (2002), Holland and Foo (2003), Gray and Milne (2004), Murray et al. (2006), Frost (2007), Yamamoto et al. (2007), Aerts et al. (2009) and others. Empirical studies on environmental reporting and disclosures have focused on both industrialised countries and developing countries. Most of the studies analysed the disclosure of environmental information in the context of developed countries: Solomon and Lewis (2002), O’Dwyer (2002), and only a few papers discussed this issue in the developing world context: Ite (2004). Some of these have been longitudinal studies of reporting practices in a single country others have attempted to provide comparative analyses between countries. Our study continues this analyse by examining the differences in reporting environmental issues between European countries in order to identify the variables that explain this differences.

Yamamoto et al. (2007) study the discretionary disclosure of the environmental information practiced using companies that work in Latin America and South Africa. This study showed Brazil as the host country of the largest number of companies with high disclosure items, followed by South Africa and Peru. In a segregated analysis Mexican firms outperformed their Brazilian peers in terms of disclosure, although there were only three group Mexican companies in the sample. The Bolivian firm presented the highest score among all companies in 2005. The authors suggest that a solution to increase the environmental disclosure in developing countries is to make it mandatory through specific regulation.

Yusoff and Lehman (2006) studied the differences of the environmental disclosure of the top 50 companies in Australia and Malaysia regarding the factors influencing the environmental disclosure decision of the analysed companies. They conclude a better and higher environmental disclosure in the Australian companies because Australian regulation regarding environmental issues is better than the Malaysian’s one. They also point that in Malaysia only
the positive points regarding environmental disclosure is reflected while in
Australia either positive or negative results are disclosed.

Holland and Foo (2003) examine current corporate environmental
reporting practices within UK and US annual reports and suggest that
elements of the legal and regulatory framework of each country which regulate
environmental activity determine the types of disclosures made, and so
influence environmental performance.

A study exploring some of the underlying conditions for differences
in disclosure in Canadian and US companies (Buhr and Freedman, 2001)
found that the type of disclosure—mandatory and voluntary—followed from
the context in which the companies operated. Hence in Canada voluntary
disclosure was higher and reflected the collectivist nature of Canadian society
reporting in the US appeared to follow the requirements of the legislature
and higher levels of mandatory disclosure were seen in US company’s annual
reports.

Christofi et al (2012) consider that the Securities and Exchange
Commission (SEC) and Financial Accounting Standards Board (FASB) should
become actively involved in standardization and enforcement of corporate
socio-environmental disclosures because investors have neither rewarded
nor penalized firms for adhering to or violating sustainability matters in their
corporate decisions.

Ribeiro and Abar-Guzman (2010) analysing the extent to which
Portuguese local entities have implemented a set of environmental accounting
practices conclude that the existence of compulsory environmental accounting
standards is not positively associated with the development of environmental
accounting practices by Portuguese local entities.

Stittle et al. (1997) state as a conclusion of their study that in spite
of the similarity between regulations (both UNE and BS 7750 conform to the
EU regulations), in reality the extent and quality of this information varies
considerably between companies and between countries. Differences can be
seen between the UK and Spain due to the degree of variety in the development
of the way that environmental issues are perceived and also from within the
economic and legal systems.

Nyguist (2003) compared the legislation in Denmark, Norway
and Sweden concerning what kind of information firms must disclose. He
concluded that these countries have great similarities regarding accounting
legislation and standards. However Denmark has chosen a different way to
force entities to disclose environmental performance. In Denmark entities must deliver separate green accounts while Norwegian and Swedish entities and bound to report environmental issues in the administrative report. The objective of the Danish and Norwegian legislation is to stimulate entities environmental improvements.

Larrinaga-Gonzalez et al. (Larrinaga-Gonzalez et al., 2002) analyse the Spanish environmental disclosure standard. They concluded that the regulation of environmental reporting would prevent all the shortcomings of voluntary environmental disclosure. Regulation is not sufficient for the advancement of environmental accountability. We conjecture that an institutional reform would need at least a discursive dialogue in the development of regulation and an effective enforcement of legislation.

Acerete et al. (2011) analyze the extent to which Spanish concessionaires of toll motorways have adopted accounting reporting standards that provide environmental information. The results indicate a minimum level of quality in the environmental information provided and a low level of disclosure of the elements required by the standards. The authors consider that the main driver of the increase in disclosures is the need for compliance with accounting regulations, rather than any change in the attitude of concessionaires toward environmental reporting.

Jørgensen and Sodorstrom (2006) investigate how environmental accounting varies under commercial and environmental laws across countries. They find evidence that ‘legal institutions affect managers’ reports of corporate environmental disclosure. Environmental disclosure and disclosure regulations are codetermined that is across countries, reported environmental disclosure vary with legal institution, environmental regulation and disclosure regulation.

All this studies had enforced us to see the differences regarding environmental disclosure from the eye of the accounting regulation system, the voluntary of mandatory disclosure of environmental performance and other factors which will be presented in the next section.

Research Methodology

The study represents an empirical research that uses archival data as the primary source of data. The advantages of the archival data consist in the fact that archival data are less subjective than dates obtained by researcher when
conducting content analyses or applying surveys. These archival data helped us to present the level of variables used in a comparative way for a sample of 27 countries from European Union. The main argument for choosing European Union countries as sample of this research is that European Union countries have to promote the same environmental policy and have to implement common environmental instruments.

We’ve analysed the correlations between corporate environmental disclosure as the dependent variable and the independent variables including strength of auditing and accounting standards, government mandated disclosure of environmental performance and pollutant release, development, number of companies which had implemented ISO 14001/EMAS, eco-label awards obtained by companies within the country, environmental performance.

**Data used**

In Table 1 we present the variables used. The Global Competitiveness Report for 2005 - 2006 is the main data source used for determining the level of the variable analysed (prevalence of corporate environmental reporting, strength of auditing and accounting standards, governmental-mandated disclosure of environmental performance and pollutant release, Gross Domestic Product) within different countries from Europe. The Global Competitiveness Report series has involved over the last three decades into the world’s most comprehensive and respected assessment of country’s competitiveness, offering invaluable insights into the policies, institutions, and factors driving productivity and, thus, enabling sustained economic growth and long-term prosperity. Produced in collaboration with leading academics and a global network of research institutes, The Global Competitiveness Report provides users with a comprehensive dataset on a broad array of competitiveness indicators for a large number of industrialized and developing economies. Besides hard data from leading international sources, these indicators include the results of the Executive Opinion Survey carried out by the World Economic Forum annually. The Survey captures the perceptions of several thousands business leaders across the countries covered on topics related to national competitiveness (www.gcr.webforum.org).

Along with this Global Competitiveness Report the data used have been taken from the World bank website (www.worldbank.org), from the European Commission Eurostat website (http://epp.eurostat.ec.europa.eu), from the United Nation Statistics Division website (http://unstats.un.org),
from International Energy Agency website (www.iea.org) from Pilot 2006 Environmental Performance Index and from United Nations Conference on Trade and Development website (www.unctad.org). From these sources we could determine the environmental performance within a country, factors reflecting the economic healthy of a country (development) or other elements important regarding the differences of corporate environmental disclosure (eco-label awards obtain, number of companies which had implemented ISO 14001/EMAS). The variables were selected from the period 2005-2006.

**Variable description**

In this paper we’ve tried to explain the variation of corporate environmental disclosure within European countries so we chose the corporate environmental disclosure as the determine variable of the study.

*The prevalence of corporate environmental disclosure (CED)*

Corporate environmental disclosure, according to stakeholder theory, represent the environmental information which is disclosed voluntarily by companies is a response to the existence of users who are legitimately interested in the behaviour of the company and who compete with traditional users (Freeman, 1984; Roberts, 1992; Fekrat et al., 1996). The main variable "Prevalence of corporate environmental reporting" represent the question 10.10 in the Global Competitiveness Report 2004-2005 survey and question 9.09 in the Global Competitiveness Report 2005-2006 survey. It was noted in the survey with a mark from 1 to 7. Number 1 attached to the variable represent the fact that the corporate environmental disclosure in that country in nonexistent. Number 7 represents the fact that the level of the corporate environmental disclosure in that country is widespread.

We consider that these differences could be explained by variables like: strength of auditing and accounting standards, governmental-mandated disclosure of environmental performance and pollutant release, level of development, eco-label awards obtained by companies within the country, the number of companies which had implemented ISO 14001/EMAS environmental performance.

*The strength of auditing and accounting standards (SAA)*

This first codetermine variable analysed "Strength of auditing and accounting standards" is consider by many empirical studies to be the factor
that determine the financial reporting, the accounting and auditing regulation within a country. The variable is question 9.24 in the Global Competitiveness Report 2005-2006 survey and it was noted with a mark from 1 = nonexistent (which represent the fact that the auditing and accounting standards doesn’t exist in that country) to 7 = widespread (which suggest that the auditing and accounting standards are at the highest level).

The governmental-mandated disclosure of environmental performance and pollutant release (GME)

The second codetermine variable governmental-mandated disclosure of environmental performance and pollutant release is referring to the fact that the disclosure of environmental information within a country can be voluntary and mandated. In some countries there are some specific mandated elements regarding environmental disclosure, in some counties there are totally voluntary. Also this factor was chosen as a codetermine variable as it was suggested by many empirical studies we’ve presented in the literature review. The variable is question 10.05 in the Global Competitiveness Report 2004-2005 survey and question 9.03 in the Global Competitiveness Report 2005-2006 survey and it was noted with a mark from 1 = nonexistent (which represent the fact that the disclosure of environmental performance and pollutant release is voluntary, there aren’t mandatory environmental information) to 7 = widespread (which suggest that the disclosure of environmental performance and pollutant release is mandatory and it reached the highest level).

Level of development (DEV)

These codetermine variable was taken from the Global Competitiveness Report 2004-2005. This variable reflects the economical health of a country. So we analysed if the economical health represents a factor that determines the level environmental responsiveness and environmental disclosure of information. For this we’ve divided European counties in developing, developed and underdeveloped considering the division made by World Bank (www.worldbank.org) representative for our study.

Eco-label awards obtained by companies within the country (EcoA)

This indicator is defined as the number of eco-label or “EU flower” awards in EU Member States. The Community eco-label is awarded to products and services with reduced environmental impacts and is administered by the
European Eco-labelling Board (EUEB).

**Number of companies which had implemented ISO 14001 or EMAS (ISO-EMAS)**

Is an indicator that reflects the number of entities that have implemented environmental management systems such as ISO 14001, that the EMAS, systems designed to improve the management and monitoring of environmental performance in an entity. The worldwide ISO14001/EMAS statistical numbers were collected by Reinhard Peglau, c/o Federal Environmental Agency from Germany from the interested people throughout the world and subjected to a schematic process to show the graph by Corporate Risk Management.

**Environmental Performance Index (EPI)**

Represents an index composed of 17 indicators from six categories: environmental health, air quality, water resources, natural resources, biodiversity, sustainable energy, which represent the environmental performance within a country. The main factor that influences the environmental performance within a country is the economic activity of the entities that activate in that country, the main source of pollution and resource degradation. The indicator was selected from Pilot 2006 Environmental Performance Index and is marked between 0 and 100, which represent the highest scor of environmental performance within a country.

The description of the dependent and independent variables is presented in table 1:

<table>
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<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
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<tr>
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<td>6.60</td>
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<td>3.00</td>
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<td>.08955</td>
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<tr>
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</tbody>
</table>

Table 1: Descriptive analysis
Hypothesis

Each hypothesis represents our personal view regarding the connection between the determine variable and each codetermine variable. Some of the correlation was suggested by empirical studies some of them were analyzed and presented for the first time within this study.

**H1:** The strength of auditing and accounting standards influences the level of prevalence of corporate environmental reporting. This correlation was suggested by many studies presented in the literature review section. The accounting and auditing regulation within a country gives the strength to disclose information within the companies which are representative for that country. Countries in which accounting and audit standards are well implemented the amount and quality of information reported by companies is high level and also the environmental information are better disclose in bough quantitative and qualitative terms.

The motivation underlying the formulation of the first hypothesis is that transparency on preventing errors and fraud in the private sector is essential for business and can be obtained by using accounting practices and auditing standards to ensure the access to information. Although European Directives and International Standards of Accounting present deficiencies in reporting environmental issues, they have recently passed through standards (IFRS 6), interpretations of standards (IFRIC 1, IFRIC 5, IFRIC 6) or various guidelines and recommendations (EC Recommendation 2001/453) which encourage corporate environmental reporting. Jorgensen and Sodorstrom (Jorgensen and Sodorstrom, 2006) analyzing how environmental reporting varies between countries argue that environmental reports are determined by the degree of implementation and enforcement of accounting and auditing standards.

**H2:** The governmental-mandated disclosure of environmental performance and pollutant release influences the level of prevalence of corporate environmental reporting. Countries with a high level of governmental-mandated disclosure of environmental performance and pollutant release have also high level of prevalence of corporate environmental reporting. Governmental-mandated rules regarding disclosure determine companies to disclose more. In countries were the disclosure rules are voluntary companies disclose less because there are factors like costs, non transparency of negative aspects and others which determine companies to disclose in the limit of the regulations. Mandatory environmental reports are considered by many
researchers as a way to increase the accountability of an entity (Deegan and Rankin, 1996; Holland and Foo, 2003; Frost, 2007; Yamamoto et al., 2007). Lee and Hutchison (2005) considers that without laws and regulations, disclosures are unlikely to be uniform and comparable across firms.

**H3:** The economical strength of a country influences the prevalence of corporate environmental reporting. We analyzed if developed countries have a higher level of prevalence of corporate environmental reporting than developing countries. Developed countries have more financial resources those developing countries so the environmental protection has to benefit from this. Developed countries are countries where many environmental theories were born and countries where companies are consider by many practitioners and academicians more environmental friendly. Studies have shown that entities with high financial performance present high level of environmental disclosure (Richardson et al., 1999; Gray and Milne, 2004, Murray et al., 2006).

**H4:** Also we tried to see if countries which are consider more environmental friendly taking into account variables like the number of eco-label awards obtained by companies, the number of companies implementing ISO 14001 or EMAS. These variables reflect in some way the ethical behavior of the entities within a country which leads us to the legitimacy theory based on the idea that to be successful entities must act within the limits of what society identifies as ethical behavior (Deegan et al., 2002; O’Donovan, 2002; Aerts et al., 2009). So we assume that a country in which the number of eco-label awards obtained by companies is higher is considered to be more environmental friendly and so the level of prevalence of corporate environmental reporting should be high. Also we consider that companies with ISO 14001/EMAS standards are environmental friendly so they disclose more environmental information than other companies.

**H5:** Corporate environmental performance is reflecting the truth and fair view regarding environmental issues. So we assume that environmental reporting is related to corporate environmental performance and countries in which the level of pollution is high have to disclose more information that countries in which the level of pollution is low because they have more environmental information to disclose. To analyze this hypothesis we correlate the corporate environmental reporting with environmental performance within a country. There have been numerous studies that have shown the existence and absence of connections between environmental reporting and environmental performance of the entities (Fekrat et al., 1996; Brown and
Deegan, 1998; Neu et al., 1998).

**Data Analysis Results**

Using the considered variables we estimate a general linear model that could explain environmental reporting variation for the European Union countries as:

\[
CED = \lambda_i + \beta_1^{*} GME + \beta_2^{*} SAA + \beta_3^{*} DEV + \beta_4^{*} EcoA + \beta_5^{*} ISO-EMAS + \beta_6^{*} EPI + \varepsilon_i
\]

where:
- \(\lambda_i\) = constant
- \(\beta_i\) = model coefficients
- CED = the prevalence of corporate environmental disclosure
- GME = the governmental-mandated disclosure of environmental performance and pollutant release
- SAA = the strength of auditing and accounting standards
- DEV = level of development
- EcoA = eco-label awards obtained by companies within the country
- ISO-EMAS = number of companies which had implemented ISO 14001 or EMAS (ISO-EMAS)
- EPI = Environmental Performance Index
- \(\varepsilon_i\) = error term

The correlation between variables was tested using the software SPSS version 17.0 and the obtained results are presented in the below table.

<table>
<thead>
<tr>
<th></th>
<th>CED</th>
<th>GME</th>
<th>SAA</th>
<th>DEV</th>
<th>EMS</th>
<th>EcoA</th>
<th>EPI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pearson Correlation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CED</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GME</td>
<td>.928</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAA</td>
<td>.795</td>
<td>.732</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEV</td>
<td>.411</td>
<td>.393</td>
<td>.472</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMS</td>
<td>.230</td>
<td>.230</td>
<td>.017</td>
<td>.321</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EcoA</td>
<td>.217</td>
<td>.269</td>
<td>-.023</td>
<td>.375</td>
<td>.618</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>EPI</td>
<td>.445</td>
<td>.586</td>
<td>.511</td>
<td>.480</td>
<td>.095</td>
<td>.187</td>
<td>1.000</td>
</tr>
<tr>
<td><strong>Sig. (1-tailed)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CED</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>GME</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 2: Correlations table
The above table suggests a very strong correlation between prevalence of corporate environmental reporting and governmental-mandated disclosure of environmental performance and pollutant release. Countries that have a high level of governmental-mandated disclosure of environmental performance and pollutant release have also a high level of prevalence of corporate environmental reporting. We can validate the hypothesis and conclude that changes in national regulations regarding environmental reporting can be very useful in explaining the quality and quantity of environmental information reported. However environmental reports are ambiguous and remain in many cases at the discretion of management even in the most sensitive sectors that affect the environment.

Accounting and auditing standards do not give a particular importance of environmental issues, they are insufficient to reflect fairly the entity’s environmental impact but the consistent application of these help to increase reporting in general and so the environmental reporting in particular.

With some exceptions such as Malta which, although it is considered a developed country has the lowest level of environmental reporting, most developed countries have a high level of environmental reporting.

From the distribution map we cannot find any correlation between corporate environmental reporting and the number of eco-label awards obtained by companies within a country. The relation can be identifying in about 40% of the countries which we consider very low level so the hypothesis cannot be validated. Exceptions can be identifying in the case of Greece, Italy and others. This are countries were although the level of environmental disclosure is middle the number of companies which are consider to be environmental friendly is high.

Although implementing ISO 14001 or EMAS is a factor the increase environmental disclosure within a company we cannot find any linear function between them at a country level. The number of entities that have implemented management systems (ISO14001/EMAS) is not a determinant
factor of corporate environmental reporting. There are exception like Italy and Spain there the number of companies implementing ISO 14001 standard is high but the prevalence of corporate environmental reporting is not very high. These could be explained by the high level of CO2 emissions which determine companies to implement environmental standards like ISO 14001 or EMAS to be more environmental friendly.

Although we can see that countries with the level of corporate environmental reporting higher than 4 levels are countries with many sustainability-satisfying companies we cannot define a linear correlation between these variables.

The middle intensity indirect correlation between environmental performance and level of corporate environmental reporting determine us to say that entities with low environmental performance disclose more information regarding environmental impact. This can be explained from the point of view of the legitimacy theory, by the benefits which are created by reporting aspects regarding environmental impact for the stakeholders of information, justifying them self’s for the low environmental performance.

Thus, the correlations between independent variables and the disclosure index are significant at the 1 per cent level for the governmental-mandated disclosure of environmental performance and pollutant release (GME), the strength of auditing and accounting standards (SAA) and Environmental Performance Index (EPI). A new model was estimated and the assumptions underlying the regression model were tested again. The adjusted R² of 0.900 is acceptable for this type of analysis and the model is statistically significant (p value = 0.025). The results confirm three hypotheses: H1, H2 and H5, the other hypotheses being rejected. So, the companies with the governmental-mandated disclosure of environmental performance and pollutant release, with the strength of auditing and accounting standards and with low environmental performance index disclose more corporate environmental information.

The analysis between the considered variables, based on equation (1) is presented in the following table:
Table 3: Regression results

<table>
<thead>
<tr>
<th></th>
<th>Coefficients (β)</th>
<th>t - value</th>
<th>p value</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.732</td>
<td>0.847</td>
<td>0.406</td>
<td></td>
</tr>
<tr>
<td>GME</td>
<td>0.913</td>
<td>8.486</td>
<td>0.000</td>
<td>2.484</td>
</tr>
<tr>
<td>SAA</td>
<td>0.356</td>
<td>3.056</td>
<td>0.006</td>
<td>2.205</td>
</tr>
<tr>
<td>EPI</td>
<td>-0.031</td>
<td>-2.395</td>
<td>0.025</td>
<td>1.557</td>
</tr>
</tbody>
</table>

Notes: Model summary: $R = 0.955$, $R^2 = 0.911$, adjusted $R^2 = 0.900$, $F = 78.878$, $p$ value = 0.025, Durbin-Watson = 1.903

After the application of stepwise regression, the significant independent variables were only those presented in the above table, variables considered as having most influence on the level of corporate environmental reporting.

Conclusions

Reporting of environmental information has matured over the past decades, but still remained a lack of adequate standardization and environmental disclosure remains voluntary in many countries. Our results suggest factors that explain the differences regarding corporate environmental disclosure: strength of auditing and accounting standards, governmental-mandated disclosure of environmental performance and pollutant release, environmental performance.

These results highlight that countries with high level of governmental-mandated disclosure of environmental performance and pollutant release and where the strength of auditing and accounting standards is high level present a high level of prevalence of corporate environmental reporting. So the determining factors of environmental reporting in the entities in a country remains the legal factor while ethical behaviour explains in a lesser extent environmental reporting. We believe that the introduction of mandatory environmental reporting within specific sectors and industries in a country would increase considerably the relevance, reliability and comparability of environmental reporting within the entities.

Environmental organizations within a country make pressure for environmental protection although most all this organizations don’t have the authority to change environmental regulations. There are countries where is
one or two organization with big influences so the number of the organizations is not a very relevant factor regarding environmental disclosure. The relation between the number of companies that have implemented ISO 14001/EMAS and the environmental disclosure is not very well pointed by the analyses. I can conclude that although the implement of ISO 14001/EMAS determine an increase of corporate environmental disclosure level within a company there cannot be determine a clear relation between the number of companies that have implemented ISO 14001/EMAS and the environmental disclosure at the country level. The number of Eco-label awards within a country is not very suggestive for the amount of information disclose or for the countries profile regarding environmental disclosure. The factor is more suggestive for the quality of environmental disclosures and is more significant at company’s level analyses.

