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EXECUTIVE SUMMARY

Creativity is the key of success. As we know in every aspect of business environment only creation is needed in order to be developed and be competitive in the market.

The European Union aims at shaping Europe's future in a global competition by fostering creativity and innovation. Therefore, 2009 was declared by the EU as the European Year of Creativity and Innovation, to raise awareness on the importance of creativity and innovation for personal and economic development in the work place. There is no doubt that growth in business demands creativity. It is what will separate the company from the competition.

The aim of this document is to identify the strengths and weaknesses regarding creativity in SME's. This report will present the research that First Elements Euroconsultants Ltd undertook in Cyprus in order to identify the awareness levels and role of creativity in Cyprus companies.

At the first stage First Elements Euroconsultants Ltd selected a random sample of SME's and contacted the Managing Directors of several SME's, whereas only 12 SME's have responded and participated in the survey.

The survey methodology involved the provision of questionnaires (Creativity scorecard) in which the managers answered through telephone survey. The data collected covers the whole of Cyprus with most responses received by SME's established in the Nicosia region which is the main business and trade hub of Cyprus. The companies that have been targeted employ up to 50 staff.

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1. INTRODUCTION

Cyprus is a small country with improving economic performance: The Gross Domestic Product (GDP) per capita went from 89.5 % to 92.7 % surpassing the EU-27 average in the last five years and GDP growth rates were around twice the European average. The business sector is dominated by a very dynamic financial services and tourism sector but limited manufacturing activities. Unemployment is low and productivity is increasing, however labour costs increase even faster.

Cyprus belongs to the group of 'moderate innovators' as classified by the Synthetic Innovation Index of the EIS (European Innovation Scoreboard) 2008. Regarding innovation drivers the picture is mixed: The country outperforms the EU significantly in the share of population with Tertiary Education. Lifelong learning is at three quarters of the EU average but with a rising trend. More worrying are the share of Science and Engineering (S&E) graduates, declining from 41 % to 28 % of the European average and broadband penetration which is low but rising rapidly. Knowledge creation is the weakest point of the national performance, with GERD (Gross Expenditure on Research and Development) and BERD (Business Expenditure on Research and Development) shares at a much lower level than the Barcelona target, and it is unlikely that there will be any significant cohesion in the near future. The positive ranking in innovation and entrepreneurship, which figures as the country's strength is contradicted by the indicators on new to firm and new to market sales, which place the Cypriot companies well below the European average.

Innovation policy is in basic levels: Research and Development (R&D) support has been organized and improved significantly over the last five years and has made some timid steps towards sensitizing the business sector and raising BERD. But there is no focused innovation policy: policy support is mainly fragmented and composed of research grants and basic infrastructure, whereas initiatives by the private sector to raise issues like industrial design, clusters and quality control have remained without systematic response from the side of the public sector.

1.1 National System of Cyprus.

In Cyprus there is no single entity responsible for the design, promotion and co-ordination of innovation policy measures. The innovation system in Cyprus is structured on *policy, intermediary and implementation* levels:

- a. At *policy level*, the *Planning Bureau* (responsible for the overall economic policy) has a central role in the design of the Cyprus RTDI strategy and in the promotion of international scientific co-operation. The *Ministry of Commerce, Industry and Tourism* carries responsibility for the promotion of high-tech companies, the reconstruction of traditional industry and for attracting foreign investment. The *Technical Committee*, an inter-departmental unit for innovation matters in Cyprus, is responsible mainly for the promotion of high-tech industry.
- b. At the *intermediary level*, the *Research Promotion Foundation* (RPF) communicates the RTDI strategy to the research community. The *Cyprus Institute of Technology* (CIT) aims at enhancing the competitiveness of Cypriot firms by focusing on their technological and innovation upgrade.
- c. The *Cyprus Institute of Neurology and Genetics*, the *University of Cyprus*, the *Higher Technical Institute*, the *State General Laboratory*, the *Agriculture Research Institute* and the *Cyprus Productivity Centre* operate at the implementation level. Other key actors are the University of Nicosia, the *Frederick University*, the European University the newly established *Business Incubators* and private enterprises.