Countries from Northern Europe and Western Europe with high level of environmental regulation and high level of auditing and accounting standards have also a high level of reporting environmental issues. From Europe Scandinavian countries present the highest reported environmental disclosure. This is the region with the highest level of environmental disclosure all over the world and it is represented by countries like Denmark, Finland and Sweden well known for the importance given to the environment. From Europe countries like Germany, United Kingdom and Scandinavian Countries (Denmark, Finland, Sweden) are developed country for which environmental protection is an important issue, countries with high GDP, long term oriented with high level audit and accounting standards, high level of governmental-mandated disclosure of environmental performance and pollutant release which determine also a high level of corporate environmental reporting. Some exceptions from the relations analyses have been observed especially from Italy, Spain and Greece. There were warnings sent to Italy and Greece for “failing to submit environmental studies on the current state of their water resources” (European Commission, 2007). Separately, the Commission said it was taking legal action against Italy over 11 cases of environmental law, most of them stemming from a failure to submit information on air pollution, management of waste, biotechnology and environmental impact assessments. “In spite of previous warnings, Italy is not complying fully with EU environmental laws or cooperating over our requests for information,” Environment Commissioner Stavros Dimas said in a statement (European Commission, 2007). As we can see from the analyses most of the Southern Europe Countries and Eastern
Europe countries (Romania, Bulgaria) are developing countries with low GDP per capital and with a low level of corporate environmental reporting. In these countries companies have difficulties regarding environmental disclosure:

- the first obstacle was found in the lack of regulations regarding the environmental reporting issues which might be used in order to reach the aimed value of environmental performance (like in the case of Romania); a low level regarding the strength of auditing and accounting standards;

- time dimension is also an important variable. These countries are only at the beginning its real integration in matters which regard the European Unions’ structures and systems, this meaning that environmental legislation has changed and will continue to do so;

- a great number of companies only relate environmental investments to increased costs, without even seeing a glance of the possible returns and therefore are only interested to keep themselves at the thickest limit imposed through laws;

- a huge problem in approaching this topic is grounded within the environmental education which spreads both in the internal structures of one’s entity and through the relationships between different entities; what we want to say here is that there should be a change in the entities’ attitude towards environmental responsibility which ought to come out of common sense since all of us are interested in creating such an environmental management system which would lead to smaller quantities of wastes, decreased material consumption and fewer accidents. In a working paper in 2005 The World Bank consider that Bulgarian Croatian and Romania companies were far behind developed countries in terms of environmental practices.

The study presents importance for the understanding of environmental reporting and presenting differences regarding this issue between European countries and suggests that the legal factor, mandatory environmental disclosure is an efficient way that we can increase the quantity and the quality of environmental disclosure.

**Acknowledgment**

This paper is part of the research project POSDRU/89/1.5/S/59184 ‘Performance and excellence in postdoctoral research within the field of economic sciences in Romania’, Babeș-Bolyai University, Cluj-Napoca being a partner within the project.
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209-235.

Table 1: Description of variables analyzed

<table>
<thead>
<tr>
<th>Variable</th>
<th>Codification</th>
<th>Source</th>
<th>Values of variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>The prevalence of corporate environmental disclosure</td>
<td>CED</td>
<td>The Global Competitiveness Report 2005-2006</td>
<td>Variable can range between 1 and 7: 1 – absent 7 – widespread</td>
</tr>
<tr>
<td>The governmental-mandated disclosure of environmental performance and pollutant release</td>
<td>GME</td>
<td>The Global Competitiveness Report 2005-2006</td>
<td>Variable can range between 1 and 7: 1 – voluntary 7 – mandatory</td>
</tr>
<tr>
<td>The strength of auditing and accounting standards</td>
<td>SAA</td>
<td>The Global Competitiveness Report 2005-2006</td>
<td>Variable can range between 1 and 7: 1 – absent 7 – widespread</td>
</tr>
<tr>
<td>Eco-label awards obtained by companies within the country</td>
<td>EcoA</td>
<td>European Commission Eurostat website</td>
<td>Variable may take values greater than 0, depending on the number of entities in a country which obtained Eco-label awards</td>
</tr>
<tr>
<td>Country</td>
<td>CED</td>
<td>GME</td>
<td>SAA</td>
</tr>
<tr>
<td>----------------</td>
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<td>-----</td>
<td>-----</td>
</tr>
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</tr>
<tr>
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<tr>
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<td>Sweden</td>
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</tr>
<tr>
<td>27</td>
<td>United Kingdom of Great Britain and Northern Ireland</td>
<td>5,60</td>
<td>5,40</td>
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</tbody>
</table>

Source: dates are selected from Global Competitiveness Report 2005-2006, Pilot 2006 Environmental Performance Index, Eurostat, Federal Environmental Agency
Giving Voice to Employees and Spreading Information Within the Firm: The Manner Matters

Author: Enzo Valentini, University of Macerata, Dipartimento di Studi sullo Sviluppo Economico, Piazza Oberdan 3, 62100 Macerata, Italy, enzo.valentini@unime.it

The aim of this paper is to verify empirically whether giving voice to employees and spreading information within the firm increase job satisfaction, while thoroughly analyzing if different means imply different consequences. The analysis was carried out using a British data set: “Changing Employment Relationship, Employment Contracts and the Future of Work Survey (Working in Britain 2000)”. An ordered probit model was used for estimation. The results confirm the effects of individual features on job satisfaction, as highlighted in previous studies. The analysis shows that job satisfaction can be enhanced by spreading information within the organization and by giving voice to employees, but the management must choose communication strategies perceived as reliable by the employees.

Keywords: Job satisfaction, employees’ voice, procedural utility, gift exchange, Human Resource Management.

Introduction

Economists are paying increasing attention to “factors” in job satisfaction. Job satisfaction can affect productivity, effort, absenteeism, and quits. There is an obvious interest in studying how to organize work environments in a way that increases employees’ satisfaction and quality of life.

Studies on job satisfaction and productivity gains are based on the idea that a satisfied worker is likely to give “extra-effort” (or to avoid absenteeism and
quits). Links between job satisfaction and quits have been shown by Freeman (1978), Akerlof et al. (1988), and Parasuraman and Futrell (1983). McNeily and Goldsmith (1991) report a tendency for men and women to leave their current sales positions because of dissatisfaction with various aspects of their jobs. Levine and Tyson (1990) suggest that increased worker participation can lead to performance improvements. Ichniowsky et al. (1997) find that participatory practices increase productivity.

Labor relations can be seen as a gift-exchange, in which workers appreciate good intentions on the part of the principal towards building an environment for a satisfying job, and respond by “working well”. This idea is traceable to Akerlof (1982), who started a research program that has grown as a consequence of results from experimental economics. These results have shown that the concept of self-interest is not enough to understand agents’ behavior in laboratory experiments, simulating situations of strategic relations and that we must consider, at least, altruistic motivations and reciprocity. This last concept is an extension of the gift exchange concept: reciprocity means that “in response to friendly actions, people are frequently much nicer and much more cooperative than predicted by self-interest; conversely, in response to hostile actions they are frequently much more nasty and even brutal”. Experimental results have confirmed, through the reciprocity concept, the “gift exchange tendency” and the importance of studying determinants of job satisfaction. From this point of view, enhancing job satisfaction could be a good solution to “moral hazard” problems in labor relations because it is possible to suppose that the higher a worker’s satisfaction, the higher his attention to the firm’s efficiency. Inside firms and organizations, problems caused by information asymmetry (i.e., moral hazards) could be efficiently coped with by adopting governance models based not only on material incentives and monitoring, but on psychological motivation as well. The goal would be to encourage cooperation when it is possible, in such a way as to support information exchanges and economize on information and transaction costs.

Both material incentives and psychological motivations affect the level of utility enjoyed by employees in labor relations. This paper includes some management tools among the possible determinants of job satisfaction, such as how information is spread within the firm and how workers’ opinions

1 Fehr and Gatcher (2000).
2 This theory requires that the utility function includes the reciprocity concept. Literature offers some support for this theory: Rabin (1993), Fehr and Schmidt (1999).
3 See, for example, Bowles and Gintis (2002).
are collected. If the chance of receiving reliable information or voicing their own opinions increases workers’ satisfaction, then they can reply (via “Gift Exchange”) with extra effort. However, different channels may imply different results because:

- experimental results suggest that people evaluate and appreciate the “procedure” by which something is accomplished. The literature refers to this notion as “procedural utility”, which means that it is not only important how much one is paid, but also the way in which the wage is given (i.e. if it is based on trust or incentives) (Benz and Stutzer, 2003). In determining their effort, employees could consider not only if managers listen to their voices, but also how.

- some management tools could better receive employees claims (or spread information). Therefore, they can be more effective in creating a satisfactory work environment. This fact, in turn, can increase job satisfaction.

The volume of literature on “procedural utility” is increasing rapidly. Benz et al. (2004) present a complete introduction to this concept, and Frey et al. (2005) also offer a useful analysis.

Benz and Stutzer (2003) focus on the fact that utility from pay is not only influenced by economic outcomes (pay levels), but also by the way pay is determined. The results of their empirical analysis are consistent with the notion of procedural utility because they find that being consulted on pay issues contributes to workers’ well being, as measured by their satisfaction with their pay. In this case, the procedural factor is the frequency of being asked about wage issues and the dependent variable is pay satisfaction. In this paper, I consider two different possible channels of “procedural utility”, not regarding pay methods: the way information is spread in firms and the way the workers’ voice is organized. Tortia (2008) empirically confirms the idea that trust relations and fair procedures increase worker well being, but he considers procedural utility as fairness with regard to pay and not procedural utility as “voice” or “info” channels.

The aim of this paper is to verify empirically whether giving a voice to employees and spreading information within the firm increase job satisfaction, while thoroughly analyzing if different means imply different consequences.
Searching for factors in job satisfaction

Past studies have already shown that job satisfaction is determined not only by material incentives like wages and job security. Actually, most empirical studies do not find a significant correlation between wage and job satisfaction. Groot and Van den Brink (1999) assert that this is due to preference drift, resulting from an adaptation to higher wages. We can briefly sum up previous results on the most studied factors:

- **Gender.** A number of studies have demonstrated that women are more satisfied with their jobs than men. The main reason for this finding could be that men and women have different expectations of their jobs.

- **Age.** Clark and Oswald (1996), Blanchflower and Oswald (2004) have observed a U-shaped relationship between age and job satisfaction.

- **Marital status.** People who live with a partner seem to be more satisfied than singles, probably because married individuals are generally happier with their lives.

- **Education.** Clark and Oswald (1996), Sousa Poza (2000) and Verhofstadt et al. (2007) report that more educated people are likely to be less satisfied with their jobs, probably due to differing expectations, as was the case with gender.

- **Income.** Although wage levels are often not correlated with job satisfaction, some studies show that relative wage influences job satisfaction, as observed by Hamermesh (2001) and Shield and Price (2002).

- **Establishment size.** Some studies show that people are more likely to be satisfied in smaller establishments.

The study of the variables contributing to job satisfaction can be improved by focusing on the findings presented in the introduction: job satisfaction is extra-material and it is necessary to search for other possible determinants by studying psychological variables. The focus is on how different management features can have different effects on job satisfaction. The next section presents the data set and the methodology used for the analysis carried out in the paper.

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5 Blanchflower and Oswald (2004), Clark (1996).
Data and methodology

The analysis was carried out using a British data set: “Changing Employment Relationship, Employment Contracts and the Future of Work Survey (Working in Britain 2000)”. This project was designed to identify changes in employment relationships and the contractual basis of employment, and to examine their consequences for the future of work. The survey is based on a questionnaire covering some subjects that are useful for the goals of this paper, including current main job details, organization of work, information and communications, training, benefits and working time, job satisfaction and organizational commitment, job security, and personal and family details.

The data’s technical features are briefly shown in table 1 as they are presented in the UK Data Archive site.

<table>
<thead>
<tr>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dates of Fieldwork: June 2000-January 2001</td>
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<tr>
<td>Country: Great Britain</td>
</tr>
<tr>
<td>Spatial Units: Standard Regions</td>
</tr>
<tr>
<td>Observation Units: Individuals</td>
</tr>
<tr>
<td>Kind of Data: Numeric data; Individual (micro) level</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Universe Sampled</th>
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<tbody>
<tr>
<td>Location of Units of Observation: National</td>
</tr>
<tr>
<td>Population: Working individuals aged 20-60 in Great Britain during 2000</td>
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<table>
<thead>
<tr>
<th>Methodology</th>
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<td>Time Dimensions: Cross-sectional (one-time) study</td>
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<tr>
<td>Number of Units: 3815 (target) 2466 (obtained)</td>
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<tr>
<td>Sampling Procedures: Multi-stage cluster sample</td>
</tr>
<tr>
<td>Method of Data Collection: Face-to-face interview; Self-completion</td>
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An ordered probit model was used for estimation. This method is appropriate for categorical ordered data, such as a questionnaire data set. In an ordered probit, an underlying score is estimated as a linear function of the independent variables and a set of cut points. The probability of observing an outcome corresponds to the probability that the estimated linear function, plus random error, is within the range of the cut points estimated for the outcome.
In ordered probit models, coefficient signs have the same meaning as a standard regression, which is not true for coefficient values. To understand the extent of the impact of changes to the independent variable on the dependent variable, it is be necessary to compute marginal effects. Finally, the analysis uses the weights furnished in the data set: it considers age, sex, and social class. The dependent variable, Job Satisfaction, was obtained by the question: “All in all, how satisfied would you say you are with your job?”; with possible answers ranging from 1 (completely satisfied) to 7 (completely dissatisfied); the dependent variable actually used in the analysis was built by reversing the order of the answers in the questionnaire and it represents job satisfaction as increasing from 1 to 7.

Among the independent variables there are regressors related to **Personal Conditions:**
- *Female*, 1 female, 0 male;
- *Married*, 1 married, 0 single, divorced or widowed;
- *Age* and *Age^2*, to verify the U-shaped relation reported by previous studies;

A negative correlation between union membership and job satisfaction is widely confirmed by past studies. The causal direction of this link is unclear. Bryson et al. (2004) found robust arguments to support the endogeneity hypothesis, so I prefer to exclude “union membership” from the analysis.

As suggested by previous studies, wage rates turn out to be uncorrelated with job satisfaction, so I do not include it in the final regression, but I use the relative wage indicator:
- **Relative Wage**: 1 (my wage is on the low side), 2 (neutral), 3 (my wage is on the high side). In the analysis, this variable is recoded in three dummy cases where the reference case is the first category⁷.

The dissemination of information from the firm’s management to employees could be positively correlated with job satisfaction, but if procedural utility matters, employees could perceive different means of information spreading differently, specifically with respect to their reliability. Among the regressors there are some dummies concerning **how employees are informed** about what is occurring in the organization, each one indicating (a value of 1) whether the corresponding method is implemented in the interviewee’s work place: *Info notice board; Info news sheet; Info magazine; Info web site; Info e-mail; Info meetings with management.*

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⁷ This variable comes from a specific question on the questionnaire and it is not inferred from interviewees’ statements about their income.
The questions used to build the “info” variables are the following: “Does your employer give you news of what is happening in the organization by any method on this card?” (notice board, email, etc.) and “Does management organize meetings where you are informed about what is happening in the organization?”.

The same observations made for info spreading channels can be used for the subject of the workers’ voice: the more chances for voicing their opinions, the greater their satisfaction. In this case, firms can implement different voicing forms and some of them could be perceived differently by workers and could be more or less effective than others. The analysis includes three dummies on Channels of Voice: Meetings with management; Employees groups; Formal suggestion schemes.

The questions used to build the “voice” variables are: “management hold meetings in which you can express your views about what is happening in the organization?”, “organizations have groups of employees who meet regularly to think of improvements that could be made within the organization. Are you involved in such a group?”, “your employer have a formal suggestion scheme?”.

The last group (Job General Features) includes all the remaining regressors:

- Pay negotiable is a dummy that indicates whether pay was directly contractible between the worker and superiors at the beginning of the relationship;

- Public sector, 1 yes, 0 no;

- Firm size it is a categorical variable: 1 (1-10 employees), 2 (10-50), 3 (50-499), 4 (500-990), 5 (1000+); this variable will be split into dummy cases, and the refcase is the smallest dimension.

In table 2, variables means and standard errors of the data set are listed.

<table>
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<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Mean</th>
<th>Std. Dev.</th>
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<th>Max</th>
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<td>0.46</td>
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</tr>
<tr>
<td></td>
<td>Value 1</td>
<td>Value 2</td>
<td>Value 3</td>
<td>Value 4</td>
<td>Value 5</td>
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<td>------------------------</td>
<td>---------</td>
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**Results**

Table 3 shows the results of the ordered probit. The variables chosen for the analysis exclude some observations (among them all of the self-employed), and 2,010 observations were used. All results concerning factors related to **individual characteristics** confirm the findings of past studies (the U-shaped impact of age, the greater satisfaction of women, married and non skilled workers). I checked for the impact of the number of children in a household, as some previous work has hypothesized a relationship, which I did not find.

The **General features** of a job have “expected” signs. Larger establishments imply lower satisfaction. Working in the public sector seems to be associated with a higher satisfaction; it is possible that public sector workers are more likely to have chosen their vocations for non-pecuniary reasons (i.e., in health or education services). Allowing workers to negotiate their pay seems to positively affect job satisfaction. These results reflect the concept that the more control individuals have over their own situations, the greater the satisfaction. The correlation between relative wage and satisfaction confirms
previous findings in the literature.

**Table 3:** Ordered Probit Results (n=2010)
Dependent Variable: Job Satisfaction

<table>
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<th></th>
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</thead>
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<td>Age2</td>
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<td>0.002</td>
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<td><strong>General Features</strong></td>
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<td>Firm size 500-999</td>
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<td><strong>Channels of Voice</strong></td>
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<td>Employees groups</td>
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<tr>
<td>Meetings with management</td>
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<td>.087</td>
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<td>***</td>
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</tbody>
</table>

Wald $\chi^2$=230.2, $P>|\chi^2|>0.000$; Pseudo-$R^2$=0.05

Base group: man, single, no education, low relative wage, pay not negotiable, firm size 1-10, private sector, no channels to spread information within the firm, no channels of employee voice

Finally, the results confirm that job satisfaction can be enhanced
by the spread of *info* and by giving *voice* opportunities to employees. But, they also signal that the means chosen by management could be perceived differently by workers and be more or less effective.

The spread of information through impersonal or “cold” means (i.e., written) might not be well received by workers and, probably, are even considered as a way to avoid telling the truth, as the news sheet result confirms. Conversely, workers appreciate information given “face-to-face” (meetings), probably because this method reduces the chances of lying and allows questions to be freely directed to the management. The same observations emerge for voice channels: employees seem to appreciate the opportunity to meet with other employees or management and talk directly to them. There is another possible interpretation of the data: the “chances to meet” are more effective than other channels of voice or info spreading and they have indirect consequences on job satisfaction because they make a larger contribution toward building a satisfactory environment for workers.

Marginal effects (Table 4) help to clarify the different impacts of management strategies, particularly from a quantitative point of view.

<table>
<thead>
<tr>
<th>Job Satisfaction</th>
<th>Pr(1)=</th>
<th>Pr(2)=</th>
<th>Pr(3)=</th>
<th>Pr(4)=</th>
<th>Pr(5)=</th>
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<td>.007**</td>
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<td>.005**</td>
<td>.007**</td>
<td>.007**</td>
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<td>.027**</td>
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Giving Voice to Employees and Spreading Information Within the Firm: The Manner Matters

<table>
<thead>
<tr>
<th>Info - Notice Board</th>
<th>Info - News-sheet</th>
<th>Info - Magazine</th>
<th>Info - Web site</th>
<th>Info - Meetings with management</th>
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<table>
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<td>-.041***</td>
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</table>

Base group: man, single, no education, low relative wage, pay not negotiable, firm size 1-10, private sector, no channels to spread information within the firm, no channels of employee voice.
Significance: * 10%, ** 5%, ***1%.

The interviewed workers showed a high level of job satisfaction, as the statistics described in Table 4 exhibit (the mean is 5.4). In relative terms, the “crucial” levels of satisfaction are the fifth and sixth: an individual with base group characteristics falls into one of these two categories in almost 77% of the cases (see the first row of the table). Shifting to or from the fifth to the sixth category of satisfaction implies being under or over the average level respectively. Hence, the most important marginal effects are those in columns Pr(5) and Pr(6), which signal that the most important factors of job satisfaction are, in order, as follows: relative wage, education level, gender, firm size (especially if it is over a thousand), chances to have meetings with the management about voice claims and the sharing of information. These “chances to meet” seem to be more relevant than being a public employee or having the possibility to negotiate wages. With regard to the concept of procedural utility, spreading information through news sheets and meetings have different consequences: the first method even seems to negatively affect job satisfaction.

Analogously, with regard to voice channels meetings with management are more appreciated than simple employee groups. Actually, “face-to-face” meetings with superiors can be considered the only really effective way for a
worker to voice his concerns.

Conclusions

The analysis carried out in this paper confirms the findings of previous studies on the effects of personal conditions on job satisfaction. Moreover, the results are compatible with predictions of studies on psychological incentives: job satisfaction can be enhanced by spreading information in firms and by giving a voice to employees’ requirements and ideas. Nonetheless, it is necessary to choose a means to spread the information that is perceived as democratic and credible by employees.

In particular, the analysis suggests that chances to meet with management in person either to voice opinions or to get information from superiors are relevant elements in determining job satisfaction. These opportunities for a meeting can positively affect job satisfaction in two ways:

- **Direct Effect**: workers appreciate the chance, in itself, to meet with management and this factor directly affects the level of job satisfaction (procedural utility);
- **Indirect Effect**: meetings are more effective than other means, both for receiving workers’ claims and for spreading information, and they provide an opportunity to organize work in a more satisfactory way.

These results could be useful indications for building a modern theory of Human Resource Management, based on the minimization of transaction costs due to information asymmetries or moral hazard. Creating a satisfactory job environment could be an effective way to deal with moral hazard problems in productive units; resorting to gift exchange with workers (job satisfaction vs. effort). If this is the aim, it is necessary to implement reliable means, both to spread information within the firm and to give the employees the chance of voicing their claims, suggestions, and opinions. “Face to face” meetings between management and employees seem to be the most appreciated and effective method to achieve this target.

Acknowledgment

I would like to acknowledge Michael White (Policy Studies Institute, LSE) as the depositor of the data I have used. The data set is available thanks to the UK Data Archive. I alone am responsible for the paper’s contents.
References


The Impact of Opportunity Recognition Skills Training on Entrepreneurial Intention of Female Nursing Students

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This paper using the Theory of Planned Behavior, presents a study of entrepreneurial intentions among nursing students in Zanjan Azad University. By measuring the intention of nursing students, the factors that impact their intention to start business can be recognized and the effective programs to affect their intention can be designed and developed. A sample of 56 nursing student selected and assigned to test and control groups. Data was collected at tow stage: The first down at the beginning of the first semester and before an entrepreneurial training program (ETP) performed, and the second, down at 75 days later, after ETP program was accomplished. The training program focused on opportunity recognition assumed to have positive effect on entrepreneurial intention. Because they not involve in practical aspects of start up and giving participants thought of potential barriers we could measure the effectiveness of the training program. Results shows that unlike many studies that show entrepreneurial training program positively influence entrepreneurial intentions of students, this study find very low effect of entrepreneurial training program on entrepreneurial intentions of nursing students. This paradoxical finding might be as a result of other factors such as greater chance of nursing students to be employed after graduation. Our results also showed that like entrepreneurial intention, self efficacy had not been influenced by training program. Social norms had been influenced by ETP but attitude toward behavior and perceived self efficacy had
not influenced.

**Keywords:** Entrepreneurial Intention, Subjective Norms, Personal Attractiveness, Entrepreneurship Training Program.

**Introduction**

Promoting entrepreneurship in health care sector is the main way to increase and speed up development in this sector. Entrepreneurship involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, new ways of organizing, new markets, new processes, and new raw materials through organizing efforts that previously had not existed (Venkatraman, 1997). The knowledge about markets and knowledge about how to serve them facilitates the discovery of opportunities (Shane, 2003). This sort of knowledge surely belongs to those who have access to particular kind of information. Those who study in this field and similar fields, such as nursing students have this knowledge. Thus encouraging them to start their own business initiates innovation and helps the health sector to grow.

Education has a positive and strong impact on entrepreneurial intention (Lutje and Frank, 2003) and it is the main way to enable people to recognize the opportunities around them, particularly opportunities close to their field of study. Educational programs are developed to learn and encourage entrepreneurial behavior, understanding their impact on the factors that influence and shape individuals’ intentions to choose self-employment as a career, are critical (McStay, 2008). In previous researches that studied the impact of entrepreneurship training programs (ETP) on entrepreneurial intentions of students, these programs, involved the whole entrepreneurial process, and there are few studies which had been paid attention to a specific entrepreneurial activity or entrepreneurial intent. Also there are few researches that had studied the intention of health care students, particularly nursing students. The main purpose of this paper is to study the impact of opportunity recognition skills training on entrepreneurial intentions of nursing students. Because of the special properties such as the courses they take and the chance of employment after graduation, nursing students are good population for this study. By measuring the impact of training on their intention, we can design
and develop the effective programs to affect their intention.

This paper presents a study of the impact of entrepreneurial training program (ETP) on entrepreneurial intentions among nursing students in Zanjan Azad University. The training program focused on opportunity recognition. We assume that the training program have positive effect on entrepreneurial intention. The training program consisted of eight sessions about opportunity recognition plus a preliminary session to describe the objectives of study and gaining necessary personal information to assign individuals to the test and control group.

**Literature Review**

The decision to become an entrepreneur considered as voluntary and conscious (Kruger et al., 2000). Therefore, it seems reasonable to analyze how that decision is made. The decision to become an entrepreneur has been analyzed using different methodologies (Linan, 2004). Many studies have focused on the importance of different characteristics such as age, gender, origin, religion, level of studies, labor experience, and so on (Reynolds et al., 1994). The predictive capacity of these demographic variables is very limited. These approaches have been criticized (Gartner, 1989; Krueger et al., 2000), both for their methodological and conceptual problems and for their low explanatory capacity (Linan, 2004). The intention to carry out a given behavior will depend on the person’s attitudes towards that behavior (Ajzen, 1991). Thus intention based models offer a better understanding of predicting behavior A more favorable attitude would increase the intention of carrying it out. Attitudes would measure the extent to which an individual positively or negatively evaluates something. Attitudes are relatively stable, but they change according to time and situation. (Linan, 2004).

Two intention-based theories are used in this paper to provide theoretical and empirical support for the proposed model. Among these two theories, an individual's perceptions act as the primary explanatory mechanism for the intention to be formed. These theories are Shapiro's Entrepreneurial Event (SEE) (Shapero and Sokol, 1982), and The theory of Planned Behavior (TPB) (Ajzen, 1991). These two models present a high level of mutual compatibility (Krueger et al., 2000).
Shapiro’s Entrepreneurial Event

Shapiro and Sokol were driven by the desire to understand two main questions: what triggers the action of changing one’s life? And why do people choose a particular path from countless other options? (mueller,2008) The theory of the entrepreneurial event considers firm creation as the result of interaction among contextual factors, which would act through their influence on the individual’s perceptions. Shapiro and Sokol (1982 look at life path changes and their impact on perceptions of desirability and perceptions of feasibility) in relation to new venture formation. This model assumes that critical life changes (displacement) causes precipitation of a change in entrepreneurial intention and subsequent behavior. Displacement also occurs in a negative form (e.g. divorce, loss of a job) or a positive form (financial support, good business partner). The intention of an individual to be self-employed (an entrepreneurial event) therefore depends on the individual’s perceptions of desirability and feasibility of the activity.

Figure 1: Shapiro and Sokol’s model of the Entrepreneurial Event (1982)

Desirability refers to the degree to which a person feels an attraction towards a given behavior (to become an entrepreneur). According to Shapiro and Sokol (1982) the entrepreneurial event is the result of an individual’s perceptions of desirability of entrepreneurship that is under influence of their own personal attitudes, values and feelings, and are the result of their unique

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social environments (e.g. family, peer groups, educational and professional influences.

Perceived feasibility is defined as the degree to which people consider themselves personally able to carry out that behavior. External circumstances would not determine behaviors directly, but rather they would be the result of (conscious or unconscious) analysis carried out by the person about the desirability and feasibility of the different possible alternatives in that situation. (Linan, 2004) It is therefore possible that students’ attitude toward self-employment may be positively impacted by participation in entrepreneurship education.

**Theory Of Planned Behavior**

The Theory of Planned Behavior (Ajzen, 1991), was derived from the Theory of Reasoned Action (Fishbein and Ajzen, 1975). The Theory of Reasoned Action states that behavioral intentions are formed by one’s attitude toward that behavior and one’s subjective norms. In turn, both attitudes and subjective norm are influenced by evaluations, beliefs, and motivation formed through one’s unique individual environments.

Theory Of Planned Behavior could be applied to all voluntary behaviors and it provides explanations in very diverse fields, including the choice of professional career (Ajzen, 2001; Kolvereid, 1996). Studies have found that the TPB is applicable to the entrepreneurship (Krueger et al, 2000). According to the TPB, entrepreneurial intention indicates the effort that the person will make to carry out that entrepreneurial behavior. It captures the three motivational factors, or antecedents, influencing behavior (Ajzen, 1991; Linan, 2004):

- **Attitude toward start-up**: refers to the degree to which the individual holds a positive or negative valuation about being an entrepreneur (Ajzen, 2001; Autio et al., 2001).
- **Subjective norm** refer to the perception that “reference people” would approve the decision to become an entrepreneur, or not (Ajzen, 2001). These reference people are colleagues, instant family members and friends.
- **Perceived behavioral control**: refers to the perception of the ease or difficulty of becoming an entrepreneur. It is, therefore, a concept quite similar to self-efficacy (SE) (Bandura, 1997), and to perceived feasibility (Shapero & Sokol, 1982). Nevertheless, recent work has emphasized the difference between
PBC and SE (Ajzen, 2002). PBC would include not only the feeling of being able, but also the perception about controllability of the behavior.

![Diagram](image)

**Figure 2**: Ajen’s Theory of Planned Behavior Model (1991)

Comparing these two different intention models reveals that they both have high predictive power. Krueger et al (2000) compared those two models and showed that both were able to predict entrepreneurial activity. Which model could provide a more detailed understanding of the influence of course characteristics on entrepreneurial intention? According to Shapero the intention to perform a specific behavior depends on two perceptions, i.e. perceived desirability and perceived feasibility. Those two perceptions are included in Ajzen’s model as well. Perceived desirability can be compared to perceived attitudes and perceived feasibility can be compared to perceived behavioral control. Ajzen identifies one more influential variable: Perceived subjective norms capture the perceived expectations from the environment. Since empirical studies show a significant relationship between socialization and entrepreneurial behavior, it seems prudent to include this aspect as a separate variable (Mueller, 2008). Considering the objective of this study is to better understand through which precursors certain course characteristics influence entrepreneurial intention, it seems reasonable to choose the model which is more precise. Ajen’s Theory Of Planned Behavior is selected here because it has necessary criterions and as mentioned above can describe the mechanisms of ETP on entrepreneurial intention better.

**Education**

The paradigm of the entrepreneurial event is important for entrepreneurial education practices, since it shows that the dominating
influential factors for company creation, i.e. desirability and feasibility, are factors that can be influenced by educational practices. Entrepreneurship education researchers have rarely included knowledge from educational science in their studies. (Mueller, 2008).

Studies about entrepreneurship education focus on enterprise education and consider course content, pedagogy, entrepreneurial learning, and assessment (Greene and Rice, 2007). External circumstances would not determine behaviors directly, but rather they would be the result of (conscious or unconscious) analysis carried out by the person about the desirability and feasibility of the different possible alternatives in that situation.(linan, 2004) It is therefore possible that students’ attitude toward self-employment may be positively influenced by participation in entrepreneurship education.

Mueller (2008) states that The following groups of students can be distinguished regarding entrepreneurial exposure: 1) Students with some entrepreneurial exposure who are inclined to become an entrepreneur in the future. For them, entrepreneurship courses can play an encouraging role, for example, if a low perception of behavioral control may have prevented them from otherwise actually planning their own business. 2) Students with no entrepreneurial exposure so far. Entrepreneurship courses can be an opportunity for them to discover entrepreneurship as an option (Mueller, 2008).

Linan (2004) offers a typology of entrepreneurship educations and define the type of entrepreneurship education into four categories (Pribady, 2005):

• Entrepreneurial awareness education. The main purpose of this education is to increase the awareness of entrepreneurial knowledge among the people. Thus, this educational category would not directly pursue the creation of more entrepreneurs. It would act on one or more of the elements that determine intention, but not directly on intention.

• Education for start-up. This type would involve the training for preparation to be the owner of a small conventional business. These trainings consist of the concrete practical aspects related with the start-up phase: how to obtain financing; legal regulation; taxation; etc.

•Education for entrepreneurial dynamism. The objective of this sort of education would not only be to raise the intention to become an entrepreneur, but also the intention to develop dynamic behaviors when the enterprise is already in operation.
• Continuing education for entrepreneurs. This education is a specialized version of adult education in general, designed to allow improvement of the existing entrepreneur’s abilities.

Research Hypotheses

The type of education that was offered in this study covers only Opportunity recognition phase of entrepreneurial process. Hypotheses in this research are:

1. Opportunity recognition skills training influence Entrepreneurial Intentions of nursing students.
2. Opportunity recognition skills training influence Attitude toward Entrepreneurship in nursing students.

This study concentrates on the intention and the antecedent variables that may relate to the formation of self-employment intentions. The model below (Figure 3) shows the intervention – entrepreneurship education and its moderating impact on students’ self-employment intentions. Based on empirical support (Krueger, 1993), the Theory of Planned Behaviour (Ajzen, 1991) and Shapero's Entrepreneurial Event Model (Shapero, 1982) have been integrated to provide a strong foundation for the revised research model in this thes.

![Figure 3: Proposed Model for study](image-url)
Method

The study using none-equivalent groups with pre-test and post-test design utilized a Quasi-experiment research design. The sample comprised of 56 nursing students from Zanjan Azad University. Data were gathered twice: first on October, 2010, at the beginning of the semester and before an entrepreneurial training program (ENT) performed, and second, 75 days later after ENT program was accomplished. Data collected using a set of questionnaire measuring students’ background information, entrepreneurial intention, attitudes toward entrepreneurship, social norms and perceived behavioral control. Using the background information that students stated, the students allocated to test and control groups. The criteria for equalization of groups were: previous entrepreneurial experience, age, family’s income and parent’s job. Of 58 students participated in study one set aside because of having previous entrepreneurial experience and one, because of being out of other student’s age group (19-24). Of 56 students, 26 allocated to test group and 30 to control group.

The instrument used for data collection was Entrepreneurial Intention Questionnaires (EIQ) developed by Linan & Chen (2009), its applicability in different cultural contexts was tested and its reliability and validity confirmed by authors. The English version of the EIQ after being translated in farsi, passed to two other translators and entrepreneurship professors to affirm the precision of farsi version, finally a pilot test performed on a sample of 27 midwifery students that are similar to nursing students. Cronbach’s alpha for all four variables was between 0.718 to 0.764 and total alpha was 0.835. The measurement of items in the survey questionnaire was based on 7 point Likert scales with 1 demonstrating “strongly disagree” to 7 demonstrating “strongly agree”. Negatively worded items were rescored so that higher scores reflected its mean. Research was performed in 3 phase:

Pre test: In pre test phase the questionnaires were given to students after one of main classes finished. After questionnaires distributed in class, a brief description about research’s aims and necessary comments about questionnaire was given. Treatment: In treatment phase an entrepreneurial training program focused particularly on opportunity recognition was performed in 8 sessions only for test group. The training program involved: Entrepreneurship process, familiarity with businesses in health sector, opportunity recognition processes and methods, factors influencing opportunity recognition and, informal
process of opportunity recognition and its stages. Post test: Post test was performed 75 days after pre test. The time between two tests decreases the probability of influence Post test by the pre test.

**Results**

Table 1 Shows the comparison of results in pre-test and post test for all four main variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean score</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre test</td>
<td>Post test</td>
</tr>
<tr>
<td>Entrepreneurial intention</td>
<td>25.62</td>
<td>26.27</td>
</tr>
<tr>
<td>Attitude toward start-up</td>
<td>18.96</td>
<td>19.88</td>
</tr>
<tr>
<td>Social Norms</td>
<td>13.81</td>
<td>15.96</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>29.19</td>
<td>29.54</td>
</tr>
</tbody>
</table>

Entrepreneurial intention) mps =42, ) Attitude toward start-up) mps=35, (Social Norms) mps=21, (Perceived Behavioral Control)mps=42

As Shawn in the table1, the mean scores for pre-test stage shows that the scores for entrepreneurial intention, attitude toward start-up, social norms and perceived behavioral control comparing maximum possible score (mps) are moderate and the values indicate whether or not extreme scores reached and there is enough space for scores to rise after treatment.

Paired sample t-test used to analysis hypotheses. Before using t-test, the assumption of equality of variances tested by using Levine’s test. Table1, Shows the results of leven's test for all variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial intention</td>
<td>0.486</td>
</tr>
<tr>
<td>Attitude toward start-up</td>
<td>0.036</td>
</tr>
<tr>
<td>Social Norms</td>
<td>0.315</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>0.713</td>
</tr>
</tbody>
</table>
As it can be seen, the significance value for all variables are above 0.05 and the assumption of equality of variance accepted for all variables except attitude toward start-up. Because the equality of variance is a necessary condition, it is necessary to use nonparametric equivalent (Wilcoxon test) instead of paired sample t-test.

**Paired-samples t-tests**

Hypopaper 1 - opportunity recognition skills training influence Entrepreneurial Intentions of nursing students.

Paired-samples t-tests were conducted to compare group mean scores for test group before and after treatment. The Levene’s test indicated that variances for the two groups (test group before (T1) and after treatment (T2)) were equal, satisfying the assumption of homogeneity of variance. Table 3, Shows t-test results for hypopaper 1. It would appear from these results (Table 3) that the anticipated change in entrepreneurial intention after the entrepreneurship course did not take place.

<table>
<thead>
<tr>
<th>variable</th>
<th>S.D</th>
<th>Std.Error Mean</th>
<th>t</th>
<th>d.f</th>
<th>Sig(2 tailed)</th>
<th>t-crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial intention</td>
<td>8.69</td>
<td>1.705</td>
<td>-0.383</td>
<td>25</td>
<td>0.705</td>
<td>2.060</td>
</tr>
<tr>
<td>Social Norms</td>
<td>4.72</td>
<td>0.926</td>
<td>-2.236</td>
<td>25</td>
<td>0.028</td>
<td>2.060</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>6.09</td>
<td>1.196</td>
<td>-0.289</td>
<td>25</td>
<td>0.775</td>
<td>2.060</td>
</tr>
</tbody>
</table>

The results of this study are consistent with studies found that the entrepreneurship training program had no influence on Entrepreneurial intentions of participants and was beyond the expectation. Fayoll et al (2006) found that entrepreneurship training program could have some strong effects for some students, depending on their background and initial perspective on entrepreneurship; for students never had been exposed to entrepreneurship the program’s effect might be reversed.

Hypopaper 3 - opportunity recognition skills training influence Social Norms in nursing students.

As indicated in table 3 hypopaper 3 is confirmed. The difference between groups considering social norms before and after training program
is significant. The relationship between social norms and training program is visible.

Hypopaper 4 - opportunity recognition skills training influence Perceived Behavioral Control of nursing students.

Hypopaper 4 tests the equality of means between test groups Perceived Behavioral Control scores before and after training program. It would appear from the results (Table 3) that the anticipated change in Perceived Behavioral Control after the entrepreneurship course did not take place. As indicated in table 3 hypopaper 4 is not confirmed. The difference between group’s considering Perceived Behavioral Control before and after training program is significant.

<table>
<thead>
<tr>
<th>Variable</th>
<th>z</th>
<th>ties</th>
<th>Sig(2 tailed)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude toward startup</td>
<td>-0.315</td>
<td>24</td>
<td>0.05</td>
<td>0.753</td>
</tr>
</tbody>
</table>

Hypopaper 2 - opportunity recognition skills training influence Attitude toward Entrepreneurship of nursing students.

Hypopaper 2 - opportunity recognition skills training influence Attitude toward Entrepreneurship of nursing students.

As stated earlier because the assumption of homogeneity of variances is not true in case of Attitude toward startup, nonparametric equivalent (Wilcoxon test) instead of paired sample t- test is used to test Hypopaper 2. This hypopaper tests the equality of means between test groups Attitude toward startup scores before and after training program. It would appear from the results (Table 3) that the anticipated change in Attitude toward startup after the entrepreneurship course did not take place. As indicated in table 3 hypopaper 2 is not confirmed. The difference between groups, considering Perceived Behavioral Control before and after training program is not significant.

**Discussions**

Many studies conducted to survey the effect of ETPs on entrepreneurial intention (Linan et al, 2005; Mueller, 2008; Lepoutre et al, 2010; Aneizi et al, 2010). Fayoll et al (2006) found that entrepreneurship training program could have some strong effects for some students, depending on their background
and initial perspective on entrepreneurship, for students never been exposed to entrepreneurship the programs, effect might be reversed. Linan et al (2005) found relation between participating in ETP and the entrepreneurial intention. They found that the influence of each course on the variables determining intention is different depending on the kind of course considered. This result is consistent with the classification developed. In a study conducted by Le pouter et al (2010), they found that that the higher the intensity and experiential of the entrepreneurship programs, the stronger their impact on some of the variables investigated involved entrepreneurial intention.

The results of this study is consistent with studies found that the entrepreneurship training program had no or very low influence on Entrepreneurial intentions of participants. Oosterbeek et al (2008) found that the effect of education on intention of participants considerably was negative. One of the possible reasons for this finding about nursing students might be the employment expectation. Given that the chance of nursing students for employment in public and private sectors, the entrepreneurial intention might be under influence of another strong factors such as employment expectation.

The most strong relation between entrepreneurial intention and its antecedents observed in previous researches was attitude toward entrepreneurship (McStay, 2008). Le pouter et al. (2010) found positive effect of education on intention and attitudes. Walter & dohse (2009), Results show that active modes of entrepreneurship education directly increase intentions and attitudes. Given that the training in the current study only cover the opportunity recognition, it is expected that students participated in program represent higher attitudes toward entrepreneurship, the results was beyond expectation. The possible explanation for the results, as stated earlier, might be the employment expectations among nursing students.

In current study the training program has a significant effect on social norms among nursing students. In fact social norms was only variable that increased after ETP. The findings of current study are consistent with other studies that found social norms are the weakest among antecedents of entrepreneurial intention in Ajen's Theory of Planned Behavior. Subjective norm (SN) measures the perceived social pressure to carry out or not to carry out entrepreneurial behavior (Linan & Chen, 2009). Linan & Chen (2009) found that social norms has influence on personal attitude (attitude toward behavior. Social norms taps perceptions of what important people in respondent’s lives think about performing a particular behavior. These normative beliefs are
weighted by the strength of the motivation to comply with them (Krueger et al., 2000). To check construct validity, these subjective social norms should depend on the expected support of significant others. Interestingly, social norms are less predictive of intentions for subjects with a highly internal locus of control (Ajzen, 1987). Empirical studies found that there is a significant relationship between entrepreneurial behaviors and socialization (Mueller, 2008).

Perceived behavioral control (PBC) is defined as the perception of the ease or difficulty of becoming an entrepreneur (Linan & Chen, 2009). Part of this study investigated the role of ETP on perceived behavioral control among nursing students. Many studies found that depending on nature of training program, perceived behavioral control increased. McStay (2008) found that training program increased all intentions variables included perceived behavioral control. The results show that the ETP had no effect on Perceived behavioral control. This was not unexpected as, the training program did not involve practical aspects that increase perception of individuals about their ability to do entrepreneurial behaviors.

**Implication For Further Researches**

The results of this study is consistent with studies found that the entrepreneurship training program had no or very low influence on Entrepreneurial intentions of participants. Oosterbeck et al. (2008) found that the effect of education on intention of participants considerably was negative. One of the possible reasons for this finding about nursing students might be the employment expectation. Other studies required to investigate the relationship between employment expectation and entrepreneurial intention.

The strongest relation between entrepreneurial intention and its antecedents observed in previous researches was attitude toward entrepreneurship (McStay, 2008). Le Poutre et al. (2010) found positive effect of education on intention and attitudes. Walter & Dohse, (2009) Given that the training in the current study only covered the opportunity recognition skill, Other studies required to investigate the relationship between the whole entrepreneurship program and entrepreneurial intention. Studies that investigate entrepreneurial intentions of participants in various stages of training program and depending on nature of trainings might be of great help to shed some light on various aspects of entrepreneurial training programs effect on intention and its antecedents.
In current study the training program has a significant effect on social norms among nursing students. In fact social norms was only variable that increased after ETP. Social norms taps perceptions of what important people in respondent’s lives think about performing a particular behavior. These normative beliefs are weighted by the strength of the motivation to comply with them (Kruegr et al , 2000). Social norms are less predictive of intentions for subjects with a highly internal locus of control (Ajzen, 1987). Empirical studies found that there is a significant relationship between entrepreneurial behaviors and socialization (Mueller, 2008), thus more studies required to investigate the relationship between socialization and intention antecedents, particularly social norms.

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kiel, Germany: Kiel Institute for the World Economy.
The Organisational Culture – An Integrator for Developing Intellectual Capital in Private Companies

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The Intellectual Capital has promoted a new perspective of creating value by increasing the awareness of the intangible resources’ importance. The current paper seeks to find out if Romanian companies are aware of the organisational culture’s influence on the company’s Intellectual Capital, so that its generation and development to be analysed and improved. Taking into account the particularities of the Romanian Business environment, the external economic and social context and Romanian cultural values, the integrator Organisational Culture was selected for testing the hypothesis of the conducted quantitative research, as it proves to be a powerful integrator, because it reacts upon individual values and intelligence, generating positive or negative outcomes.

Keywords: Organizational Culture, integrator, Intellectual Capital, management

Literature review

The concept of “culture” has been constantly discussed and analysed by both academics and practitioners and there are different approaches to defining it. There is no standard definition and during time, various interpretations were associated: the implicit standars and values that develop in working goups (Homans, 1950; Kilmann and Saxton, 1983), the broad policies and principals that guide a group towards shareholders (Ouchi, 1981; Pascale and Athos, 1981), the implicit rules for getting along in the organisation, ”the way to do things around here” (Van Maanen, 1976, Ritti and Funkhouser, 1982),
the ideas, feelings and image groups develop to characterise themselves (Schultz, 1991).

Advances in defining the concept led to perceiving the organisational culture as a set of processes and practices the organization develops around their handling people, values and credo of the organisation (Schein, 2004). Organisation identity is thus similar with organizational culture. Perceptions of the members that “an organisation stands for something positive and unique in terms of identity can increase the inclination to appropriate common organizational values (...) Distinct values, ideas and symbols can provide for a common identity (...)” (Alvenson and Sveningsson, 2008).

A string organizational culture is as set of fundamental values, traditions, rituals, symbols, informal rules, attitudes, behaviors that indicated how people should act in a certain organisation. Companies who have developed their personality through values, heroes, customs and traditions might have a competitive advantage. These type of companies pass on values, not just profits of services.