In more detail, the institutional context in Cyprus through which the innovation policy is designed, supported, channelled and implemented is the following:

- Planning Bureau

The *Planning Bureau* plays a major role in the co-ordination of the government policy. It constitutes the economic and administrative arm of the *Central Planning Commission* and the *Planning Committee on Policy and Budget*. It is a government service independent of any Ministry and accountable directly to the *President of the Republic*, as Chairman of the *Central Planning Commission*. In practice it operates through the *Minister of Finance* in his capacity as Chairman of the *Planning Committee on Policy and Budget*.

The *Planning Bureau* is responsible for the overall economic planning; it prepares the development plans and monitors the allocation of funds. Through these plans, it has formulated industrial development policies in Cyprus. It is also involved in setting the basic priorities in the research sector and in preparing policy measures for the achievement of these goals. The *Planning Bureau* additionally acts as a policy link between the Government and the European research and innovation programmes. It funds the *Research Promotion Foundation* annually, as well as the other research activities and initiatives of the wider public sector research bodies.

- Ministry of Commerce, Industry and Tourism

The *Ministry of Commerce, Industry and Tourism* has a leading role in the industrial innovation areas. The *Department of Industry* is responsible for the *New Industrial Policy* (and therefore for the business incubators measure, which promotes innovation issues and has also the supervision of the *Department of Registrar of Companies and Official Receiver* which besides keeping records of company registrations and approved trademarks, acts also as the *Intellectual Property Authority* and the national *Patents Office*. The Department has played a major role in the protection of intellectual property in Cyprus.

- The Ministry of Education and Culture

The *Ministry of Education and Culture* comprises the following departments: primary, secondary, higher and tertiary education, technical and vocational education, the scientific research centre, cultural services and the pedagogical institute.

A policy document for reengineering of secondary technical and vocational education (STVE) was launched in May 2001 by the Ministry. After deliberations with social partners and stakeholders (*the Technical Schools Teacher Assemblies, the Technical Instructors Trade Union, the Advisory Body for Technical and Vocational Education*) and the final approval from the *Educational Council* the proposal was finalized and approved by the *Council of Ministers* in August 2001.

- Research Promotion Foundation (RPF)

The *Research Promotion Foundation* serves as the national institute for the promotion of scientific and technological research in Cyprus. The *Government of the Republic of Cyprus* established the *Research Promotion Foundation* in 1996. The objectives of the Foundation are:

The RPF is responsible for the preparation and the implementation of: 1) the National Programme for Research and Technology Development 2008, 2) the Programme of the European Union for research and Technological Development (7th Framework Programme), 3) the Programme for the European Development for Competitiveness and Innovation (1st Framework Programme CIP)

The RPF is also the *National Project Coordinator* for *EUREKA* (a pan-European network for market-oriented, industrial R&D), *COST* (European Co-operation in the field of Scientific and Technical Research), *EUROSTARS* (is the first EUREKA initiative for funding and support of R&D performing small and medium enterprises) and *ESF* (European Science Association).

- Business Incubators

In the framework of the business incubators scheme of the *New Industrial Policy* four incubators have already been established: **Promitheas Business Innovation Centre**, the incubator of the Cooperation of the *University of Nicosia* (prior *IMCS Intercollege Ltd*), the **Cyprus Institute of Neurology and Genetics**, **ERMIS Research & Incubator Centre** and the incubator of the **University of Cyprus**.

- Ministry of Labour and Social Insurance

The *Ministry of Labour and Social Insurance* supports and promotes the work of the *Human Resource Development Authority of Cyprus (HRDA)*, previously called *Industrial Training Authority*, provides continuous education and lifelong training at all kinds of human development issues. HRDA is a semi-governmental organisation and representatives of employers, unions and the government manage it. As the national agency for training, *HRDA* does not implement training activities. The training activities that promoted by *HRDA* are designed to meet the needs of the economy, the enterprises and the labour force taken as a whole, which are set in the form of guidelines by the *HRDA*, in co-operation with the *Planning Bureau*.