The role of the organisational culture

The current paper seeks to find out if Romanian companies are aware of the organisational culture’s influence on the company’s Intellectual Capital (IC), so that its generation and development to be analysed and improved. If we put the IC in the middle of the big picture and we look at its roots instead of branches, we can argument that the value of the IC depends on certain mechanisms, called integrators (Bratianu, 2011). They have the power to bring together the primary elements and to integrate them in the company’s IC, using synergy. By introducing the concept of integrator, new research horizons of the organisations IC’s dynamics were open. The integrator represents a powerful field of forces, capable of combining two or more elements into a new entity, based on interdependence and synergy (Bratianu, 2011, p. 8).

The current research is part of a larger research conducted in the last three years, which focuses on the impact of integrators on the organisational Intellectual Capital’s generation and development. Taking into account the particularities of the Romanian Business environment, the external economic and social context, the Romanian cultural values determined by the education system that starts to be oriented to the current market needs, redesigning curriculums and deliver the proper classes for skilled workforce
(Vasilache et al., 2012) the integrator Organisational Culture was selected for testing the hypothesis of the conducted research. The Organisational Culture is a powerful integrator, as it reacts upon individual values and intelligence, generating positive or negative outcomes. Significant negative reactions can appear if the fundamental values are based on fear and punishments or if there is a disagreement between the organizational strategic goals and the individual fundamental values (Schelegelmich and Chini, 2003).

Research methodology

The research conducted has two hypotheses, and in both cases, null and alternative hypothesis were considered:

**Ho(i):** In the companies analysed, the organizational culture’s impact on generating and developing organisational intellectual capital is significant. The alternative hypothesis, valid in case of null hypothesis’ rejection is:

**Ho(ii):** In the companies analysed, the organizational culture’s impact in generating and developing organisational intellectual capital is not significant.

The second hypothesis refers to managers and employees’ perception:

**H1(i):** Managers’ perception on the role of organisational culture that generate and develop intellectual capital is similar to the employees’ perception.

**H1(ii):** Managers’ perception on the role of organisational culture that generate and develop intellectual capital differs from the employees’ perception.

In the last years, the small and medium enterprises (SME) have been the core of the economies of the most important European Union’s member states and Romania is not an exception. During the recent financial and economic crisis, Romanian SMEs have been struggling to maintain the organisational performances in terms of financial results and even to survive, by carefully controlling the liquidities, liabilities and receivables. As many Romanian SMEs were forced to decrease the number of employees or their salaries, the impact of financial rewards diminished significantly and the real motivation became embedded in the organizational culture.

The current research analysis 120 Romanian companies, with a number of managers ranging from 1 and 7 and a number of employees ranging from 10 to 250. The main indicators taken into account when identifying the subject
companies were: the nationality of the shareholder (the company should have at least one Romanian shareholder), the size of the company (it should be a small or medium firm with the number of employees ranging between 10 and 250), the geographical settlement of the company and the industry in which the companies activate. The main criteria for stratifying the sample of respondents managers were: age, the seniority within the company and within the industry, the last graduated studies. The completion ratio was 4:1 and the total number of valid answers received from managers was 152 and 700 from employees.

The average age of the respondents was 38.5 and most of them (74.5%) own a bachelor degree. The respondents were predominately seniors in the field of work, most of them having worked more than 10 years and they have been with their current company on an average of 7.85 years.

Participants were asked to participate in a 20 minutes, online (web-based) survey, containing a predetermined set of questions designed to capture date from the respondents. When measuring the concept, numbers were assigned to variables according to a metric Likert scale. This scale from 1 to 5 measured to what extent the respondents agree or disagree each statement included in the questionnaire (Hair et al, 2007).

Findings and results

Although it is difficult to measure the extent to which collective work satisfaction is driven by a strong positive organisational culture and leads to organisational performance, the following analysis identifies a range of factors within the company that can significantly influence it: social networks, supportive work environment, managers’ attitude, knowledge sharing process.

For an accurate check up of the assumptions raised, the data obtained from self-completion questionnaires, was introduced in two separate databases: one for employees and one for managers. The total number of valid questionnaires from the employees was 700 and from the managers was 152.
### Table 1: Descriptive statistics for the integrator Organisational Culture

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The employees of the organisation are capable of making competent decisions, without compromising the good development of the activity of the company.</td>
<td>699</td>
<td>1</td>
<td>5</td>
<td>4.03</td>
<td>.881</td>
</tr>
<tr>
<td>The experienced employees help and guide the new-comers.</td>
<td>698</td>
<td>1</td>
<td>5</td>
<td>4.22</td>
<td>.878</td>
</tr>
<tr>
<td>The employees are well informed in what concerns the way in which the activity of the company is performed.</td>
<td>700</td>
<td>1</td>
<td>5</td>
<td>4.04</td>
<td>.789</td>
</tr>
<tr>
<td>There are situations in which the managers of the organisation delegate the power and competence of decision-making to the employees.</td>
<td>698</td>
<td>1</td>
<td>5</td>
<td>3.53</td>
<td>.954</td>
</tr>
<tr>
<td>The organisation supports and encourages team-work.</td>
<td>700</td>
<td>1</td>
<td>5</td>
<td>4.32</td>
<td>.850</td>
</tr>
<tr>
<td>The company organizes team-buildings, discussions and informal meetings for its employees.</td>
<td>700</td>
<td>1</td>
<td>5</td>
<td>3.17</td>
<td>.815</td>
</tr>
<tr>
<td>Inside the company there is an open communication between the departments and between the employees and managers.</td>
<td>700</td>
<td>1</td>
<td>5</td>
<td>4.12</td>
<td>.942</td>
</tr>
<tr>
<td>All the employees get involved in reaching the goals of the organisation.</td>
<td>700</td>
<td>1</td>
<td>5</td>
<td>3.97</td>
<td>.915</td>
</tr>
<tr>
<td>The values promoted by the company are accepted and applied by all the employees.</td>
<td>698</td>
<td>1</td>
<td>5</td>
<td>4.03</td>
<td>.938</td>
</tr>
<tr>
<td>Valid</td>
<td>693</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The fourth column (Mean) represents the answers mean and varies between 3.17 and 4.27. The majority of the answers’ means approach the maximum value (4 or 5), except for three variables with values lower than 4. The standard deviation (column 5) has values lower than 1, which means the employees have similar opinions regarding the culture of their organisation.
Following the values of table 1, we can conclude that the employees of the analysed organisations have common values, principles and beliefs, get involved in reaching the goals of the company and are well informed about the way its activity is running. Also, inside the company there is an open communication between departments and between employees and managers. Once people within the organisation realise the meaning of the information they acquire within a company and this becomes shared, a knowledge network has been created (Hannah and Lester, 2009).

At the same time, the participant employees consider that their efforts to contribute to the success of their organisation are recognized, valued and rewarded by the management when reaching a goal.

The 3.17 value (row 6) tells us, however, that the employees do not consider that companies they are working for organize sufficient team-buildings, discussions and informal meeting in order to improve their internal communication.

**Table 2**: Cronbach Alpha Analysis - validity of the statistics

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>No of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.753</td>
<td>9</td>
</tr>
</tbody>
</table>

The value of the index Cronbach Alpha presented above is 0.753, a value above 0.7, so we can conclude that the chosen set of variables is linearly correlated and measures a latent unidimensional construction. The high value of this test shows that the selected variables are consistent among them, and also in relation with the integrator Organisational Culture, built on them.

**Statistics of items**

**Table 3**: Statistics of the items for the integrator Organisational Culture

<table>
<thead>
<tr>
<th>SMOW</th>
<th>SVOW</th>
<th>ITC</th>
<th>CAIW</th>
</tr>
</thead>
<tbody>
<tr>
<td>The employees of the organisation are capable of making competent decisions, without compromising the good development of the activity run by the company.</td>
<td>31.39</td>
<td>24.182</td>
<td>.472</td>
</tr>
<tr>
<td>The experienced employees help and guide the new-comers.</td>
<td>31.20</td>
<td>24.243</td>
<td>.465</td>
</tr>
</tbody>
</table>
The employees are well informed in what concerns the way the activity of the company is run. | 31.38 | 23.013 | .393 | .739 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>There are situations in which the managers of the organisation delegate the power and competence of decision-making to the employees.</td>
<td>31.89</td>
<td>24.112</td>
<td>.317</td>
</tr>
<tr>
<td>The organisation supports and encourages team-work.</td>
<td>31.10</td>
<td>24.272</td>
<td>.483</td>
</tr>
<tr>
<td>The company organizes team-buildings, discussions and informal meetings for its employees.</td>
<td>31.26</td>
<td>22.962</td>
<td>.343</td>
</tr>
<tr>
<td>Inside the company there is an open communication between departments and between the employees and managers.</td>
<td>31.30</td>
<td>23.602</td>
<td>.499</td>
</tr>
<tr>
<td>All the employees get involved in reaching the goals of the organisation.</td>
<td>31.45</td>
<td>22.638</td>
<td>.555</td>
</tr>
<tr>
<td>The values promoted by the company are accepted and applied by all the employees.</td>
<td>31.39</td>
<td>23.848</td>
<td>.470</td>
</tr>
</tbody>
</table>

SMOW - Scale mean if one item is waived; SVOW - Scale variance if one item is waived; ITC - Correlation of items; CAIW - Cronbach Alpha if one item is waived

Following the values obtained in the first column of Table 3, we observe that the strongest correlation with the scale is achieved by the item „There are situations in which the managers of the organisation delegate the power and competence of making decisions to the employees”, which means this item is the one that sets the tone of the entire analysis. Therefore, we can conclude the integrator Organisational Culture largely depends on the measure in which the managers delegate the power and competence to their employees in the decision making process. Also, inside the companies, the endeavours to contribute to the success of the organisation is recognised, valued and rewarded by the management.

Table 3 also shows us, following the values of the last column, Cronbach Alpha analysis if one item is waived. The values are lower than 0.753 obtained previously, so we can conclude that the initially chosen items (“The employees of the organisation are capable of making competent decisions, without compromising the good development of of the company’s activity”, “The employees are well informed in what concerns the way the activity of the
organisation is performed”, “The experienced employees help and guide the new-comers”, “There are situations in which the managers of the organisation delegate the power and competence of making decisions to the employees”) are relevant for the present analysis. This value indicates that the elimination of any of the selected items translates into a loss of information in analysing the results.

**Table 4:** ANOVA test

<table>
<thead>
<tr>
<th></th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2232.720</td>
<td>692</td>
<td>3.226</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Items</td>
<td>730.423</td>
<td>8</td>
<td>91.303</td>
<td>114.545</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>4412.688</td>
<td>5536</td>
<td>.797</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5143.111</td>
<td>5544</td>
<td>.928</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We can observe that the value of the significance test is 0, which means that there is no significant variance between groups, meaning between the employees’ and the managers’ opinions.

**Analysing managers’ answers**

**Table 5:** Descriptive statistics for the integrator Organisational Culture

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The employees of the organisation are capable to make competent</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>4.06</td>
<td>.739</td>
</tr>
<tr>
<td>decisions, without compromising the good progress of the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>company’s activity.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The experienced employees help and guide the new-comers.</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>4.37</td>
<td>.716</td>
</tr>
<tr>
<td>The employees are well informed in what concerns the way the</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>4.18</td>
<td>.887</td>
</tr>
<tr>
<td>activity has to take place.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
There are situations in which the organisation’s managers delegate the power and competence of decision-making to the employees.  

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>1</th>
<th>5</th>
<th>Mean</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>The organisation supports and encourages team-work.</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>3.72</td>
<td>.970</td>
</tr>
<tr>
<td>The company organises team-buildings, discussions and informal meetings for its employees.</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>4.56</td>
<td>.752</td>
</tr>
<tr>
<td>Inside the company there is an open communication between the departments and between the employees and managers.</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>3.36</td>
<td>.852</td>
</tr>
<tr>
<td>All the employees get involved in reaching the organisations’ goals.</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>4.60</td>
<td>.729</td>
</tr>
<tr>
<td>The values promoted by the company are accepted and applied by all the employees.</td>
<td>152</td>
<td>1</td>
<td>5</td>
<td>4.15</td>
<td>.812</td>
</tr>
<tr>
<td>Valid</td>
<td>152</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The fourth column (Mean) represents the answers’ mean and varies between 3.72 and 4.56. The majority of the answers’ means approach the maximum value (5), except for two variables whose values are lower than 4. The standard deviation (column 5) has values lower than 1 that means the employees have similar opinions regarding the organisational culture.

Following the values of the Table 5, we can conclude that the managers of the analysed organisations have common values, principles and beliefs, that the values promoted by the company are accepted and applied by all the employees and that they are capable of making competent decisions without compromising the good progress of the company’s activity. The 3.36 value (row 6) shows us, however, that the managers admit the fact that more team-building activities, discussions and informal meeting for the employees are needed and should be encouraged.

**Tabel 6: Cronbach Alpha Analysis - Validity of the statistics**

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>No of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.704</td>
<td>9</td>
</tr>
</tbody>
</table>
The value of the index Cronbach Alpha is 0.704, a value greater than 0.7, so we can conclude that the chosen set of variables is linearly correlated and measures a latent one-dimensional construction. The high value of this test shows that selected variables are consistent with each other, and also in relation to the integrator Organisational Culture, built on them.

**Table 7: Statistics of the items for the Organisational Culture macro-variable**

<table>
<thead>
<tr>
<th>Description</th>
<th>SMOW</th>
<th>SVOW</th>
<th>ITC</th>
<th>CAIW</th>
</tr>
</thead>
<tbody>
<tr>
<td>The employees of the organisation are capable of making competent decisions, without compromising the good development of the activity performed by the company.</td>
<td>32.94</td>
<td>39.579</td>
<td>0.335</td>
<td>0.669</td>
</tr>
<tr>
<td>The experienced employees help and guide the new-comers.</td>
<td>32.63</td>
<td>39.532</td>
<td>0.356</td>
<td>0.667</td>
</tr>
<tr>
<td>The employees are well informed in what concerns the way the activity of the organisation is performed.</td>
<td>32.82</td>
<td>38.350</td>
<td>0.374</td>
<td>0.654</td>
</tr>
<tr>
<td>There are situations in which the managers of the organisation delegate the power and competence of decision-making to the employees.</td>
<td>33.28</td>
<td>37.555</td>
<td>0.301</td>
<td>0.658</td>
</tr>
<tr>
<td>The organisation supports and encourages teamwork.</td>
<td>32.44</td>
<td>39.321</td>
<td>0.356</td>
<td>0.665</td>
</tr>
<tr>
<td>The company organizes team-buildings, discussions and informal meetings for its employees.</td>
<td>33.64</td>
<td>36.231</td>
<td>0.361</td>
<td>0.639</td>
</tr>
<tr>
<td>Inside the company there is an open communication between departments and between the employees and managers.</td>
<td>32.40</td>
<td>19.129</td>
<td>0.196</td>
<td>0.634</td>
</tr>
<tr>
<td>All the employees get involved in reaching the goals of the organisation.</td>
<td>32.99</td>
<td>37.437</td>
<td>0.447</td>
<td>0.639</td>
</tr>
<tr>
<td>The values promoted by the company are accepted and applied by all the employees.</td>
<td>32.85</td>
<td>39.467</td>
<td>0.306</td>
<td>0.670</td>
</tr>
</tbody>
</table>

Following the values obtained in the first column of Table 7, we observe that the strongest correlation with the scale is achieved by the items: “The company organises team-buildings, discussions and informal meetings for its employees” and “There are situations in which the managers of the organisation delegate the power and competence of decision-making to the employees”, these two items being the ones that give the tone of the analysis. The weakest
correlation with the scale belongs to the items: “Inside the company there is an open communication between departments and between the employees and managers” and “The organisation supports and encourages team-work”.

We can conclude that the integrator Organisational Culture largely depends on the measure in which the managers delegate the power and competence to the employees for decision-making. Also, the managers have to be aware of the importance of open communication between departments and between themselves and the employees.

In the same table (Table 7), we can analyse the values from the last column Cronbach Alpha analysis if one item is waived. The values are much more lower than that of 0.704 obtained previously, therefore we may conclude that all the items which were initially chosen („The employees of the organisation are capable of making competent decisions, without impeding the good run of the activity of the company”, „The experienced employees from the company support and guide the new comers”, „The employees are well informed about the way in which the activity of the company is run”, „There are situations in which the managers of the company delegate the power and competence of decision-making to the employees” etc.) are relevant for the approached analysis. This value also indicates that the elimination of any of the selected items leads to a loss of information in analysing the results.

### Table 8: ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of the squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups in groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between items</td>
<td>190.282</td>
<td>8</td>
<td>23.785</td>
<td>9.972</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>2881.273</td>
<td>1208</td>
<td>2.385</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3071.556</td>
<td>1216</td>
<td>2.526</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total mean= 4.11</td>
<td>3797.111</td>
<td>1367</td>
<td>2.778</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We may notice that the value of the significance test is 0, which indicates that there is no significant variation between groups, meaning the employees’ and the managers’ opinions are similar. Due to a strong organisational culture, employees are involved in the company’s development and permanently pursue to achieve the strategic objectives set. The perception of the employees regarding the type of communication inside the company is clear: they believe the exchange rate of information and knowledge is high,
their relationship with the management is very good and they work together for improving the performance of the company.

Conclusions

Viewed from the perspective of Intellectual Capital, the Organizational Culture integrator significantly influences two of its three components, the Human Capital through: good relations between employees, experienced employees help newcomers to adapt quickly, a strong process of knowledge sharing, as well as Relational Capital (informal meetings and discussions, teambuildings, teamwork).

Analysing the results, hypothesis Ho is validated as in the companies analysed, the organizational culture’ impact on generating and developing organisational intellectual capital is significant. As for the second hypothesis H1, the results validate it too, since managers’ perception on the role of organisational culture that generate and develop intellectual capital is similar to the employees’ perception.

Both categories studied, the employees and managers, recognise the lack of teamwork activities and informal meetings outside the company, factors that can significantly increase the communication inside the company and represents an important pillar of any company’s organisational culture. Still, results have shown managers are aware of the fact that a strong organisational culture acts as an integrator for Human Capital, therefore new actions and measures for strengthening the organizational culture will be implemented in most of the analysed companies.

References

Ohio:Grid, 1982.
Enhancing Leadership Integrity Effectiveness Strategy Through the Institutionalization of Anorganizational Management Integrity Capacity Systems

Authors: José G. Vargas-Hernández, Adrián de León-Arias, Andrés Valdez-Zepeda, Víctor Castillo-Girón

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Aims / objectives: This paper aims to analyze organizational management integrity capacity system as an improvement concept for enhancing leadership integrity effectiveness in a university setting. It departs from the analysis of the current organizational culture, values, virtues, managerial capabilities and attitudes to assume any organizational task. This paper aims also to propose a strategic model for the institutionalization of an organizational management integrity system.

Study design: Cross-sectional study.

Place and Duration of Study: University Center for Economic and Managerial Sciences, University of Guadalajara. The study is conducted for one academic year during the term 2011-2012.

Methodology: The research methods used are the analytical based in the literature review and interpretative of the main findings to provide a synthetic model.

Results and conclusion: The outcomes of the research on the application of organizational management integrity capacity systems may demonstrate that the drama of leadership effectiveness is centered on dysfunctional organizational integrity culture and leadership. This chapter provides a sound strategies and institutionalization for organizational integrity capacity philosophy focused on leadership integrity effectiveness that empowers management professionals to act with integrity and supported by an organizational integrity culture.

Implications: The results provide the basis to develop strategies for an organizational integrity leadership framed by an organizational integrity culture, sustained by a code of conduct, regulation policies and overall the development and institutionalization of an organizational integrity capacity system which can positively influence the
behavior of key stakeholders and actors.

Keywords: Integrity, leadership integrity effectiveness, management integrity development, organizational integrity capacity system.

Introduction

The purpose of this study is to analyze the relationship between organizational management integrity capacity and leadership integrity effectiveness. Organizational integrity and managerialism are schools of thought to frame and support strategic choices and measures in corruption prevention and control. Organizations face challenges to “do the right thing” and ensure organizational integrity by creating an ethical leadership culture capable to ensure sustainable management integrity.

Organizational integrity should be considered within the context of a wide range of leadership variables. The effects of leadership integrity on organizational effectiveness have been well studied and reported on the literature (Brenner and Molander, 1977; Mortenson, Smith, and Cavanagh, 1989; Posner and Schmidt, 1984), although there is a lack of concern to analyze the impact of organizational management integrity on leadership effectiveness. The link between organizational management integrity capacity system and leadership integrity effectiveness has not been adequately tested empirically. Usually the organizational management is not aware of its integrity, moral and ethical issues and principles exercised or it is reluctant to articulate and admit its organizational values to sustain good governance practices, such as anticorruption rules.

Traditional educational organizations and institutions of higher education are considered by Meyer and Rowan (1983) as tightly coupled through the traditional ritual classifications that create the façade of organizational integrity.

Conceptual and theoretical background

Concept of integrity

The word integrity derives from the Latin, meaning wholeness, completeness, conscientious coherence, or committed responsibility. Integrity
comes from the Latin for whole and complete. The concept of integrity is multidimensional and should be specified.

The term integrity refers to strict fidelity to own personal principles embedded in the moral and ethical complexity and responsiveness to sustain integrity capacity (Hampshire, 1983, 1989; Williams, 1985; Nagel, 1979; Fernandez and Barr, 1993; Benjamin, 1990; Kahane, 1995). Bennis (1989) states that integrity is one of the best qualities of leadership. Integrity is an attribute related to ethics (Kerr, 1998) that reflects more adherences to a moral code (The American Heritage Dictionary of the English Language, 1992) and incorporates honesty and trustworthiness (Northhouse, 1997). Werhane and Freeman (1997) define integrity as the quality of moral self-governance at the individual and collective (organizational) levels.

Becker (1998, pp. 157–158) defines “integrity is commitment in action to a morally justifiable set of principles and values . . .” in such a way that it is assumed as a moral justification based on the reality of a universal truth. Integrity is an integral part of good leadership (Batten, 1997; Covey, 1996; Fairholm, 1998; Manz, 1998; Nix, 1997; Northhouse, 1997; Rinehart, 1998; Sanders, 1994; Wenderlich, 1997; Winston, 1999). Huberts (1998) defines integrity as the quality of acting in accordance with socially accepted moral values, norms, and rules. Integrity is a functional attribute prominently cited in servant leadership literature (Covey, 1996; Fairholm, 1998; Kouzes and Posner, 1993; Nair, 1994; Pollard, 1996; Rinehart, 1998; Winston, 1999).

Integrity is about not doing the wrong thing, not necessarily doing “ethical” things but also about doing the right thing and being perceived as positive, active and proactive (Becker, 1998; Butler, 1991; Butler and Cantrell, 1984; Hosmer, 1995; Jarvenpaa, Knoll and Leidner, 1998); Mayer, Davis and Schoorman, 1995; Murphy, 1999; Parry and Proctor-Thompson, 2002). Integrity is a moral foundation for effective leadership (Clawson, 1999). Leaders with integrity are honest even when the situation is self-damaging (Russell and Stone, 2000). Integrity refers to an analytical decision-making process based on envisaged organizational principles and values that simultaneously may function as an ideal and a constraint (Karssing, 2000, 2006). A person of integrity has an awareness resulting in an attitude to follow the spirit of the rules, adhering to deeply held ethical principles and values and making right decisions (Badaracco 2002). Integrity is an attitude that surrenders to ethical commitment, the “gateway to operating from one’s deepest purpose, in concert with a larger whole” (Senge, Scharmer, Jaworski, and Flowers, 2004, 103).
Lasthuizen (2008) defines integrity as the quality of individual behavior in accordance with the organizational values, norms, rules and obligations and its organizational environment. Personal moral integrity is central to individual integrity that is an individual who accept full responsibility for his actions and any negative consequence. Using the analogy of the water thank, Thomas, Schermerhorn and Dienhart (2004) explain the commitment to integrity, where the floor is the legal baseline and above is the level of ethics that the organizational management adopts.

The components of process integrity, according to Petrick and Quin (2000) are moral awareness, moral deliberation, moral character and the practices and actions carried out by personal and collective agents. This process incorporates characteristics of integrity: conscientiousness and discernment, resolution and accountability, commitment and readiness, and coherence and authenticity in moral conduct.

The integrity literature has advanced from personal integrity to collective integrity, organizational integrity, and more recently to global collective level (Benjamin, 1990; Solomon, 1992; Carter, 1996; Paine, 1997; Petrick and Quinn, 1997; LeClair, Ferrell, and Fraedrich, 1998; Westra, 1998).

**Organizational integrity**

The concept of organizational integrity has its origins in Weber who argued that economic development was closely link to the emergence of formal bureaucracies and management routines or universal rules and regulations which provide secure and predictable basis for individual interests and capabilities to be channeled to collective projects. The concept of organizational integrity includes the concept of autonomy of capacity, competence and credibility of local political institutions and the efficiency of administrative bureaucracy either of local public institutions or private organizations.

Integrity capacity is “the individual and/or collective capability for repeated process alignment of moral awareness, deliberation, character and conduct that demonstrates balanced judgment, enhances sustained moral development and promotes supportive systems for moral decision making” (Petrick and Quinn, 2001:332). The growth of integrity capacity is intrinsically valuable and utilitarian - instrumental enhances the reputational capital as an intangible organizational asset (Fombrun, 1996; Petrick, Scherer, Brodzinski, Quinn and Ainina, 1999).
 Organizations framed by outcome-oriented transcendent-teleological ethics sustain the balanced application of judgment integrity capacity and ethical judgments in organizational settings leads to have good consequences and to achieve good ends (Trevino and Youngblood, 1990; Cohen, 1993; Trevino and Nelson, 1995). Organizational judgment integrity capacity is related to the balanced application of management and leadership integrity employing management, ethics and legal theories and promoting moral progress.

Personal integrity involving the well-being of the other embedded in moral principles and an ethical culture, it fosters the integrity to have beneficial effects at organizational level. Moral integrity may be subject to some conditions raising some moral dilemmas about the existence of organizational integrity even in for-profit organizations. Personal and organizational integrity are interactive attitudes between different stakeholders in relationships concerned and framed with moral principles and ethical issues. Organizational integrity means that corruption and fraud are absent in the individual behaviors of organizations. Integrity is a specific value instead of the related value incorruptibility (Van der Wal et al. 2006).

Organizational integrity is both a standard of personal moral excellence, and a relational value (Adler and Bird 1988). Organizational integrity refers to the integrity of individual working inside and outside in and on behalf of the organization (Klockars, 1997; Solomon, 1999). Organizational integrity is a social virtue emphasized by relationships and connectedness between persons and stakeholders of an organization, all of them behaving and acting with integrity, morally reasonable rational values (Becker 1998).

Organizational integrity creates standards to provide the cultural cohesion for professional responsibility and competence in a right attitude to approach organizational problems and dilemmas (Karssing, 2000, 2006). Organizational integrity is more than having a mechanism for holding individuals responsible. Organizational moral issues focusing on individual responsibility does not necessarily are a matter of, and can even detract from organizational integrity. The search for individuals responsible for misbehaviors may inhibit organizational integrity (Bowie, 2009).

Organizational integrity is defined “as organizational conduct compliant with the moral values, standards, norms, and rules accepted by the organization’s members and stakeholders, but also as the commitment to an equal distribution of public services to all citizens” (Kolthoff, 2010: 43). As a social phenomenon, organizational integrity involves both consistency
between principles and action embedding adherence to principles socially accepted and consensually validated with a comprehension of what is fair and just (Habermas, 1998).

Personal integrity is a process of maturing growth, something to pursue not something one possess as an attribute or moral trait (Wolffe 1988). The extended notion of personal integrity into the social domain may become perceived as “organizational” integrity (Trevinio-Rodriguez 2007, 82). Both levels of integrity, personal and organizational can be determined by the emphasis in the type of strategic implementation.

Practicing managers, scholars and professional associations are fostering organizational integrity, promoting ethics codes and building ethical workplaces (Bohte and Meier 2000; Jurkiewicz and Brown 2000; Zajac and Al-Kazemi 2000). To develop beneficial cooperation between persons and organizations, it is required trust-generating integrity (Axelrod 1984). Cameron, Bright and Caza (2004) consider that the ethical factors in organizations can be measured by organizational integrity among other four factors such as organizational forgiveness, organizational trust, organizational optimism, and organizational compassion.

Selznick (1957. 1969, 1992) argues that constituencies want the organization to evince organizational integrity by being self-consistent, trustworthy, non-opportunistic, and distinctively competent organizational self. People attempt to preserve a sense or organizational integrity through self justification, self integrity, and self affirmation processes, internal coherence (Staw, 1980 and Steele, 1988) and behave authentically to maintain integrity (Gecas, 1982).

Organizational integrity is an attribute of a dynamic organizational self, making possible the autonomy, as suggested by Kraatz and Block (2008). Individuals and organizations displaying commitment to values commonly shared by commitments that may sustain trustworthiness, can generate attitudes of personal and organizational integrity. An attitude of integrity framed by shared commitments can unfold to extend benefits to all the stakeholders in any organizational setting.

Relevant societal value can be added to the organizational integrity by designing and implementing strategies and policies centered on fostering the organization’s overall social and environmental good standing. Organizational integrity can unfold by the awareness of the other (Srivastva and Barrett, 1988, 318). Kaptein and Wempe (2002, pp. 237 – 46) contend that corporate integrity
is a value related to sustainability, social responsibility, accountability and specifically to empathy, solidarity, reliability and fairness.

The incentive structures require fitting the organizational moral integrity to be related. Organizational integrity may have adverse effects due to the wrong design of structures, procedures and incentives. A fair distribution of incentives and rewards play an important role in supporting or inhibiting organizational integrity. Individual’s responses to organizational incentives and rewards are important for a practical account of organizational integrity.

The utilitarian - instrumental perspective considers organizational integrity as an instrumental tool is perceived ethically inferior to the intrinsic worth’s perspective that assumes that organizational integrity has more relevance. Under an utilitarian - instrumental and pragmatic framework of reference to integrity, it requires the existence of an entity, only to be assessed tentatively on a case by case basis, which maybe questionable.

Organizational integrity is embodied in an organizational ethical culture of open communication, interaction, diversity and dialogue within a common moral framework of principles and ethical values. Organizational integrity can be used to justify utilitarian - utilitarian - instrumental ethical discourse although it does not necessarily really foster standards of organizational ethics. Emphasis on the intrinsic value of organizational integrity matching actual performance and avoiding potential damages of utilitarian - instrumental misuse allows organizations to develop a genuine caring environment for all the internal and external stakeholders. Cameron, Bright and Caza (2004) reported integrity as one of the virtues that appears strongly related to firm performance and to prevent unethical and dysfunctional behaviors in organizations and the negative effects associated.

Organizational integrity as a theoretical approach aimed to minimizing corruption in organizations “refers to the integration of an organization’s operational systems, corruption control strategies and ethical standards” (Larmour and Wolanin, 2001: xx). Organizational integrity has been advocated by professionals involved in human resources development and individual and group work processes (Swanson, 2001). According to Lyn (1994:111) organizational integrity is based on “the concept of self-governance in accordance with a set of guiding principles” more than normative - compliance to avoid legal sanctions. The definition of governance as a perceptual intrinsic activity is the organizational scaffolding supporting stakeholder trust.

Between the two levels of personal integrity and organizational
integrity maybe a conflict when an individual’s autonomous values and deeply held principles are not aligned with the organizational ethical culture. A litigious society makes more difficult to achieve organizational integrity. Therefore, Hampshire (1983) sustains that personal integrity and ethical behavior should be distinguished from integrity at an organizational level. By maintaining personal wholeness and integrity in the battlefield, organizational behavior strives for organizational integrity.

The maintenance of any organizational integrity system faces a representational framework of means and requirement. One of these requirements is to have reliable agents to acquire, maintain and reason the dynamics of changing organizations. This notion of organizational integrity regulates the organizational dynamics of any system. Demazeau, and Rocha Acosta (1996) develop a model for multi-agent systems with dynamic organizations in terms of a population-organization structure for dealing with the notion of organizational integrity.

The interactions among the different components of organizational integrity give the identity to the integrity system. Organizational integrity systems are “policy and operational frameworks that are intended to integrate an organization’s anti-corruption strategies. They usually comprise standard elements including risk assessment, audit and investigation capacity, reporting, education and training, organizational controls and policies, administrative structures, leadership and communication” (Plibersek and Mills, 2009:3).

When the identity is not strong, the organizational integrity may be shaky and the organization has not clear what stands for on their current operations and functions. However, the presence of an organizational integrity system formed by a set of integrity policies and operational procedures (ICAC, 2009) is not capable to stop workplace corruption despite the anti-corruption strategies designed and implemented by this framework. Failure in implementing an organizational integrity system may be a factor in workplace corruption.

Bowie (2009) associates some features of individual integrity and organizational integrity. Both are committed to moral principle. Organizational integrity is a reference to any issue involving wrongdoing that has legal individual and organizational consequences on efficiency, effectiveness, welfare, image, etc. The wrongdoing maybe is more of an individual involvement concerning a specific grievance in the workplace and less likely concerning issues involving all the stakeholders in organizational integrity.
The organizational integrity is in tension and conflict with the developments of global economic and political processes. Organizational integrity may not necessarily be in conflict with financial success. Hicks (2007: 14) assumes that “organizational integrity is a reflection of an agency’s reputation for delivering on its promises and being true to its stated values and ideals in everything it does....Organizational integrity is not the sum of individual or professional integrity in a particular entity.”

There is lack of organizational integrity (Wolcock, 1998) in the situation of collapsed states (Zartman, 1995) where rules out the anarchy, the state institutions practically are non-existent. On the situation of predatory states (Evans, 1992, 1995) there is organizational synergy with a bureaucratic state apparatus formally constituted but corrupt, which is without organizational integrity. The situation of weak and inefficient communities or states (Migdal, 1988) with a considerable level of organizational integrity but an inexistent organizational synergy where the state apparatus and the functions of civil society are subject to the rule of law, although they are not efficient and not capable to respond to the citizens’ demands.

Having positive organizational capital reputation is not a sufficient condition for possessing organizational integrity, but it may have an empowering influence with all the relevant stakeholders. Reputational capital for organizational integrity is part of the corporation’s brands grounded in the values, giving them a competitive advantage and positioning them in the market place (Bowie, 2009).

The dynamics of any information system links the courage required to achieve organizational integrity (Dewey 1909, 403) sustained by structural process to develop strong institutions of unity (Murdoch 1970, 95). An information system should maintain the organizational structures in their own organizational ethical culture to support organizational integrity. Dhillon and Backhouse (1999) identified the technical, formal and pragmatic basis for developing an information system to maintain organizational integrity.

Social networks and interactions provide a theoretical framework to analyze corruption prevention and resistance in terms of the existing organizational integrity. Organizational integrity establishes social norms in organizational settings seeking to define a schema of ethical values to resist corruption under the assumption that “deviance stems largely from the nature of the organization rather than the nature of the individual (Larmour and Wolanin, 2001: xx).” Boardman and Klum (2001) contend that corruption
resistance depends on the key elements including the right ethical values, which are a prerequisite to organizational integrity, leadership driving the development and integration of the values and communication.

Any change on the organizational environment may create challenges, opportunities or threats for the equilibrium of organizational integrity. According to Wollcock (1998), there are some important emerging conditions which may erode organizational integrity. The increasing economic globalization processes have a strong impact in changing organizational activities and functions, labor patterns and stakeholders relationships. Individuals in organizations have principles they want to adhere to, which implies organizational integrity based on relationships of identity. Chang (2000) argues that these changes require to reevaluating the principles of individual and organizational integrity and accountability. To do this, it is necessary besides to reassess the organizational management integrity and the leadership integrity in organizations settings.

Research question

To what extent does strategic organizational management integrity capacity system influences the institutionalization of leadership integrity effectiveness?

Hypothesis

Variable Independent (X): Strategic organizational management integrity capacity system
Variable dependent (Y): Institutionalization of leadership integrity effectiveness

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<tr>
<th>Variable</th>
<th>Description</th>
<th>Indicators</th>
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<tr>
<td>Independent X</td>
<td>Strategic organizational management integrity capacity system</td>
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<tr>
<td>Dependent Y</td>
<td>Institutionalization of a leadership integrity effectiveness</td>
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Based on the theoretical rationale that there is a positive relationship between organizational management integrity capacity system and leadership
integrity effectiveness, the following hypothesis is proposed:

*Hypothesis 1*: A positive relationship exists between perceptions of strategic organizational management integrity capacity system and the institutionalization of leadership integrity effectiveness.

**Objectives**

A. To analyze the relationship between the institutionalization of leadership integrity effectiveness and the strategic organizational management integrity capacity system.

B. To contribute empirically to normative - compliance research on organizational management integrity capacity system.

C. To operationalize the notion of leadership integrity effectiveness.

D. To analyze how organizational management integrity capacity system contributes to leadership integrity effectiveness.

**Theoretical framework research model**

![Theoretical framework research model](image)

**Figure 1**: Theoretical framework research model

**Organizational management integrity capacity system**

Management integrity in organizational settings is a main issue of critical concern in leadership effectiveness. Organizational management
integrity is concerned with the existence of a morally stable organizational system to sustain an integrity capacity system. The strength of the organizational integrity capacity system determines the implementation of the organizational integrity and ethics development system. Any improvement of any organizational integrity capacity system requires more than controlling ethical behaviors and enforcing normative - compliance (Petrick and Quinn, 1997). Organizational management integrity is concerned with moral principles and ethical behaviors that increase self-awareness with respect to individual interrelationships within the organization and with stakeholders outside the organization that increases.

Organizational integrity-based management is focused on managerial decision making and actions taken to integrate ethical principles, values and judgments into specific decisions and actions through dialogue (Waters, 1988). The knowledge of organizational management integrity would help to develop leadership effectiveness behaviors and therefore, at thus, at the end the integrity against organizational effectiveness performance. Organizational management and leadership may reflect the awareness, officially convey and communicate the integrity as mission statements, codes of ethics and corporate culture (Simons, 1999). Smith (2003) inquires the use of corporate ethics on managerial effectiveness and study some initiatives that contribute to organizational integrity.

Organizational integrity to be effective requires the code of ethics and other factors that may contribute to an effective application. Codes of ethics embedded in organizational settings are organizational behavior guides but cannot substitute moral climate. The existence of moral climate in an organization is a requirement for organizational integrity. Moral climate is the key notion of organizational integrity characterized by asset specificity, which can be created, difficult to reproduce and can be lost easily. Once the organizational integrity is lost, it has an immediate impact and it is not easy to regain it. (Bowie, 2009). Moral climate cannot be substituted by codes of ethics in organizational settings although.

Theoretical approaches to organizational management integrity system

Organizational management integrity cannot be approached from transcendent - transcendent - teleological ethics as an ideal standpoint but from the findings of economics, sociology, psychology, anthropology, etc.
Organizational management integrity should balance the ideal, the possible and the practical. Ideals of organizational integrity must be practical and affordable (Bowie, 2009). The normative - compliance organizational commitments to mission, values and principles within the organization and among stakeholders lead toward a movement from organization to institution (Selznick, 1992, 1996) to legitimate organizational choices in a sustainable organizational integrity (Paine, 1994; Selznick, 1992).

A managerial decision at organizational level is whether to focus on a normative - compliance-directed system or an integrity-directed system (Ferrell et al., 1998; Weber, 1993). An integrity-directed system goes beyond normative - compliance of collective commitment and can be found in organization ethics development systems (OEDS). An ethical integrity system over normative - compliance clarifies moral and ethical behaviors, empowers the people to achieve moral autonomous reasoning and operationalize the organizational values.

To ensure personal and organizational integrity and functioning framed by the theory of organizational functional integrity, the members should maintain proper appearances linked to specific organizational formalities, such as hiring a manager, thus resignation does not poses a threat to organizational integrity. The organizational model of functional integrity shows that the normative - compliance of some activities and events may affect the functioning of the whole organization evolving as a multi eclectically process on specific activities. Thus, organizational management should be aware of management and ethics theory assumptions and the implications of managerial responsibilities and functions implicitly linked to integrity (Petrick and Quinn, 1997).

The organizational functional integrity may be linked to the rules and policies, demonstrating the normative - compliance as the condition. The behavior displayed by an organizational setting may be problematic and disruptive of the organizational functional integrity. In the organizational model of functional integrity, the members’ normative - compliance is an imperative to prevent long term problems and the defenders’ image is essential to continue functioning (Gephart, 1978).

Stakeholder theory provides the moral framework for organizational integrity. All organizational stakeholders can provide inputs to enhance moral climate and thus, organizational integrity. The stakeholder management in organizational integrity must balance the interests and benefits of all
stakeholders involved. A stakeholder single-minded that ignores the interests of others will result in failures to achieve organizational integrity. Conflict of interest between stakeholders and within organizations is a roadblock to organizational integrity. Attempting to manage the perceptions and impressions of organizational stakeholders, top management may be unaware of the damages that may create new reputational crises and problems of organizational integrity and honesty (Dutton, Dukerich and Harquail, 1994).

Thomas, Schermerhorn and Dienhart (2004) contend that sustainable – integrity programs build and confirm organizational cultures and supported by empirical evidences, they argue that integrity programs outperform normative - compliance programs on several ethical features. Creating sustainable organizational integrity is an important goal that requires a great deal of work to build and maintain organizational ethical cultures.

Bowie (2009) considers that the essential conditions for organizational integrity are competent people, effective monitoring and normative - compliance. According to Payne (2003) organizational management integrity has two choices related to ethics leadership, the integrity programs that is sustainable and normative - compliance programs. Integrity programs focus on excellence, self governance, encourage shared commitment, leadership is management driven and values drive actions. Normative - compliance programs focus on laws, organizational regulations and rules, the goal is conformity to standards to prevent misconduct, and the leadership is lawyer driven.

An old management paradigm is more focused on control; organizational ethics is dependent on more selective integrity rules, tools and screening instruments. An organization that has a deficient or lacking an integrity capacity system, is prone to control ethical conducts at the workplace with all sorts of sanctions and punishment are imposed as the result to enforce the rule. A coordinated assurance paradigm in organizational ethics is driven by external standards to promote organizational internal integrity capacity systems. Organizational management is responsible to adopt a management paradigm as a framework for the implementation of an integrity capacity system.

Ethics codes, professional associations and ethics management play an important role in fostering organizational integrity. Ethics management is “a systematic and conscious effort to foster organizational integrity” (Menzel, D. C. 2005, 157). At the core of the organizational management integrity is embedded in an organizational ethical culture capable to embody the
organizational strategic vision as the result of negotiated expectations between the internal and external stakeholders’ interests. Promoting alignment between personal goals and development of shared vision contributes to organizational management integrity (Cacioppe, 2000).

Petrick, Scherer, Brodzinski, Quinn, and Ainina (1999) link managing integrity capacity as an eventual strategic resource for sustainable global competitive advantage. Managing organizational integrity capacity as an intangible strategic asset, it may contribute to the organizational core capability enhancing the benefits to the different organizational stakeholders and held them accountable (Korten, 1999; LeClair et al., 1998). Within this integrity framework, organizational leadership practices must function and foster the aggregate strategic asset of integrity capacity (Dunphy and Griffiths, 1998).

Managerial skills on system integrity capacity are crucial to sustain an organizational ethical culture committed to organizational integrity capable to develop a leadership and managerial integrity environment and to enhance organizational integrity capacity. System integrity capacity is defined by Petrick and Quinn, (2000:12) as “the aligned implementation of organizational policies that institutionalize ongoing moral improvement within and between organizations and enable extra organizational contexts to provide a morally supportive framework for integrity-building environments through statistically measured performance improvements” (Lindsay and Petrick, 1997; Petrick, 1998).

Petrick and Scherer (2002) suggest that the neglect of individual organizational managerial integrity capacity lead to managerial immoral and illegal conduct to managerial malpractices which have adverse impacts on the interests of all the stakeholders. Cruver (2002) and Swartz and Watkins (2002) explain based on the Enron executives case the consequences of these adverse effects when individual and organizational management integrity capacity is neglected. Organizations should enhance management integrity capacity systems to provide supportive structures and contexts for ethical behaviors in the workplace. Organizational management integrity may under estimate or ignore personal responsibilities in some specific situations. Strong organizational management integrity is grounded on moral and ethical priorities that give the sense of mission and purpose to face any emerging challenge.
Management integrity must realize that stakeholders should never be treated as simply utilitarian - instrumentals, mere means to an end and never abandon one’s humanity (Habermas, 1998). The Habersian discourse ethics centered on true dialogue may fosters the intrinsic worth of organizational integrity. Organizational management integrity is an interdependent and synergistic process under a framework of communication and dialogue to make decisions and problem-solving. Strategic dialogue between the management integrity and all relevant stakeholders can develop and institutionalize organizational integrity.

Organizational ethics and values may become a tool for strengthening organizational integrity and organizational culture’s identity aimed to sustain and enhance achievement of economic, financial, social and environmental goals. Organizational ethics is defined as “the principles, norms and standards that guide an organization's conduct of its activities, internal relations and interactions with external stakeholders. Ethics refers to the ethical standards identified, defined and implemented within organizations to achieve a culture of organizational integrity” (Plant, 2008/9:9).

To gain organizational management integrity requires specific structures, methods and strategies of organizational forms. A simple mechanism to obtain and enable organizational integrity management requires an understanding of the structures of organizational forms. Integrity management is a safeguard of the spread of unethical behaviors and integrity violations in organizational settings. Among these organizational forms is the management of relationships between the different organizational stakeholders of the firm. A structure of organizational form that sustains the unity with processes and products, it provides organizational integrity.

Structural unity with simplicity of organizational forms, structures and relationships is the base for organizational management integrity and good communication shared by all the participant stakeholders. Organizational management integrity through structural unity offers the potential to manage processes with complete control within virtual organizations, configuration management and supporting software deployment (Murer and Scherer, 1998).

The ethical principles and culture inherent in leadership behaviors at the workplace create the needed organizational culture to influence the building of organizational management integrity. Kolthoff (2007) found that organizational management integrity is represented by leadership to safeguard integrity in performance management. The leader’s commitment to create and
maintain an ethical organizational management culture is the key element to the best practice of organizational integrity that has an impact on efficiency, effectiveness, competitiveness, organizational reputation, job satisfaction, commitment, etc. (Boardman and Klum, 2001). A strong ethical culture is a requirement for organizational management integrity.