The *Higher Technical Institute* of the *Ministry of Labour and Social Insurance* was established in 1968 and it is publicly funded. It is one of the main knowledge providers, which could support and promote innovative thinking and practises. Its main purpose is to train high-level engineers at technician level to satisfy the needs of industry by providing suitable personnel to take up middle level technical posts. The HTI in conjunction with various professional organisations organises short courses of vocational character mainly concerning new technologies for people coming from industry. These courses run under the auspices and sponsorship of the *Human Resource Development Authority*.

The *Cyprus Productivity Centre* is a department of the *Ministry of Labour and Social Insurance*, established in 1963. It offers in all the major towns a wide range of management development

programmes, as well as upgrading and ab-initio vocational training programmes for technicians. In that way the *CPC* is assisting both private and public organisations to develop their human resources and to improve their productivity. Additionally, the *CPC* through the *Mediterranean Institute of Management (MIM)* organises annually a Post-Graduate Management Diploma Programme, designed to increase the employability of unemployed young university graduates and to improve the managerial potential of those already working.

- Ministry of Agriculture, Natural Resources and Environment

The *Agricultural Research Institute (ARI)* is a department of the *Ministry of Agriculture, Natural Resources and Environment*. It was established in 1962 as a cooperative project between the government of Cyprus and the *UNDP* and was entrusted to the government of Cyprus in 1967. It is the main channel in its field for the development and promotion of innovative practices with substantial contributions in applied research in the fields of new plant and animal production. Here, should also be mentioned the Ministry's *Cyprus Forestry Department*, the *Geological Survey Department* and the *Department of Fisheries and Marine Research*.

- Ministry of Health

The *Ministry of Health* supports and promotes the work of the *Cyprus Institute of Neurology and Genetics*, which was established in 1990, following a donation by the United States, through the Cyprus office of UNHCR. The Institute was established in the context of an independent non-profit foundation, the *Cyprus Foundation for Muscular Dystrophy Research*, so as to ensure its necessary administrative and scientific flexibility and dynamism to confront these illnesses in co-operation with university, government and non-government physicians and other scientists. It carries out applied and to a lesser extent basic research in the field of genetics diagnosis and genetic diseases. Additional research facilities are the *State General Laboratory*, which is the main and the older institute in Cyprus in chemistry and microbiology sectors and the *Bank of Cyprus Oncology Centre*.

- European Institute Cyprus

The *European Institute of Cyprus (EIC)* was founded in 1996, after mutual agreement between the Republic of Cyprus and the European Union, as an independent and an autonomous Institute. The Institute's fundamental mission is to constitute the main vehicle that will promote the study and information on matters related to the European Union. Also informs SME's for any EU / National Fundings that are available.