An organizational integrity system as a broad prevention program aims to promote ethical behavior rather than attack the specific unethical behaviors to reduce harm (Sparrow, 2008:36-37). An organizational integrity audit, including the organizational management integrity, can be conducted to measure organizational integrity qualities (Kaptein, van Reenen, 2001).

An organization operating on organizational managerial integrity model has duty values built in the inherently heuristic nature of a behavioral-operational-procedural-structure from which right managerial decisions are inferred. In this sense, the application of the organizational managerial integrity model at any part and level of the organization requires of a procedure and a supportive structure being capable to find the guiding ethical principles to solve any problem.

Ethical practices contribute to organizational management integrity and also to organization’s operational effectiveness and decision making processes. Ethical management behavior in the workplace may be more related to organizational factors and the organization’s ethical culture than to individual attributes (Zipparo, 1998). Individual integrity in organizations maybe more questioned than the overall organizational integrity and organizational management integrity. Thus, building an organizational management integrity culture leads to create a corruption resistant organization.

To manage for organizational integrity requires having knowledge of individual's integrity at the workplace. Assuming that people do the right thing in organizations, it does not necessarily lead to organizational integrity. Organizational integrity may be reinforced by theory Y individuals in organizations who do not consider either treating others or be treated as mere utilitarian - instrumentals, as well as their jobs or the organization. Organizations embedded with integrity are not utilitarian - instrumental to selfish interests of specific stakeholders. On the other hand, theory X people treat others and consider organizations are mere means and utilitarian - instrumentals and not end (Bowie, 2009). Individuals in organizations treated as utilitarian - instrumentals may behave in accordance.

It is quite difficult to focus on the positive organizational effects of the
behavioral management integrity if the leadership behavior may be espoused by a mismatch between the actual ethical conduct, values and morals, and actions (Simons, 1999). Boardman and Klum (2001) focus on building organizational management integrity in an integrated organization’s operational systems, corruption prevention strategies and ethical standards.

The integration of ethical standards into organizations in the form of codes of conduct extended beyond the required by law, is a necessary action to pursue organizational management integrity. Management organizational integrity has a positive relationship with organizational integrity and thus, with organizational effectiveness. An organizational integrity system to be considered as capacity, coherence and consequences (Shacklock and Lewis, 2006) should be validated if the organizational characteristics are defined in similar way in order to deliver results.

The aim of an organizational integrity management system is to prevent integrity violations. Huberts, Pijl and Steen (1999) develop a typology of organizational integrity violations consisting in corruption, conflict of interest, fraud, theft, improper use of authority, sexual harassment and discrimination, private time misconduct, abuse and manipulation of information, abuse and waste of resources.

Management of an organizational integrity system is based on corruption risk assessment. According to OECD (2010:24) a management of organizational integrity system “includes all utilitarian - instrumentals, processes, factors and actors that influence the integrity of the members of an organization” Utilitarian - instrumentals are categorized to determine and define, guide, monitor and enforce integrity. Defining utilitarian - instrumentals determine when integrity is compromised through risk assessments. Implementing an organizational integrity management system makes public any integrity violation and any improvement might help to observe more integrity violations in the workplace.

Organizational management integrity manifests through the organization’ values sustaining diverse activities, operations and relationships taking place within the different stakeholders.

The organization should be committed to ethical values, good governance, ethics management integrity and corruption prevention consistently displayed in its activities, operations and relationships with stakeholders contributing to sustainable organizational integrity. Governance means the pervasive management of organizational integrity and accountability
subsuming both process transparency and relationship honesty (Kitchin, 2003).

Smith (2003) studies ethics management and some other initiatives that contribute to organizational management integrity. Ethics management is viewed as a planned managerial effort to foster integrity in organizations, and not as a control tool of individual and organizational behaviors. Ethics codes, statements of values and professional associations play an important role in fostering organizational integrity and building ethical workplaces (Bohle and Meier 2000; Jurkiewicz and Brown 2000; Zajac and Al-Kazemi 2000).

Regarding the overall organizational mechanisms of governance aimed to maintain, sustain and enhance organizational managerial integrity, there are several forms of knowledge governing interactions between individuals and organizations, which include among others codes of ethics, ethics manuals, integrity systems and procedures, etc.

New entrants to the organizational integrity system may be the developers of the organizational management integrity to lead with integrity. A measurement utilitarian - instrumental for organizational management integrity programs would provide information on integrity leadership, ethics management, misbehaviors, fairness, etc. These measures would be the indicators to diagnose any organizational integrity as it is and to promote the management of change towards the organizational development and growth.

Creating and increasing trustworthiness further helps develop organizational integrity and through structural unity supports the information systems security in the inter-phase between virtual organizations and individuals in organizations. Structural unity achieves organizational integrity despite some limitations on sophisticated specific shared structures. Simplicity in organizational forms and structural unity should support improvement of organizational management integrity. Despite the sophistication of languages to model organizational processes, not necessarily reflect organizational management integrity as a framework to integrate configuration management consisting of artifacts and corresponding processes (Murphy and Scherer, 1998).

Conflicting abstract standards in legalistic normative - compliance-driven organizations, causing moral stress may be the cause of unsuccessful organizational integrity-based management (Waters 1988) and moral muteness (Bird and Waters 1989; Trevino, Hartman, and Brown, 2000). To avoid the possibility of what Hicks (2007: 15) terms “systemic ethical failure” it is important to sustain an ethical organizational culture framework for
maintaining and promoting organizational management integrity and for understanding and managing people in organizational settings. The antithesis and threat to organizational management integrity are any disconnection between rhetoric and action, such as utopianism and opportunism. Groupthink is a danger and a serious threat to achieve organizational integrity. Telepathy avoidance is necessary for organizational integrity.

A well trained and experienced professional management supported by organizational management integrity, will accomplish higher levels of organizational performance and will achieve superior economic, social and environmental goals of efficiency and effectiveness and good ethical standards.

**Leadership integrity**

Organizational leadership and management integrity should resolve and prevent moral and ethical problems but holding individuals responsible, and more important, to solve and prevent a crisis of organizational integrity. Leadership integrity stimulates and has direct effects organizational integrity. Leadership integrity as morally acceptable behaviors contributes to the prevalence of organizational integrity. An essential requirement for moral leadership is an attitude of integrity and genuine commitment to moral principles and ethical values to become integrity leadership (Badaracco 1997, 120).

Leadership integrity in organizations is an important concern between organizational management integrity and leadership effectiveness (Kanungo and Mendonca, 1996). The impact of leadership integrity is limited only to a few direct effects on the prevalence of organizational integrity. Integrity focused-leadership has an impact on organizational integrity and influence the incidence and prevalence of integrity.

The leadership integrity plays a key role in creating and developing policies, procedures and the whole organizational system indicated by the level of influence that the organizational management integrity has on them. Organizational leadership integrity fostering integrity capacity improves the firm’s reputation capital with their internal and external stakeholders (Fombrun, 1996). Leadership without integrity may be a risk to any organization (Morgan, 1993; Mowday, Porter and Steers, 1982; Parry, 1998b; Posner and Schmidt, 1984). Organizational leadership integrity should establish and develop the behavioral and ethical role models for process, judgment and development integrity. Also, leadership integrity should build and sustain
the organizational integrity capacity building to foster organizational moral progress.

The integrity capacity construct proposed by Petrick and Quin (2000) is focused to improve individual and organizational (collective) resources to foster moral progress in organizations, meaning the increase in stakeholders demonstrating the systems dimension of integrity capacity. Collective integrity is considered a stage of post conventional collective moral reasoning and commitment to universal ethical principles (Kohlberg, 1984; French and Granrose, 1995). Collective integrity capacity is a stream framed by integrity literature in philosophy and psychology (Erikson, 1950; Taylor, 1985; McFall, 1987; Srivastva and Associates 1988; Walters, 1988; Halfon, 1989; Calhoun, 1995).

These collective integrity capacities support judgment integrity and collective action processes. Petrick and Quin (2000) found a relationship between individuals and collectives exhibit moral processes with process integrity capacity and moral progress. Collective commitment to organizational moral can be cultivated through the implementation of collective developmental integrity capacity (Likert, 1967; Kochan and Useem, 1992; French and Granrose, 1995, Petrick, 1998). The aggregated individual development integrity capacity forms the organizational ethical culture that may support the collective commitment to developmental integrity capacity and moral progress. Taking into consideration the law for guidance is a necessary but not sufficient stage for organizational developmental integrity capacity.

Positive, active and pro-active leadership behaviors and doing the right things are perceived as having high levels of trust and integrity. Unethical and immoral behaviors, doing the wrong thing or what is not expected and valued are perceived as low integrity.

Diagnosing and developing leadership integrity effectiveness leads to identify and develop organizational management integrity and effectiveness. Organizational management integrity may be improved by developing transformational and developmental exchange leadership behaviors may reduce the non integrity and unethical behaviors. Integrity systems can be a framework of reference for the designing and implementing organizational strategy aimed to sustain the capability of leadership integrity role in the whole organizational system and to maintain the coherence of the organizational management integrity to deliver required actions.
Literature on ethical leadership integrity focus on the roles played to assess, enhance and ensure and sustain organizational management integrity. Exercising leadership integrity and having some guiding principles such as the public interest may be part of an analysis of a corruption resistance tendering process (Boardman and Klum. Some factors that contribute to maintaining the integrity of a tendering process include openness, honesty, accountability, objectivity, courage and leadership. (2001). Organizational leadership must be aware of integrity capacity as a strategic asset by improving competence in judgment integrity and held accountable for decisions related to organizational integrity and management integrity in organizational settings.

Leadership integrity is being held accountable for balance and consistent collective judgment integrity with respect to behavioral, moral and economic complexity. Leadership should be held accountable for the nurturing and management of key intangible strategic assets in order to sustain organizational integrity capacity. High integrity capacity of organizational leadership is more concerned to stakeholder's moral issues, designing and applying sound policies and making right decisions (Litz, 1996; Driscoll and Hoffmann, 1999).

Building organizational integrity leadership based on the existing organizational culture may require to design and implement strategies and policies aimed to create and maintain key ethical standards, such as acting with integrity by being honest, open, accountable, objective and courageous (Boardman, and Klum, 2001). Organizational integrity is one organizational factor of emerging inspired leadership capable to influence and foster spirit at work.

Ethics leadership integrity – focused considers the importance of normative - compliance as the base of an ethical culture. To engage individuals and the whole organization in integrity programs beyond mere normative - compliance is a task of mindful organizational management integrity. They also report other empirical studies that found that employees are more concerned with the integrity than with rules and sanctions and the power of integrity to promote voluntary rule-following was greater.

Leadership should be facilitative in its integrity role and persuasive of vision and values and committed to develop organizational management integrity (Johnson, K.W., 2005). A research conducted by Kinjerski and and Skrypnek (2005) revealed that personal spirit at work is associated to leadership fostering a culture of caring individuals and organizational integrity aligned
with its mission. They also found that alignment among individual values and organization’s purpose and mission fosters organizational integrity.

Organizational leadership integrity skills to manage situations in moral complexity and to build and maintain the organizational integrity capacity system may enhance its reputational capital among all its stakeholders (Velasquez, 1996). Integrity capacity is intrinsically and utilitarian - instrumentally valuable in organizational settings as an intangible asset of reputational capital, although it may be functional and cultural differentials based on leadership integrity capacity system. Leadership integrity capacity systems sustained on the functional and cultural differentials may have diverse perceptions of quality services leading to an opportunity of improvement (Grant, 1996).

Organizational leadership integrity is challenged by the adverse impacts of integrity capacity exacerbated by economic globalization processes, to develop and implement strategies, policies and to improve theoretical tools for managing emerging ethical dilemmas resulting from (Yergin and Stanislaw, 1998; Petrick, 1998). Brown (2005) analyzes the integrity as a wholeness challenge of the cultural, interpersonal, organizational and environmental dimensions to a leadership strategy. The integrity challenge is to develop appropriate relationships and improve their quality among individuals, corporations and civic organizations through the analysis, evaluation and redesign of communication patterns. Leaders know how to design organizational management integrity after knowing what it entails.

Recent literature on ethical and leadership integrity roles and related issues examines the implications with the organizational integrity system including the structural relationships between the individual integrity in interaction with the leadership integrity, the management organization’s integrity and the intra-organizational integrity systems (Shacklock and Lewis, 2006). Lasthuizen (2008) tested the empirical relationship based on theoretical and normative - compliance assumption between leadership and integrity and concluded that this relationship is complex and complicated. Testing theoretical and normative - compliance assumptions based on the relationship between organizational management integrity and leadership integrity.

There is a large body of the literature that claims the lack of integrity of transformational and charismatic leadership while another body of literature supports a positive relationship between transformational
leadership and integrity. There are limited empirical evidences on how and to what extent organizational leadership contributes to organizational integrity. Parry and Proctor-Thompson (2002) support with empirical evidences that transformational and active transactional leadership styles appear to contribute to perception of integrity.

Research conducted by Parry and Proctor-Thompson (2002) suggests that active and positive leadership behavior is related to integrity. Inspirational leadership has weak direct effects on the prevalence of organizational integrity. Empirically it proved not be strong in the context of organizational integrity. Problems may arise when the leadership is inspirational but not ethical.

**Transformational leadership**

Empirical research testing the link between integrity and transformational leadership is limited and there is also a large body of literature that argues that transformational leadership theory allows the emergence of leadership lacking integrity. Among other links between leadership integrity and transformational leadership, having a clear vision and developing trust are core factors of transformational leadership contributing to organizational integrity (Bass, 1985, 1990, 1998; Yukl, 1989). A vision incorporates a value system that protects and promotes organizational integrity, and encourages learning and adaptation (Rowsell and Berry, 1993, p. 22). Tracey and Hinkin (1994) found evidence to support that transformational leaders possessed and behaved consistent with integrity and high ethical standards.

Transformational leadership has a limited impact on the prevalence of organizational integrity and not necessarily has a positive impact on individuals' moral judgment. Petrick and Scherer (2000) define judgment integrity as the use of theoretical ethics resources to analyze and resolve individual and collective moral issues. Judgment integrity is at the core of integrity capacity and leadership integrity. For leadership integrity according to Petrick and Quinn (2001:337) judgment integrity means “being held accountable for achieving good results (outcome oriented transcendent - teleological ethics), by following the right rules (duty-oriented deontological ethics), while strengthening the motivation for excellence (character-oriented virtue ethics), and building an ethically supportive environment within and outside the organization (system improvement oriented contextual ethics).

Behavioral, legal, ethical and moral complexity shape organizational
judgment integrity capacity sustained by management and ethics theories to establish balanced use managerial responsibilities. Stakeholders committed to handle moral complexity using judgment integrity to develop integrity capacity in organizational settings can enhance behavioral, moral and ethical progress in organizations (Petrick and Quinn, 1997).

Leadership integrity should develop judgment integrity to enhance full moral accountability by providing an integrated model of judgment integrity, merging perceptions and assumptions of behavioral, moral and economic complexities between organizational management integrity and global economics (Brunsson, 1989; Solomon, 1992). Organizational judgment integrity can be a conscious shaping and balancing of competing organizational management, macromarketing to resolve economic complexity, behavioral, moral and ethics theories in the formation of organizational policies and leadership integrity practices (Petrick, 1999).

Pseudo-transformational leadership (Bass and Steidlmeier, 1999) arises because leadership integrity does not necessarily is effective integrity. Giampetro, Brown, Browne and Kubasek (1998) and also Price (2003) supported the assumption that transformational leaders may fail.

Carlson and Perrewe (1995, p. 5) argue that justice and integrity are values promoted by transformational leadership “as the best approach for instilling ethical behavior in organizations” although the link requires further empirical consideration. Gottlieb and Sanzgiri (1996) contend that leaders with integrity value share of information, viewpoints and feedback in an open and honest communication during decision making processes. Behavioral integrity is a critical component of transformational leadership (Simons, 1999). Organizational integrity may be maintained and enhanced by transformational leadership assuming that followers may behave with integrity. Transformational leadership does not necessarily develop and promotes integrity (Bass and Steidlmeier, 1999).

Bass and Steidlmeier (1999) consider that pseudo-transformational leadership may lack integrity. An empirical study found that justice connects integrity and transformational leadership in organizations (Gillespie and Mann, 2000). Focusing on the leadership behavioral integrity to enhance organizational managerial integrity, Parry and Proctor-Thomson (2002) discuss the integrity of transformational leadership drawing on the follower’s interests towards the contribution to the interests of the group and away from the self (Den Hartog, Van Muijen and Koopman, 1997; Carlson and Perrewe,
Parry and Proctor-Thompson (2002) provide empirical evidences to support that the perceived integrity of leaders and transformational leadership are positively related, although this relationship may be moderated by a range of additional variables. They found a positive relationship between perceived leader integrity and demonstration of transformational leadership behaviors, and between perceived integrity and developmental exchange leadership. There is a significant positive correlation between perceived integrity and transformational leadership. Similarly, leaders with the highest perception of integrity are engaged on high levels of developmental exchange behavior.

Top-down ratings on assessments of subordinate integrity provided higher identification of transformational leadership and developmental exchange leadership than peer ratings. Transformational leadership behavior and developmental exchange leadership was perceived to possess the higher perceived integrity levels, especially transactional behavior, a type of contingent reward.

The Multi-factor Leadership Questionnaire (MLQ) was developed by Bas (1985). The use of MLQ provides empirical evidence on integrity of transformational leadership. One MLQ factor “idealized influence” relates positively to integrity (Bass and Steidlmeier, 1999). Individualized consideration and contingent reward correlate positively with each other (Avolio, Bass, and Jung, 1999) and both may be associated positively with perceptions of integrity (Lowe, Kroeck, and Sivasubramaniam, N., 1996).

**Transactional leadership**

Transactional leadership has an impact on the prevalence of organizational integrity and has not moral impact on individual’s moral judgment. Two components of active-transactional leadership, management-by-exception (MBE-active) may have no significant correlation with perceived integrity and contingent reward may have differing relationship with integrity. The two components of passive-transactional leadership, management-by-exception (MBE-passive) may lack correlation with integrity and laissez-faire may correlate negatively with integrity.

Parry and Proctor-Thomson (2002) found no significant correlation between perceived integrity and MBE-active. Perceived integrity has the strongest negative correlation with passive management by-exception and
laissez-faire demonstrated as a transactional leadership factors. The greatest variation in perception of integrity correlates with the laissez-faire leadership. Thus, the lowest perception of integrity is correlated with the high performance of laissez-fair leadership style. The lowest perception of leadership integrity is correlated to high levels of laissez-faire behavior and low levels of idealized attributes.

Corrective-avoidant leadership as a form of transactional leadership explains different perceptions about leader integrity. The highest perceptions of integrity are related are related to corrective avoidant behaviors while the lowest perceptions of integrity are related to high levels of laissez-faire leadership. The empirical research conducted by Parry and Proctor-Thompson (2002) provide evidences to support a negative relationship between integrity and corrective-avoidant. Higher leadership integrity is related to low levels of laissez fair leadership style and high levels of any corrective avoidant behavior (Parry and Proctor-Thomson, 2002)

**Charismatic leadership**

Transformational leadership is likely to have moral integrity far better than charismatic leadership. Simons (1999) identified charismatic leadership style as a potential ethical leadership. Howell and Avolio (1992) argue that the same qualities that can make a charismatic leadership style have the potential to be unethical leadership and lacking in integrity. The results provided evidence for positive relationship between perceived integrity and transformational factor of charisma, identified as idealized attributes and behaviors.

There is a negative relationship between perceptions of integrity and charisma, although Parry and Proctor-Thompson (2002) claim that is needed more in-depth qualitative case-study analysis. However, charismatic leaders can be perceived as lacking in integrity, although more research is needed to identify moderating and intervening variables.

**Leadership integrity effectiveness**

Leadership integrity correlates most strongly with leadership effectiveness. Similarly, the presence of integrity related with organizational effectiveness. There is a critical relationship between integrity and measures of organizational and leadership effectiveness (Mowday, Porter and Steers, 1982)
and a positive relationship between perceived integrity and a wide range of perceived effectiveness measures (Parry and Proctor-Thomson, 2002).

There are some empirical studies supporting the assumption that integrity is positively related to leader effectiveness (Kanungo and Mendonca, 1996; Mowday et al., 1982, Morgan, 1993; Posner and Schmidt, 1984; Steers, 1977). Integrity ratings are subject to bias of hierarchy, being higher and more favorable by superiors than by peers and subordinates (Morgan, 1993). Parry and Proctor-Thomson (2002) verify positive relationships between perceived integrity, leadership styles and a range of measures of organizational effectiveness. A positive correlation was found between leader and organizational effectiveness.

Empirical studies to test the relationship between perceived integrity and leader effectiveness have used the Perceived Leadership Integrity Scale (PLIS) developed by Craig and Gustafson (1998) and a revised version, the PLIS-R to determine and identify perceived integrity of leadership in organizations, although the integrity ratings of leaders may differ depending of the level of the rater. The PLIS-R measures beliefs on the intent of leadership.

To enhance integrity capacity as an intangible and organizational strategic asset, Petrick and Quinn (2001) propose some leadership practices. Leaders are often not held accountable for their neglect of integrity capacity and the cost incurred as a key intangible, strategic asset (Trevino, Weaver, and Brown, 2000; Petrick and Quinn, 2000). Petrick and Quinn (2001) identify the challenge of holding leaders accountable for the performance of organizational integrity capacity as an intangible strategic asset by focusing on judgment integrity to handle behavioral, moral and economic dimensions’ complexities.

**Integrity strategy as moral management**

Integrity strategy is a concept related to moral management. Payne (1994) argues that integrity strategy is ethics as the driving force of the organization. Recognition of the organizational management integrity issue in influencing the strategic direction of organizations has created a greater organizational awareness of the history, ethics and culture. An organizational integrity management system may develop institutional strategies and policies aimed to building more human and ethical capabilities intended to resist corruption and other unethical organizational behaviors (Boardman and Klum, 2001).
Strategic deployment is the new paradigm of organizational integrity capacity that organizational integrity leadership by moral to guide ethical behaviors, to improve judgment integrity, to build and maintain collective commitment to integrity and to enhance moral reputation for system integrity capacity (Petrick and Quinn, 1997).

Organizational management integrity strategy, as part of the strategic planning to foster organizational integrity, should be aligned to the economic and financial goals with ethical, social responsibility and environmental objectives. The evolving normative - compliance and transformative process character of organizational integrity is reflected in the organization's mission and values statements declared in the strategic planning (Paine, 1994, 2003). Clear integrity strategies and policies are necessary to constitute a framework model of organizational integrity to apply the values and rules through an integrity focused leadership.

Organizational integrity-based management strategies can be focused to strengthen the link between personal integrity and organizational management integrity. Organizational integrity-based strategies should be determined to transparent adherence to moral principles and to implement an ethical culture that could result in an attitude of integrity. Organizational integrity-based strategies foster credible leadership integrity, enhance reputation capital, improve trustworthy and loyalty, takes into account the conflicting interests of internal and external stakeholders. Implementing an organization integrity-based strategy means that internal and external stakeholders should commit to good governance practices where political correctness is well appreciated (Jackson and Nelson, 2004).

Personal integrity in an organization may be perceived as the cause of integrity failure rather than organizational integrity due to the individual responsibility. Personal integrity does not necessarily leads to behave ethical under some specific organizational situations. Strategies and policies on organizational management integrity-focused designed and formulated to improve the organization’s integrity, should responsible balance the possible conflicting interests, recognized by Kaptein, van Reenen (2001) as the three dilemmas: entangled hands, the many hands and the dirty hands dilemmas.

An organizational integrity-based strategy can be grounded on the definition, demonstration and dissemination of core values in a relational synergy between the diverse stakeholders of the organization. At macro level, different combinations of organizational integrity and organizational synergy
lead to different results. In order to implement organizational integrity, the leadership should be able to provide relational based quality centered on the core values from the inside out in every situation (Kingsley, K. 2005).

An organizational integrity strategy is a shared set of values-based approach designed and implemented proactively to obtain commitment from individuals, promoting individual ethical behaviors to raise the level of organizational ethics. Design and formulation of strategies to improve organizational management integrity should take into consideration surveying the programs and best practices performed by individual agencies. Best practices of corporate responsibility are essential part of strategic organizational management integrity.

An organizational strategy aimed to improve the organizational integrity should focus on leadership developing ethical policies ranging from codes of conduct, whistle- blower procedures, job rotation and applicant screening and some others (Lasthuizen, 2008). Design, formulation and implementation of strategies to improve organizational integrity, might be achieved through the monitoring of different group activities over time. Corporate social responsibility as an organizational strategy is a practice central to organizational integrity.

There are some discussions about implications of organizational management integrity related to issues questioning and rising doubts about the strategies’ success of reengineering, restructuring, outsourcing, strategic skills and capabilities, core competencies, etc.

**Institutionalization of an organizational management integrity capacity system**

Issues of integrity and ethical dilemmas may be framed by the institutionalization of organizational ethical culture. The leadership and management of an integrity capacity system should provide the supportive institutional context to sustain the organizational commitment to collective moral progress. The institutionalization of a system integrity capacity gives support to the emergence and maintenance of an organizational moral, ethical and legal culture in the current organizational practices (Petrick and Quinn, 1997; Petrick, 1998). Institutional coherence as a requirement for organizational integrity is concerned with all the stakeholders involved in any type of individual
and organizational relationships avoiding wrongdoings. Woolcock (1998, p. 168) identifies organizational integrity at the macro level considering the institutional coherence and the competence capacity. An organization that institutionalizes and integrity-directed system may be able to enhance the reputational capital as a key intangible asset (Fombrun, 1996).

In the situation where there are high levels of organizational integrity and organizational synergy, the emerging institutional structure favors development through different channels to convey civil society demands in a continuous process of negotiation and embedded autonomy (Evans, 1992, 1995). The implementation of a system integrity capacity to institutionalize an organizational ethical, moral and legal culture may provide sustainable moral progress.

Clientelism and patronage in organizations may be dysfunctions when provide the basis for the institutionalization of corruption, misbehaviors, abuses, etc., and the lack of any organizational management integrity (GRECO 2002; Transparency International 2001; Papakostas 2001; Kathimerini 30 January 2003). Institutionalization integrity-directed systems are applied to all the internal and external organizational stakeholders, such as the Acting with Integrity Program of Nortel based upon internalized ethical principles anchored by core business values.

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What is Good e-Learning?

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To introduce e-learning are used informatic systems, the communication and media networks. Transfer of skills and knowledge specific e-learning is possible, mainly using computer and networks. E-learning using electronic applications and processing in order to learn. Learning and e-learning applications are based on Web technology, which is computer based, virtual classroom and digital collaboration. Content is delivered via the Internet site, audio tape or video, satellite TV and CD-ROM. E-learning applications are led by an instructor and typically include text, images, animation, video and audio.

Keyword: e-learning, web, Internet, CTB, Computer based training, ITB, Internet Based Training, WBT, Web based training, blended learning, distributed learning.

So-called e-learning is met at all forms of learning or self-teaching, and aims to acquire knowledge by the student on individual experience and practical knowledge. Systems and network communication media serve as the implementation of specific learning.

Education, e-learning is inextricably tied to the computer network and allow transfer of application, skills and knowledge. When we talk about e-learning, we aim at using electronic applications and processing for learning. E-learning applications and processes include Web-based learning, computer-based learning, virtual classroom and digital collaboration. Virtual lesson there because the Internet, and derivatives and the audio tape or video, satellite TV and CD-ROM. Virtual learning may consist of self and is led by an instructor,
it including the objectives text, image, animation, video and audio.

We find acronyms of e-learning as Computer-Based Training CBT, or IBT Internet-based training or Web-based training WBT used with variations of e-learning.

E-learning has unexpected benefits for organizations and individuals involved.

Students in higher education online learners had superior results compared to those who attended, proving that this form of learning increases performance.

Without taking into account physical political and economic boundaries, high skill trainers share their knowledge across borders and so students from all over the world can attend. Have the opportunity to make known their courses in the area that experienced teachers can be accessed internationally, for anyone interested at minimum costs.

Online students have proved more flexible and electronics courses agreed. We address e-learning either auodidact or in periods of learning at all times and all the days of the week. Students are not tied to any one day or break time and opt for choice learning. Online courses do not require presence in a particular classroom. Basic Internet access and audio capabilities are the only conditions imposed. Students can begin courses at work and can finish at home on another computer.

To develop skills and competencies in this century, particularly to ensure that students have digital knowledge necessary to address chosen profession or career. Researchers predict a major argument for e-learning to enable students to develop essential skills by integrating information and communication technology use in the curriculum. They also argue that using e-learning in this way is beneficial implications for course design and student assessment.

Electronic training has many advantages, namely: low cost of course, reduced training time, training for long periods of time is improved, progress is marked-bookmarkprogress, computer can remember where you left off so that the student can resume classes, location does not matter, home, office, or where there is a computer, ignore distance, classroom costs are reduced, the physical environment also benefits, participation in class activities are reduced when there is no convenient public access is allowed and webcast content sites and other education programs, which can be accessed in various locations.

In the literature on e-learning industry from around the world is estimated to be worth over thirty-eight (38) billion, according to conservative
estimates, although the European Union, are produced only about 20% of the market.

The term e-learning 2.0 is related to CSCL-Computer-supported collaborative learning with Web 2.0 appeared. The emergence of e-learning 2.0, conventional e-learning systems were based training packages delivered to students using Internet technologies.

Using e-learning services have evolved to reach students made since computers were first used in education. If the computer activities are integrated with practical situations or specific class is a trend that supports learning services combined.

Researchers hold e-learning that different types or forms of learning can be regarded as the beginning of e-learning, using our the e-learning self-ais, computers or the Internet for teaching and learning have classroom based, and traditionally lecture on PowerPoint type slides. They can be made available to students and through a course Web site. If the time plugged in the classroom is reduced but not eliminates, the more time online we commit to to deal to learning with hybrid learning. To highlight the increasing intensity of use of this technology in 2009, U.S. Salon Commission reviewed progress eLearning referring to improve Web, supplementing and web dependencies. “Blended learning” can cover education in the classroom, laptops and hybrid learning, while “distribuited learning” can incorporate the hybrid learning and online education.

It may be noted that e-learning then the can present a wide range of applications, and often not at all clear, even in scientific publications revised form of e-learning that should be discussed. However, American researchers argue that instructors use e-learning, the supporting technology in the classroom.

Self accessible through a computer or portable device called the Computer-Based Treinings (CBT). Use of software or completing mathematical equations are examples in which it is used generally to teach static processes. The term Computer-Based Training is often used with Web-based training (WBT web based training) difference is the method of delivery. If CBTs lesson is delivered on CD-ROM and WBTs lesson is delivered via the Internet using a Web browser. In a CBT evaluation of learning usually comes in the form of multiple choice questions, or other forms that can be easily obtained on a computer. Software through online assessments are readily available and recorded, providing immediate feedback of users and grade or test result.
Printing final records in the form of certificates of those users is a win.

Learning from the manual, or training in the classroom so-called traditional learning methodology using CBTs is available to student giving their multiple ways of learning. We mention the continuing education for the CBTs provides user-friendly solutions. Students have the opportunity to acquire knowledge and skills in ways that are more ageate by students without limiting students attending courses or reading printed manuals. The benefits of visual learning through animation or video, which usually are not offered by any other means, are an example that CBTs offers.

A good alternative to printed learning materials, which are achievements CBTs can provide media, including video and animations that can be easily incorporated to enhance the learning opportunity. Distribution to a wide audience easily at relatively low cost once the initial development is completed, is another advantage that CBTs has.

CBTs learning raises issues over which we can not overlook. Create effective lessons on the computer requires enormous resources often. Experts and teachers are put in difficulty by the software used by CBTs - Adobe Flash and Adobe is often very complex. Limiting the content and type of evaluation is exacerbated by lack of human interaction. CBT / WBT as part of an online learning program can include the latest online discussions or other interactive learning several organizations have begun to use.

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As Voice over Internet Protocol (VoIP) technology matures, companies are increasingly adopting it to cut costs, improve efficiency and enhance customer service. Using the Internet as an existing network for integrating data and telecom systems through intelligent VoIP, a range of benefits results: lower long distance costs, cost cuts in cabling processes and more flexible telephony management. However, as voice over IP services grow in popularity, major threats arise: this rapid growth leads to traffic congestion, security is jeopardized and the poor quality of calls affects communication.

The objective of this article is to present all the elements that can affect voice quality in a VoIP network and to provide methods for solving them. A detailed analysis to minimize the impact of implementation of QoS will be made, and at the end solutions to management strategies will be proposed.

Keywords: QoS, Jitter, MOS, PESQ

Introduction

Due to a convergent network’s characteristics, there have appeared several problems regarding the real-time transport of voice traffic, while maintaining a good reception.

The clarity of the audio signal and the lack of reception interferences are a priority when offering quality services. The listener needs to be able to
determine the speaker’s id as well as his momentary state.

The main factors that influence the voice quality are the echo, the jitter and the delay. The problems that these factors create are solved by implementing mechanisms that provide QoS guarantees. The factors that affect the voice signal are:

**Fidelity** The degree to which a system or a part of a system reproduces with accuracy at the exit the main characteristics of the signal that has entered. The band width of the transmission environment limits the human voice’s characteristic width (100 Hz – 10 kHz). Still, 90% of the vocal signal components are between 100 Hz and 3000 Hz.

**Echo** It appears due to impedance difference on the transmission way. The echo is present in any network, even in the classic telephony, but at a lower level, that cannot be identified by the human ear. The two components that define echo are amplitude (signal level or echo intensity) and delay (the time difference between the direct and the reflected wave). To cancel the echo’s effect different devices are implemented in the network (echo cancellers).

**Jitter** It is defined as the variation of the delay in the voice packages reaching destination. This variable time difference may determine interruptions in the voice signal. [7]

At the emission the packages are sent in a continuous flow, with a constant spacing between packages. Due to the blockages that may appear in the network, the traffic being slowed by transiting buffers or due to configuration errors, the packages flow may become inconstant. More precisely, the packages spacing, constant initially, becomes variable. This situation is presented in figure 1.

![Flux de pachete de voce](image)

**Figure 1:** Jitter

When a router receives an audio package flow, it must call on different mechanisms to cancel the encountered jitter. Usually this delay is canceled
by introducing buffer memories for the temporary stockage of voice packages (dejitter buffer). The procedure is receiving packages [2] in the order they arrive in the network and arranging them in a continuous flow with a constant spacing between packages. Thus arranged, the packages are received and processed by the digital signal processors (DSP) in order to obtain the analog voice signal.

**Delay** It is defined as the time that passes between the time that the voice signal is sent and the moment of arrival at destination. While projecting a network that transports voice packages, it is important to identify all the sources producing the delay. Also, there must be taken into account the predictable delays, in order to ensure an acceptable functioning of the network.

![Diagram](image)

**Figure 2:** presents several types of delays

*Fixed delay* – represents a sum of predictable delays that are added directly to the total network delay. It includes the following components:

*Coding* – the time it takes for the transformation of the analog signal in digital signal

*Packaging* – the necessary time for the arrangement of the cadres in packages and the extraction of the information from the packages.

*Serialization* – the necessary time for the introduction of the information bytes in the transmission environment (the communication path);

*Propagation* – the necessary time for the voice packages to travel the communication path from one end to another.

*Variable delay* – caused by the delays that appear at the “lines” in the
junction buffers that are located in the serial wan connection port. These buffers create a variable delay (jitter) in the network.

**Quality Assessment Methods**

In order to create a differencing of voice services based on quality, there have been developed three methods, by which there are granted qualifications based on the performance. These are:

**MOS – Mean Opinion Score**

MOS is one of the methods of assessing the voice quality. In order to grant MOS qualifications listeners assess several recorded phrases, that have been previously passed through different processes like compression algorithms. The phrases used in these evaluations contain a large array of sounds, for a correct assessment of the tested system performance. Listeners grant each phrase a value on a scale from 1 to 5, 5 being the maximum value.

An average is formed from the obtained degrees which sets the final points. MOS results are subjective, because they are based on listeners opinion. Also, the points indicated by one group cannot be compared to the same points accorded by another group.

**PSQM - Perceptual Speech Quality Measurement**

PSQM is a method for measuring voice quality in real time. PSQM software is usually found in the call management system, that are in their turn integrated in the SNMP system (Simple Network Management Protocol).

PSQM measurement is made by comparing original voice signal to the reception signal. Measurement is made during the call. This algorithm for automated testing has an over 90% accuracy compared to the subjective methods like MOS. Assessment is made on a scale from 0 to 6.5, where 0 is the best score and 6.5 is the lowest.

PSQM was projected for the voice networks with circuit commutation, and for this reason, its evaluation does not take into account jitter or the delay that appears in the voice networks with packaging commutation.

**PESQ - Perceptual Evaluation of Speech Quality**

MOS and PSQM methods are not recommend for present VOIP networks. Both have been projected before the wide scale spread of VOIP
technology and do not take into account specific problems like delay or jitter. Thus, a score of 3.8 can be obtained for a VOIP network while the delay in one way is larger than 500 ms, because a listener will assess only the quality of the audio material.

PESQ method, whose functioning is presented in figure 3.3 was initially developed by British Telecom, Psytechnics and KPN Research. Previously it evolved under the supervision of ITU in the P.862 standard.

PESQ takes into account the CODEC errors, filtering errors, jitter problems and specific delays of a VOIP network. PESQ is a combination of two methods: PSQM and PAMS (Perceptual Analysis Measurement System). The value scale of PESQ is from 1 (very low) to 4.5 (very good), where 3.8 represents the acceptable quality in the traditional telephony network. PESQ measures a single aspect of voice quality. This method also does not reflect in its score the effects of two way communication like: loss of signal intensity, delay, echo. PESQ was designed such as its results will reflect as accurate as possible the points obtained at the MOS evaluation.

**Objectives Of QoS Mechanisms**

In order for VOIP technology to replace definitively the services provided by the public service telephony network (PSTN), it is necessary for the VOIP service users to be able to talk using a similar or better quality network, compared to the classic telephony network.

As other applications that function in real time, VOIP applications are very sensible to problems caused by bandwidth and delay. To be certain that VOIP transmissions are audible for the final user, there must be avoided loosing packages, excessive delay or jitter.

VOIP guarantees a quality transmission of voice only if the signaling and voice packages have priority before other types of network traffic. A correct implementation of VOIP technology provides an acceptable level of voice quality, if there are respected the traffic conditions connected to bandwidth, delay and jitter.

By implementing QoS mechanisms, better qualitative services can be provided and also a higher predictability degree in the functioning of the network. For this, the following criteria needs to be observed:

- *Providing a dedicate bandwidth* – designing the network as well as it will permanently provide sufficient resources for voice and data transport
• Minimizing losses – projecting a Frame Relay network such as the priority in packets throwing will not affect the voice packages, maintaining the voice traffic below the CIR threshold (Committed Information Rate)
  • Avoiding traffic blockages in the network – supposes the networks infrastructure will be able to take a large volume of information
  • Setting priorities for network traffic – voice packages have priority before data traffic [56]

IntServ mechanism defines an architecture that demands controll of flow traffic in any network bump along the end-to-end path and a treatment of flows according to specific demands imposed by ensuring quality for different types of applications. Differential treatment of flows imposes their classification according to QoS demands and sending these requirements over the network by a signaling protocol. The signaling protocol employed by the QoS IntServ mechanism is RSVP (Resource Reservation Protocol). This is used for explicit signaling the requirements of each flow and for the controll of the reservation and maintaining the resource reservation for flows.

An IntServ flow is defined as a set of identifiable packages that are sent from one or more destinations, by which a common QoS treatment is demanded. A string of packages having the following identical parameters: source address, destination address, protocol identifier, source and destination port, is an example of IntServ flow. The IntServ flow is a stream of datagrams that result from one users activity and demands the same QoS. This is a simplex flow that goes only in one direction. For a video conference between N users there will be necessary N flows for each source to all participants.

IntServ imposes resource reservation between networks, that some users benefit privileged services and imposes authentication requirements: identification of users that make reservation demands and authentication of packages that require such resources [27.43]

Due to the fact that Internet is proposed to be used as a common infrastructure to support both real-time communications as well as non-real time, it must use a stave model of unified protocols, that imply only one protocol at the Internet level both for real-time as well as for other services.

IntServ model supposes that resources can be explicitly controlled. It also provides control of the accessibility to resources trough control of admission, that can accept serving the application if there are available resources and secures their reservation, or due to lack of resources it will not allow serving the application.
Intermediary routers provide the resource reservation based on specific information, included in RSVP messages, that characterize the flow’s demands.

In projecting IntServ model, it was established as work hypothesis, in order to satisfy the applications demands, the possibility of explicitly administrate the network resources. “Resource reservation” and “controlled access to resources” are key elements of this type of service. Resource reservation is aimed at providing for the user access to a service that has a quality specifications predictable enough that the application should run in an acceptable way, in a time that is desired by the user. [9,8]

IntServ architecture is based on reservation of individual flow resources.

To benefit from the providing of resources, an application must make a reservation before transmitting the network traffic. The application must make a specification of the traffic and demand for resources. The network uses a routing protocol to find a way that provides the demanded resources. Than a resource reservation protocol is used to install the reservation state along this path. In each bump, admission control checks if there are sufficient resources to accept the new reservation. After making the resource reservation the application may begin transmitting the traffic through the path that was reserved. For the traffic flow a classification of the packages is provided as well as mechanisms for planning in the network nodes used by the path previously defined [5,7]. The differentiation of services is aimed of providing the network’s adapting to the diverse demands of applications and to the users expectancies. DiffServ also allows differential charging for internet services.

IntServ is a service model that allows guaranteeing QoS flow, but demands resource reservation on the flow and complex control architectures along each end-to-end path.

DiffServ appears as a reaction to the complexity of IntServ architectures and its end-to-end nature.

In DiffServ architecture processing and complex decisions (eg. Classification) are made at a network’s border, in the “edges” nodes, and the QoS controll is provided by using a restraing set of guidance classes in the Core routes. These DiffServ characteristics determine the appearance of faster Core routers and the reduction of signaling, processing and memorizing states (QoS characteristics can be expressed in the terms of a small number of guidance classes).
Contrasting to the flow-orientation used by the IntServ mechanism, QoS control through DiffServ is made by grouping packages in a small number of flows combined depending on the type of service (TOS) and destination. These combinations will be classified in classes of guidance that will have associated a DiffServ code called DSCP (DiffServ Code Point), placed in the heading of IP packages. This is known as Behavior Aggregate Classification (BA).

In the core network DiffServ domains are defined, which can control QoS inside the domain (Edge-to-Edge QoS).

The marking of packages through defining DSCP in the border nodes of the network allows the mapping of a large variety of traffic in a reduced set of behaviours (BA) supplied by the core network. Border routers may also provide different traffic control policies, providing a control of the temporal characteristics of the traffic classes from the whole core network.

DiffServ divides the traffic in a small number of groups called forwarding classes. A forwarding class contains all the packages that have the same DSCP code in the header of the IP packet. [3] Each guidance class has a guiding treatment associated, defined by its priority in the throwing of packages (drop priority) and in the bandwidth allocation.

**Implementing QoS. Minimizing impact and enhancing voice quality**

The purpose for implementing mechanisms that provide QoS guarantees is mainly that of minimizing the impact that jitter and delay have on the network’s functioning. We will be presenting a series of QoS functions implemented in the routers operating system.

For the coordination of packages at the buffer exit, there can be used the following planning disciplines:

CBWFQ (Class-based weighted fair queuing) – extends the functioning allowing to define traffic classes, based on the transported information.

LLQ (Low latency queuing) – together with CBWQ ensures the strict priority of voice packages. LLQ establishes the priority for classes defined in CBWFQ.

WFQ (Weighted fair queuing) – cumulates the different sorts of traffic into an information flow and allocates it depending on the available bandwidth.

WRED (Weighted random early detection) – ensures differentiated
performance characteristics for different classes of services. WRED especially renounces at the lower-priority traffic in front of the higher priority traffic when the exit interface gets crowded.

WAN specific protocols can use the following QoS mechanisms:

- **Class-based selection** – provides the transfer rate limiting function based on the available band width. In the same time, the distribution policy is established for traffic that may pass over the allocated bandwidth.

- **Traffic-modeling** – intentionally delays traffic excess by using buffers (to withhold packages), in this way modeling the data flow when the source transmission rate is larger than expected.

- **FRF. 12 (Frame Relay Forum 12)** – enhances traffic for low speed Frame Relay connections (<768 kbytes/s) by interposing voice packages with fragments from larger frames.

- **MLP (Multilink PPP)** – allows large packages to be encapsulated separately for more connections, thus being fragmented and interrelated with other packages. By fragmenting there have been obtained smaller packages that can respect delays imposed in the real-time traffic.

- **VOIP traffic can use the following QoS mechanisms**

  - **cRTP (Compressed Real-Time Transport Protocol)** – RTP is a protocol that ensures real-time transport of all types of traffic. RTP uses an extended heading that incorporates time information (timestamp) for each package.

  - **CRTP function provides a compression for the extended heading. The advantage is the reduction of the necessary bandwidth and a corresponding reduction of the delay.**

  - **RSVP (Resource Reservation Protocol)** – ensures the network resources conservation, allowing the users to employ those resources for complying with the QoS criteria. For VOIP networks, RSVP together with the mechanisms that ensure traffic modulation and call signaling secure the network access (CAC)[7]

In order to be able to sustain a data transmission in real time, a commutation packages network must fulfill several requirements, all of them grouped generically under the name of Quality of Service – QoS)

For voice traffic, the most important characteristics that must be fulfilled are network delay and packages loss.

**Management Strategies**

According to the IT specialists’ reports in the last 4 years, there is an
increased trend of MSP technology usability. Like in any activity domain, there will always be organizations choosing for software monitoring and an internal system management. Thus, if opting for MSP to assure consistent and solid solutions at a high quality level, it is predictable for the results to show rapidly. Many companies, to achieve success, start from creating a multidisciplinary project that can establish the parameters of this implementation process. It is of highly importance to determine from the beginning of the evaluation the impact that would suppose to have the new applications towards the performances of the existing network. This way it is easier to investigate success (or the failure, depending on the case). On strict terms of implementation, the first step is indentifying a group of beta users inside the company to serve as a test cell for initial development, afterwards for the migration of the users, the identification of problems that appear and, at the end, the development of the communicational global solution.