- The Cyprus Institute

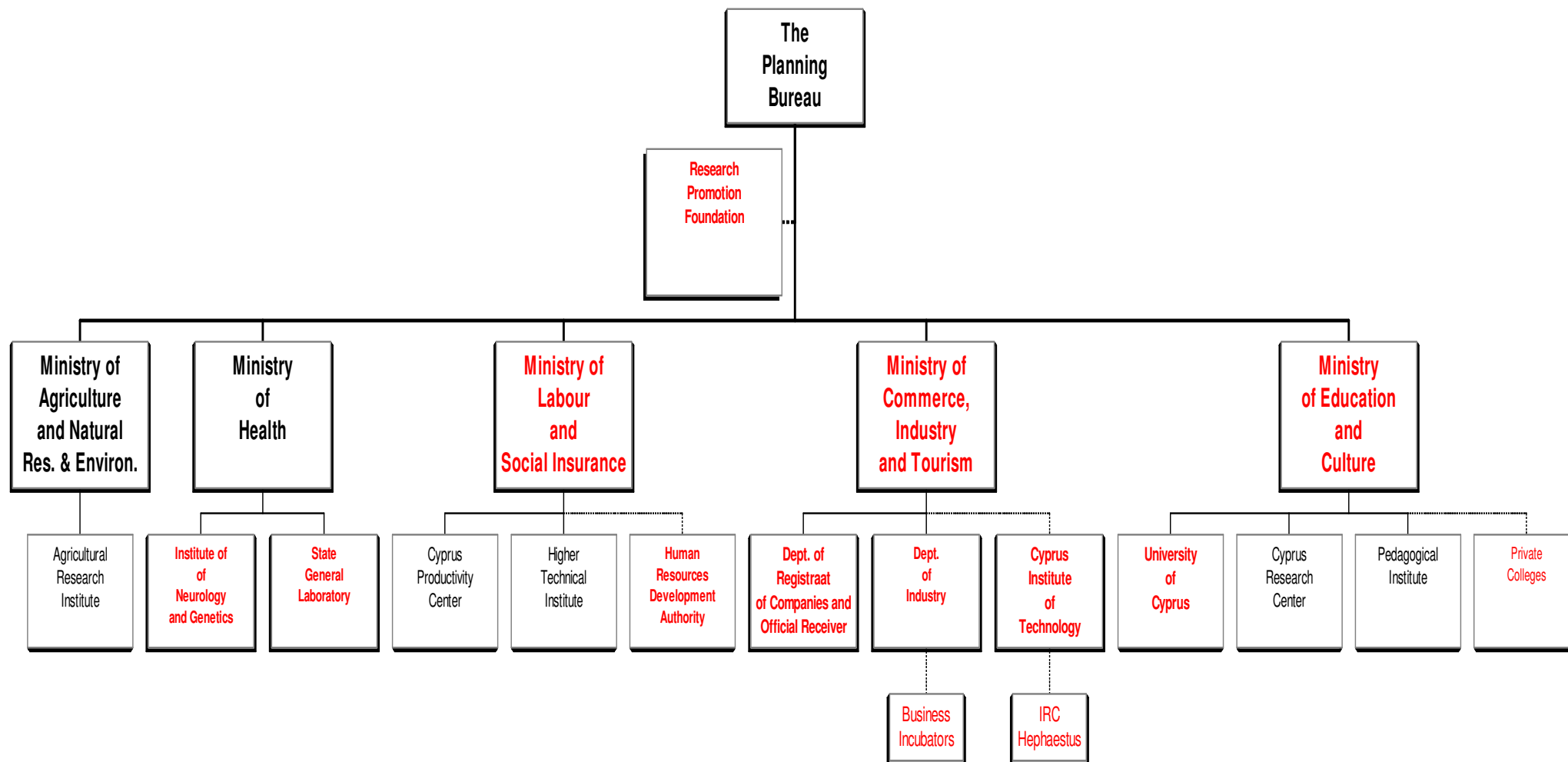
The *Cyprus Institute (Cyl)*, is a non-profit science and technology research and educational institution. Formally established in 2005 and increasingly gaining visibility both locally and internationally. In 2007 the first Research Center: the Energy, Environment and Water Research Center (EEWRC) was officially launched. In February 2009, the Science and Technology in Archaeology Research Center (STARC) and the Computation-based Science and Technology Research Center (CaSToRC) were officially launched.

- Other stakeholders

Other stakeholders also promote development policies, which could contribute in an indirect way to the formulation and implementation of innovation policies. These include the *Cyprus Federation of Employers and Industrialists* and the *Cyprus Chamber of Commerce and Industry* and their sectoral organisations. They are actively involved with governmental organisations and other agencies and act as pressure groups for the formulation of appropriate governmental policies.

The innovation institutional framework is illustrated in the following scheme. Dashed lines show non- public bodies.

Scheme 1. Institutional framework in Cyprus



2. METHODOLOGY

Sample Selection

As it is mentioned in the CREATIN Methodological Framework the aim of this scorecard is to determine 1) the attitude and perception towards creativity issues, 2) the extent and nature of creativity initiatives in the organization, 3) the barriers experienced and last 4) whether specific structures, systems and culture are in place to enable effective creativity managements in SME's.