To chose the vendor that provides the perfect solution, it should be taken into consideration the next aspects:

- Selecting a partner who can understand the characteristics of the organization's activities;
- Proceeding with a further test of the vendor;
- Communicating the results expected after implementing the chosen solution and determining the total cost of the investment;
- Establishing the parameters for success;
- Evaluating the vendor regarding certifications and training processes;
- Understanding the sub-contractual policies of the contract;
- Evaluating the data security policies;
- Establishing a list of names and contact information to assure maintenance and repair processes;
- Understanding and negotiating advantageous terms of service level agreements.

In order to fulfill each and every one of these aspects, it is of high importance for the company to know the tools used for implementing the technological solution, and the method of conciliation with the work environments of the other vendors.

Although the development and implementation of VoIP is still at the beginning, the managers of the companies want more and more the deployment of a management based on the tools and services that these technologies offer. Even without mentioning about their standardization, the
real-time management of integrated applications is based on 4 components: planning, reporting, the operational part and the troubleshooting reports.

The high developed management tools should take into consideration each of these components with well defined characteristics and solutions for every situation to appear. Moreover, it should allow the integration with the other management systems from the organization and the given solutions should be based on friendly user interfaces. Furthermore, it is necessary to be taken into consideration the implementation of the IPAM notion (IP address management), too, in the context of developing the technology VoIP.

This area is intentionally forgotten many times, based on the fact that it is rather linked to the networks or data, although the development of the VoIP technology, by itself, is a current factor for updating IP addresses.

Nowadays, almost every company manually manages IP addresses. For a continuous and complex development, this primary form of management would be harder to achieve.

IPAM protocol is an important gate for complex notions of voice and data in a network, using the recent defined ENUM mechanism with the usability of DNS structures and the numbering plan areas. Consequently, the IT staff need to manage IPAM technology as a complex method of exploitation of resources that should allow the development of data security area, of capacity planning, validity of information and managerial growth.

Implementing the IP address management notion doesn’t mean only finding an action plan, but finding specific tools that allow exploiting the DNS architectures, assuring DNS services for different mobile devices of the company and also assuring a correct configuration for DHCP technology.

A proactive and aggressive management IP address determines a better usability of the security components like firewall, security systems and traffic report analysis in a network.

It is presumed that using IPAM at a complex level, with the ENUM services, would determine a significant loading of the DNS servers and a loaded DNS and DHCP traffic.

**Conclusions**

The QoS mechanism called Integrated Services or IntServ was the first major attempt of enhancing the QoS capacity.

IntServ is an extension of the fundamental model for the internet
service that traditionally provides the best effort type delivery of IP packages. Integrated Services takes into account the completion of the Internet network such as the new network, called IP-QoS network, will be able to provide the integration of the services in real time. The integration of these services is done by controlling the link sharing both for multicast and unicast functioning.

Itserv architecture is used as support for:

• Real time Internet services (audio, video), that will secure predictable or guaranteed services

• Controlled link portaging, which allows network services providers to allocate band on demand and to control the treatment that is applied to packages belonging to different classes of services.

In each DiffServ router, packages are guided according to PHB (Per Hop Behavior). DiffServ eliminates the necessity of flow processing and provides a simpler solution from an implementing and development point of view.

References

Positive Analysis About Financial Performance and Environmental Strategies of Banks. Romania’s Situation

Authors: Elena Adelina Stoinesescu, PhD. Candidate, Academy of Economic Studies, Bucharest; Chivu Marin, Assistant Professor PhD, Spiru Haret University, PhD. Candidate, Academy of Economic Studies, Bucharest; Chivu Maria Ramona, Lecturer Professor PhD, Spiru Haret University, PhD. Candidate, Academy of Economic Studies, Bucharest

Financial performance represents a subject for researchers especially by its determinants. The analysis of banks is not such complex as economic operators’ analysis, in the most of cases the focal point being stakeholders, regulating and monitoring activities, performance indicators and so on. By taking those researches as a base and keeping in mind the differences regarding financial analysis and its affecting agents, the objective is to investigate Romanian practices about financial performance, paying attention to its affecting agents or factors, green costs and necessary regulation changes in order to get an accurate picture.

Keywords: financial performance, management, tax system, banks, environment strategies

Introduction

This study is to reach few key elements necessary for financial performance analysis of Romanian banks, in a realistic manner. Also, the study tries to keep track of pertinent affecting agents, essential indicators and demanded regulation changes, necessary to get a realistic picture of financial performance.

Also, by taking the researches’ concerning environmental strategies as a base and keeping in mind the different perspective of those, the investigation
of Romanian banks about implementing the environmental strategies it was a necessity.

**Research methodology**

*Study structuring methodology about evaluation practices of micro level by estimation technique.*

Paul Miller (1977) has classified scientific research in this manner:

- *Basic research* to know the limits of research in order to determine the basic principles capable to explain but not necessary to be applicable into practice;
- *Applied research* to make out a guide of practical solutions for identified problems;
- *Practical research* combining previous two types into practice but not necessary for this to bring any progress in studied field.

The current study is an *applied research by statistic survey technique* using a questionnaire addressed to accountantships, management and audit professionals.

According to questionnaire answers and other means of investigation, the professionals, as micro-economic level representatives, expressed their perception about financial performance, green costs impact, the payment system necessary to maximize performance, essential indicators for financial analysis and regulation impact. The most eloquent aspects of research methodology are as following bellow:

**Population**

Financial performance is a concept used by any entity and accountantships, management or audit professional. It was noticed that the banks, regulating authorities and professionals have a different approach of financial performance concept, especially in mandatorily financial performance assessment, meaning that its components are under the circumstances of prudence concept and financial year independence principle. These are the reasons why population under survey consists of regulating authorities and banks staff, expert-accountants signing financial situations, licensed-accountants, financial auditors, managing board staff and managers.

In order to extract a representative, it was paid attention to idea of financial performance based on information provided by account department;
therefore the most eligible persons are accountants, financial experts and auditors. Because of different perceptions among specialists working in the same bank but also other authorities interested in banks monitoring, it was considered as a demand other responsible persons (administrators, shareholders) to be representative, too.

**Extracting representative**

The survey base consists of regulating and supervision authorities, public finance ministry and banks representatives.

The field survey including bistadial survey methods comprised a sample of 80 persons, with 95% confidence and ± 7% error. The structure of representative is shown in 3.1. figure.

Interviewed

![Interviewed population distribution](image)

**Questionnaire work out**

It was intended to build a questionnaire based on simple, concise, easy understandable questions, without misunderstandings, focused on respondent’s experience and knowledge. It was not intended to use overwrought questions, helping respondent not to be misguided.

It was intended to use for questionnaire structure a various range of questions regarding financial performance issue as introductive questions, transit questions, filter questions, splited questions, control questions, identification questions, so on.

Taking into consideration questionnaire technicality, it was intended to use a short number of questions that do not to put respondent into difficulty and take him / her a lot of time to answer, therefore avoiding a short number of respondents.


**Data collection**

The research took place during three month period between April – July 2012.

The questionnaires were delivered both personally and by e-mail, in order to be questioned the whole country professionals, not only regional ones.

The filled questionnaires were passed back by e-mail or mail or personally.

During the research a special attention was paid to make favorable conditions for respondents in order to maximize participation: phone calls and e-mails to selected respondents asking them to fill and pass back the questionnaires. Accordingly, 80 persons from a total of 130 answered to questionnaires, meaning 62,5% of interviewed persons.

**Data processing and analyzing.**

Data processing gets through the following consecutively stages:

- Data inputs and validation on working stations;
- Automatic control and errors list generation;
- Making corrections and automatic control re-run;
- Data processing.

Data analysis was made on objectives survey basis, the main goal being to get a picture of surveyed population behavior, as real and complex as possible.

Objectives analysis was a global one, but also in correlation with other statistic variables using techniques and analyzing methods characteristic of Gallup poll.

Data analyzing used proper methods of presentation and analysis (tables, graphics, proportions, correlations, trust intervals, gradates, scaling, so on)

**Data interpretation**

The questions, the answers to questionnaires and conclusions after data interpretation, by groups are as following bellow.

**Impact agents for financial performance.**

During survey, elements/situations influencing financial performances (internal agents – management, staff, etc; external agents – valuation by
estimation techniques demanded by laws – like depreciation, provisions, fair value, useful economic life of fixed assets, etc.) were emphasized.

**Question no. 1:**

*On a scale from 1 to 4 (1 - no impact, 2 – minimal impact, 3 – medium impact, 4 – major impact) estimate which of the next internal agents have impact over financial performance:*

Answers to question no. 1

<table>
<thead>
<tr>
<th>Affecting agents</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Property</td>
<td>8</td>
<td>17</td>
<td>43</td>
<td>12</td>
<td>80</td>
</tr>
<tr>
<td>B Management</td>
<td>0</td>
<td>6</td>
<td>10</td>
<td>64</td>
<td>80</td>
</tr>
<tr>
<td>C Staff</td>
<td>0</td>
<td>19</td>
<td>33</td>
<td>17</td>
<td>80</td>
</tr>
<tr>
<td>D Strategy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E Presence on the stock exchange</td>
<td>12</td>
<td>14</td>
<td>29</td>
<td>25</td>
<td>80</td>
</tr>
<tr>
<td>F Interest margin</td>
<td>64</td>
<td>13</td>
<td>3</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>G Loans portfolio</td>
<td>0</td>
<td>0</td>
<td>42</td>
<td>38</td>
<td>80</td>
</tr>
<tr>
<td>H Other</td>
<td>18</td>
<td>26</td>
<td>19</td>
<td>17</td>
<td>80</td>
</tr>
</tbody>
</table>

(Source: authors)

It has been noticed the most of respondents pointed property, management, loans portfolio and presence on stock exchange as determinants. Regarding management, respondents estimated strategic management as an important issue to achieve medium and long term objectives. This is the reason not even one respondent pointed strategy as determinant, management and strategy being inseparable but generating strategic management. About staff impact, superior financial performance can be achieved by a proper psychologic environment, personnel being motivated by well-balanced working environment.

Presence on stock exchange was also pointed as determinant, this presence being quantified as credibility with direct influence on investments.

It is a notable fact the respondents consider an agency disposing of latest technology infrastructure can achieve superior financial performance.

A notable remark resides in pointing management and presence of
stock exchange as determinant by respondents working in banks and regulating authorities. Only few of respondents pointed interest margin as determinant, despite of major differences between Romanian banks and other European banks regarding interest margins. Concluding, a higher profitability does not necessary reflect a higher financial performance.

**Question no. 2**

*On a scale from 1 to 4 (1 - no impact, 2 – minimal impact, 3 – medium impact, 4 – major impact) estimate which of the next external agents have impact over financial performance:*

Answers to question no. 2

<table>
<thead>
<tr>
<th>Table no. 2</th>
<th>External facts</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Regulation constraints</td>
<td>30</td>
<td>12</td>
<td>21</td>
<td>17</td>
<td>80</td>
</tr>
<tr>
<td>b.</td>
<td>Supervision</td>
<td>17</td>
<td>9</td>
<td>13</td>
<td>41</td>
<td>80</td>
</tr>
<tr>
<td>c.</td>
<td>Economic environment</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>d.</td>
<td>Inflation</td>
<td>0</td>
<td>0</td>
<td>33</td>
<td>47</td>
<td>80</td>
</tr>
<tr>
<td>e.</td>
<td>Taxation</td>
<td>5</td>
<td>16</td>
<td>51</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>f.</td>
<td>The structure of financial system</td>
<td>10</td>
<td>16</td>
<td>43</td>
<td>11</td>
<td>80</td>
</tr>
<tr>
<td>g.</td>
<td>Other</td>
<td>5</td>
<td>22</td>
<td>25</td>
<td>28</td>
<td>80</td>
</tr>
</tbody>
</table>

(Source: authors)

The objectiv of this question is to determine which of the external factors can influence the financial performance. The economic environment is pointed as determinant of financial performance, closely followed by the inflation. A surprise is the presence among determinants taxes system, which leads us to think that the desire to separate tax accounting is declarative, accounting performance seems to be affected by the size of taxes. Personally, we expect that this indicator registered a small influence, because we were looking at accounting financial performance, not on the accounting financial performance adjusted with the taxation.

The regulation constraints, especially whose refers to prudential regulation and mitigate credit risk, are pointed as determinants of financial performance. While credit institutions consider that regulation (both accounting and supervision) and financial performance are negatively related, the accounting and supervision authority consider it as beneficial in achieving

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financial performance on sound and prudent basis.

However, we find that there is a growing concern regarding political influences, the majority of respondents saying that the decision of the regulatory and supervision authorities to adopt a particular accounting framework – whose rules are positively related to the financial performance - is determined by both agreements with national and international bodies and conflicts within political class.

Financial system structure was indicated as a determinant of financial performance by 68.5% of the interviewed persons (most of them form credit institutions and regulation authorities) considering that well balanced financial system can generate reliable and continuous financial performance, against 32.5% (most of them form professions) who believes that a entity may be powerful only based on its management.

As a conclusion it can be said there is no common point of view about affecting agents, but professionals, including those working in the financial sector, considers taxes as a determinant, highlighting the difficulty of accounting and taxes separation.

Next, we proceeded to request the opinion regarding management remuneration, as an effort to optimize management and shareholders interests seen through the agent theory.

**Question no. 3:**

*Which of management remuneration forms do you estimate as beneficial to maximize financial performance? (use a 1 to 4 scale)*

Answers to question no. 3

<table>
<thead>
<tr>
<th>Table no. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Remuneration forms</strong></td>
</tr>
<tr>
<td>Standard benefits</td>
</tr>
<tr>
<td>Standard benefits and shares or stock options</td>
</tr>
<tr>
<td>Standard benefits and bonuses related to profit rate</td>
</tr>
<tr>
<td>Standard benefits and bonuses related to shares price</td>
</tr>
<tr>
<td>Standard benefits and bonuses related to market share</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(Source: authors)
None of respondents chose standard benefits and bonuses related to market share as a beneficial remuneration form, maybe because of diversified methods to determine market share, consequently a lower possibility of remuneration control.

The most of respondents pointed standard benefits and shares or stock options as a beneficial management remuneration form, in correlation with internal interests of company and shareholders interests.

Furthermore, respondents working in banks disagreed correlation of benefits with shareholders objectives fulfill, but agreed with internal ones. Regulating authorities’ representatives have divided appreciations, ones taking into consideration a standard benefits package that reduces risks of management involvement into speculative actions, against the others appreciating a standard benefits and bonuses package, related to shares prise and objectives fulfill.

**Question no. 4**

*Regarding the accounting framework are you agree with the conformity with the European Directives or IFRS?*

Answers to question no. 4

<table>
<thead>
<tr>
<th>Table no. 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accounting regulation</strong></td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
</tbody>
</table>

(Source: authors)

Most respondents (70%) believes that should be applied the accounting regulation conform to IFRS for all entities, the remaining 30% choosing for an accounting regulation in line with the European Directives. It is important to note that both credit institution and Regulation Authorities representatives chose IFRS, considering that they are closer to the economic reality. Auditors also agreed previous opinion and a part of accounting profession chose European Directives because they are easier and more simplistic compared with IFRS.
Question no. 5
Do you consider financial situations according to IFRS is complete enough to determine financial performance?

Answers to question no. 5

<table>
<thead>
<tr>
<th>IFRS financial situations are complete enough?</th>
<th>Yes</th>
<th>No</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>76.48</td>
<td>23.52</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(Source: authors)

76% of respondents agreed financial situations drown-up according to IFRS principles are complete enough in order to determine financial performance. The others 24% argue IFRS principles bases on estimations and professional judgments, giving way to subjectiveness.

Trust in individual financial situations drown-up according to IFRS principles.
The question purpose is to determine the degree of confidence in IFRS reports and identify the elements generating mistrust in its.

Question no.6
Regarding quality, transparency and relevance of financial situations drown-up according to IFRS principles:

a) Are financial situations drown-up according to IFRS principles transparent enough and very relevant for financial performance evaluation?

b) Which of the elements bellow do you consider can be manipulated?

Answers to question no. 6b

<table>
<thead>
<tr>
<th>Elements</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Professional judgment</td>
<td>85%</td>
<td>15%</td>
<td>100%</td>
</tr>
<tr>
<td>b. Accounting politics</td>
<td>88,75%</td>
<td>11,25%</td>
<td>100%</td>
</tr>
<tr>
<td>c. Fair value</td>
<td>55%</td>
<td>45%</td>
<td>100%</td>
</tr>
<tr>
<td>d. Estimations</td>
<td>92,5%</td>
<td>7,5%</td>
<td>100%</td>
</tr>
<tr>
<td>e. Others</td>
<td>2%</td>
<td>98%</td>
<td>100%</td>
</tr>
</tbody>
</table>

(Source: authors)
Regarding the question 6a) about thrust in financial situations drown-up according to IFRS principles, 83% of respondents expressed their thrust only if auditors are not Romanian, while 17% took into consideration the risk of wrong application of IFRS principles, generated by its complexity.

Regarding financial situations credibility, the most of respondents estimated that professional judgment; accounting politics and estimations are able to change substantially an entity picture. About fair value, 55% of respondents estimate the fair value is a realistic value of an asset, without possibility of being manipulated, while the other 45% considered an asset value depends on evaluating person, making room for subjectiveness.

Financial performance evaluation indicators

The questionnaire let respondents to freely decide the indicators of financial performance evaluation, specifying that indicators hierarchy reflects each indicator importance according to respondents’ appreciation.

Adjacent to dedicated indicators, many others as economic growth, cash-flow, dividends politics, litigations number, penalties paid were also indicated as financial performance evaluation indicators. The profit and cash-flow were mentioned by each respondent as important indicators.

Useful information for financial performance evaluation

Question no.7

Do you consider that prudential demands determine a superior performance of banks? In case of affirmative answer specify prudential indicators could be published.

Answers to question no. 7

It is a known fact that banks activities are monitored by national monitoring authorities but also by international authorities, the primary goal being market stability.

Ones of survey objectives were to get professionals opinion regarding the importance of prudential indicators in banks performance evaluation and determine if prudential regulation could be a support factor for financial performance.

A percent of 68,75% of respondents appreciated prudential regulation does not necessary determines superior financial performances, only brings discipline among banks, while 26,25% considered that prudential regulation generates costs for banks.
Question no. 8

*Have you any interest in green accounting?*

Answers to question no. 8

As it was expected, the green accounting is not a primary goal for banks, pollution index in services sector being more reduced relative to production sector, banks activity having no visible effects over environment and accordingly no actions necessary to be carried out in order to prevent possible incidents. Furthermore, a green accounting able to anticipate and monitor the green costs and generate green reports very similar to financial situations is far away enough. Similar points of view have the other professionals, too.

Question no. 9

*Do you consider environment protection information is necessary to be distinctively represented within financial situation?*

Answers to question no. 9

The most of respondents appreciated a distinctive environment protection representation within financial situation is useless because of minimal costs (around 3 % of total costs). In addition, the diversity within this class of expenses is reduced, preponderant being energy costs and air pollution taxes.

Question no. 10

*Respondents were asked to evaluate on an 8 points scale (0—no implementation, 7 – strategy implemented) the degree of the environment strategies implementation.*

Answers to question no. 10

The most common environmental strategy in banks is about use waste paper collection. Also, banks are involved in funding green building commercial projects and have the expertise and tools to help fund green projects as: alternative energy, local agri-business, local fishing industry, etc. In order to protect the environment, banks offers discounts to costumers who pay without paper (includes debit card transactions, paying bills online, etc.).

Question no. 11

*Which are the elements you would change in present regulation in order to achieve most realistic picture of financial performance?*
Answers to question no. 11

This question was the most controversial and together with financial performance definition recorded the biggest number of different answers. In order to facilitate data analysis, the answers were grouped in 5 categories by their common characteristics. Therefore, 11,25% of respondents expressed about necessity for a complete change of regulations due to possible altered economic reality of a bank as a result of more frequently use of estimations and professional judgment. On the other hand, 15 % of respondents appreciates actual regulation as well-balanced, but mentioned the necessity of a set of guide lines in order to specify the situations when professionals’ judgment is allowed to be used.

Another category (28,75 %) appreciates the present regulations should limit fair value valuation because fair value can be determined only in the moment of transaction.

Another group (27,5 %) identified orientation to the past of financial situations demanded by accounting regulations as a problem and lack of prospective information diminish the confidence in financial situations.

The last group of respondents (17,5 %) appreciates the whole international accounting framework as a complete and complex one and confidence in financial reporting is determined by a good-will use of accounting principles.

Limits of current study and research perspectives

Of course, our study is far from being perfect, that’s why we have to be fully aware and to admit there are some limits; the value of this paper is argued by its possibilities to be considered as a good starting point that can stimulate further researches on Romanian perspective on financial performance, tax system and environmental strategies.

The survey results were very helpful in our research because it permits to evaluate on a proper manner, the regulatory authorities, credit institutions and professional perception on financial performance and tax system as a determinant; although it shows that environmental strategies are not unknown for banks. However, the study has identified difficulties in evaluating financial performance due to: different perception of management and ownership; estimation techniques used; professional judgment; the manner of determining fair value, etc.
As a summary, below is presented working hypothesis formulated and tested.

### Summary of working hypotheses

<table>
<thead>
<tr>
<th>Nr. crt.</th>
<th>Working hypotheses</th>
<th>Tested (Assumed / Rejected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The most common interpretation of financial performance is profit, although the profit is only a result of financial performance</td>
<td>Rejected</td>
</tr>
<tr>
<td>2.</td>
<td>The management’ actions determine financial performance</td>
<td>Assumed</td>
</tr>
<tr>
<td>3.</td>
<td>Property is a determinant of financial performance</td>
<td>Rejected</td>
</tr>
<tr>
<td>4.</td>
<td>Interest margin is a financial performance determinant for banks operating in Romania</td>
<td>Rejected</td>
</tr>
<tr>
<td>5.</td>
<td>Taxes has no impact on financial performance</td>
<td>Rejected</td>
</tr>
<tr>
<td>6.</td>
<td>Economic environment is a determinant of financial performance</td>
<td>Assumed</td>
</tr>
<tr>
<td>7.</td>
<td>The regulation constraints perturbs financial performance</td>
<td>Rejected</td>
</tr>
<tr>
<td>8.</td>
<td>Standard benefits and shares was indicated as the most proper management’ remuneration form</td>
<td>Assumed</td>
</tr>
<tr>
<td>9.</td>
<td>The international accounting framework is considered the accounting practice</td>
<td>Assumed</td>
</tr>
<tr>
<td>10.</td>
<td>Fair value is an accurate value</td>
<td>Rejected</td>
</tr>
<tr>
<td>11.</td>
<td>Financial performance is valuate mainly using financial rates</td>
<td>Rejected</td>
</tr>
<tr>
<td>12.</td>
<td>Most of financial institutions considers that prudential indicators should not be published</td>
<td>Assumed</td>
</tr>
<tr>
<td>13.</td>
<td>The credit institutions are not implementing environmental strategies</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

(Source: authors)

### References


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