Therefore, the creativity Scorecard had targeted the Managing Directors of Cypriot SME's as they are the key persons in the company who will be able to identify the strengths and weakness regarding creativity in the organization.

The method that used was questionnaires (Creativity scorecard) in which the managers answered through telephone survey. The data collected covers the whole of Cyprus with most responses, however, received by SME's established in the Nicosia region which is the main business and trade hub of Cyprus. The companies that were targeted employ up to 50 people.

First Elements Euroconsultants Ltd contacted several SME's with 12 responses in total.

TABLE 1: SME's that have participated in the survey

Sector	Responses
Law Office	2
Chemical Laboratory	1
IT	3
Accounting office	1
Incubators	2
Construction office	2
Bacery	1
TOTAL	12

Statistical Analysis

The questionnaire covered five major grouped factors i.e. Leadership, Culture, Structure, Motivation, Communication. Each factor involved ten sub-factors/ characteristics which were scored individually from 1 to 5 (score 1: strongly agree, score 5: strongly disagree). Respondents provided an answer on each sub-factor/ characteristic. Due to the fact that the sample size is only 12 responses, the sub-factors were not measured individually, as we would be producing at least fifty (50) groups of results. For easy reference purposes the sub-factors were grouped into the larger group categories i.e. Leadership etc. as described above. The section below indicates the grouped factors results.

3. FINDINGS

As has been clarified before each company answered the Creativity Scorecard and based on the results the following five (5) diagrams describes the characteristics of each group.

As diagram 1 below, shows that the majority of SME's in Cyprus believes that leadership can not be considered as a strong factor for achieving creativity in the workplace. The larger frequency rate lies with Score 3, showing that there is no identified tendency towards either "Agree" or "Disagree". Some tendency however lies with the second highest frequency of Score 2: Agree. The results described below show that respondents consider "Leadership" to be a factor for creativity but not a strong one.

DIAGRAM 1

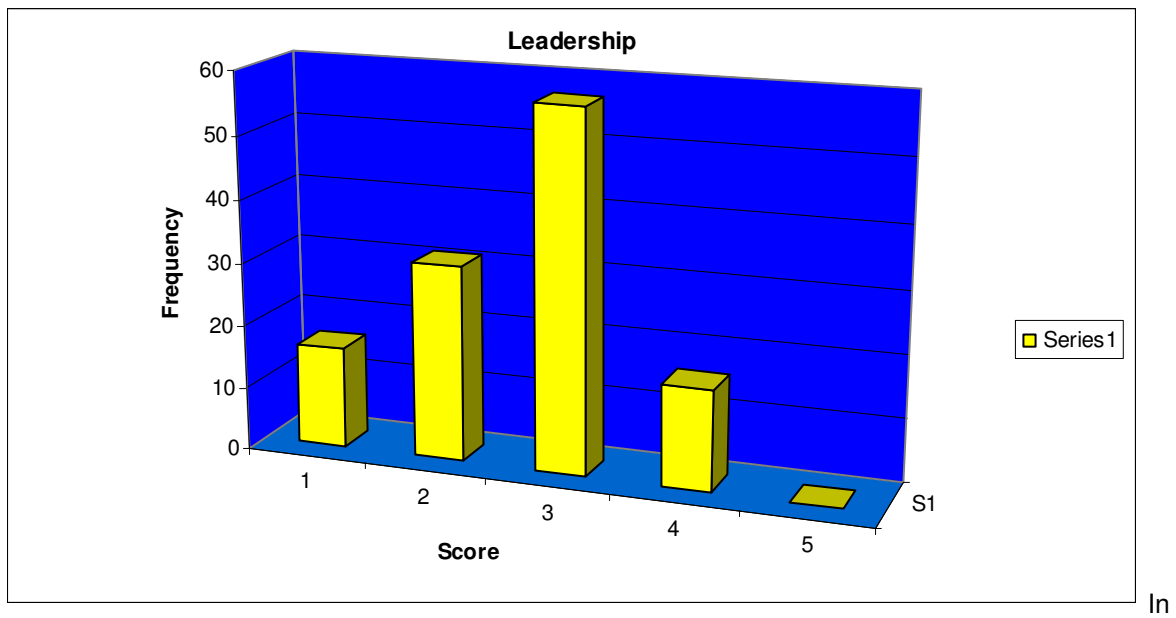
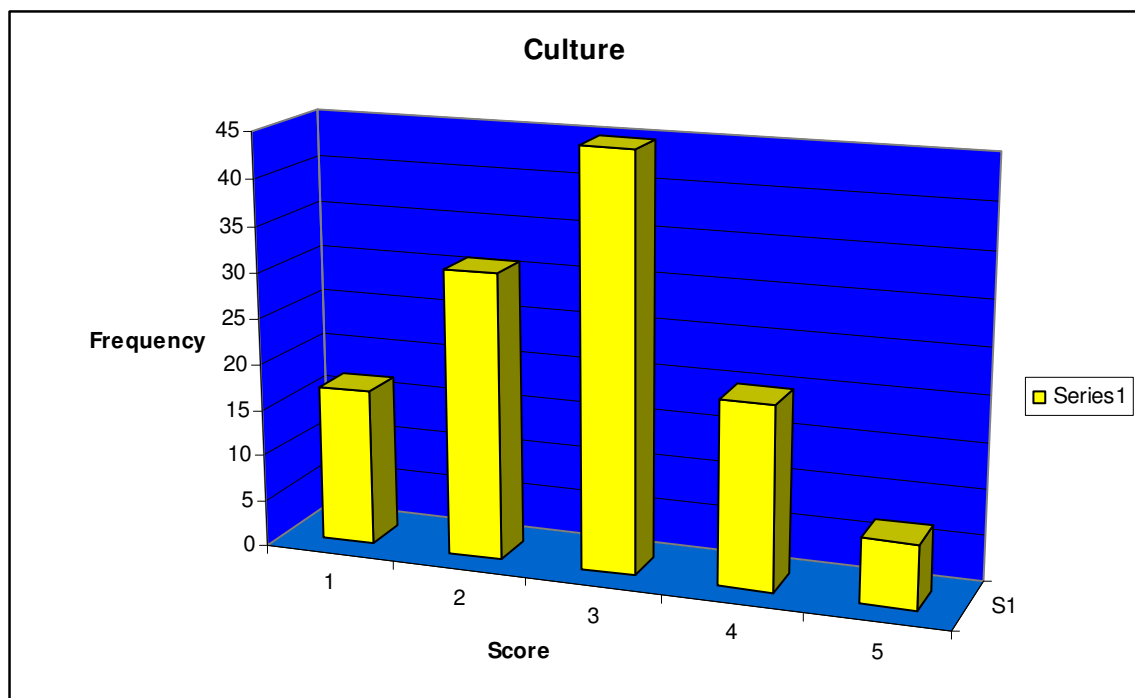
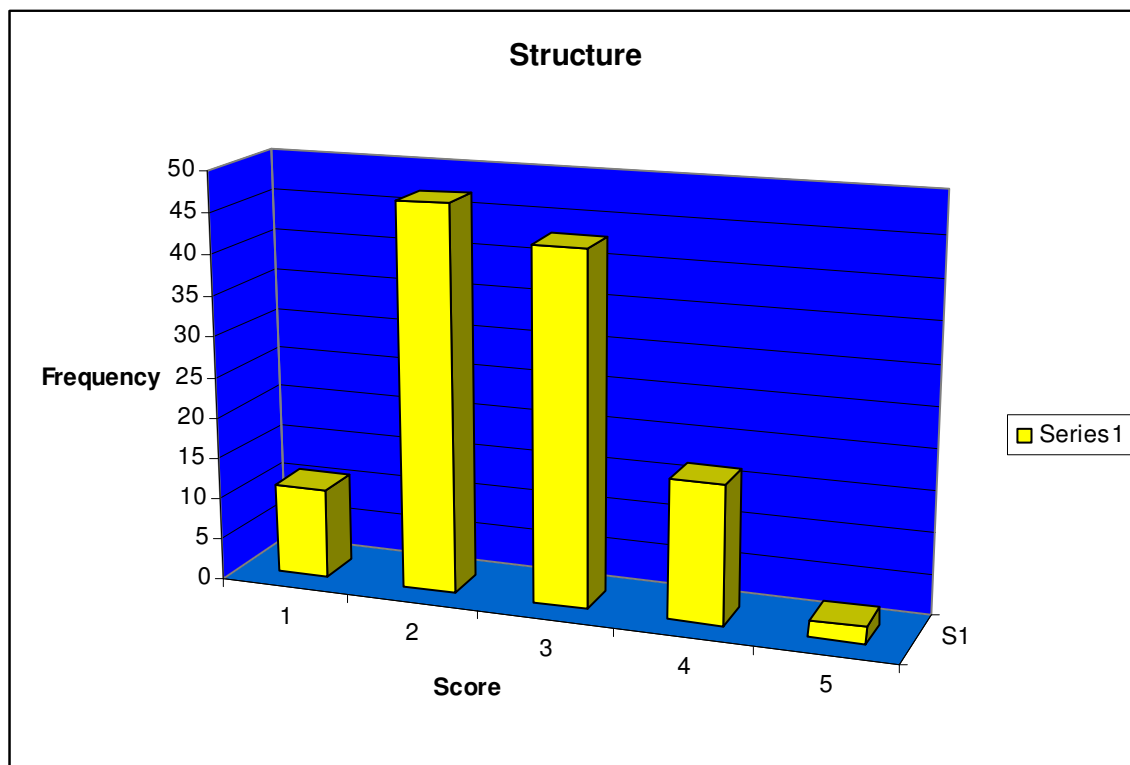


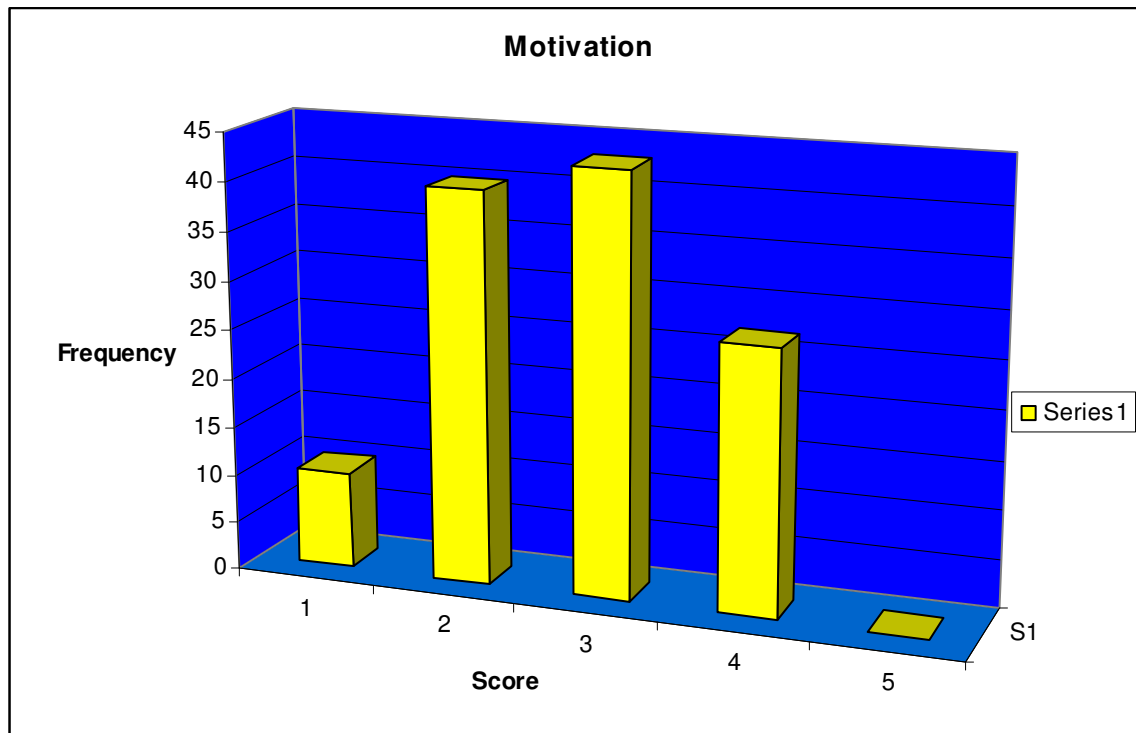
Diagram 2 shows that Culture it is not considered very important priority to the SME's (that participate in the survey) in order to implement Creativity in the workplace. As most of the Managing Directors answered at the Scorecard that either "Agree" or "Disagree" with the statements. However, some tendency lies also with the second frequency of Score 2: Agree. The results described below show that respondents consider "Culture" to be a factor for creativity but not important.

DIAGRAM 2

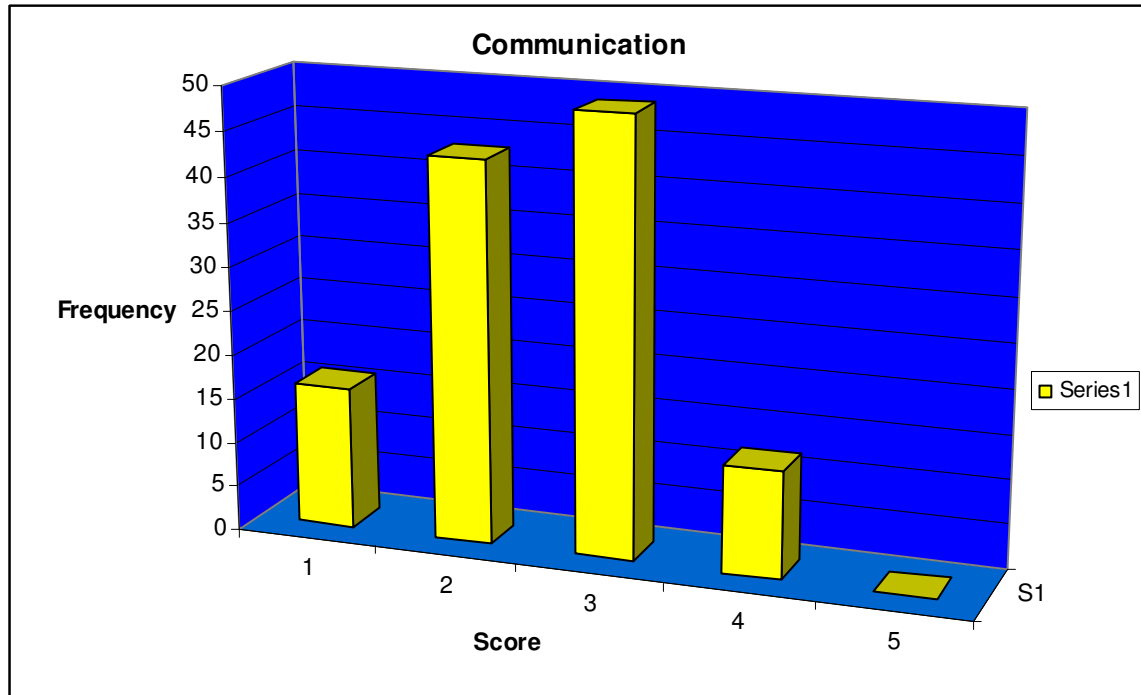
In Diagram 3 the answers provided on whether the SME's consider "Structure" to be a factor for Creativity in the workplace lies with Score 2, the larger frequency. This shows that "Structure" is an important and strong factor and it is a necessity to be implemented in organizations. The diagram describes that "Structure" is the most popular factor of implementing Creativity management as comparing with the other groups exhibited by the graphical representation of the results, but no statistical analysis test was carried out to compare between the factors; respondents have positive feelings towards the group of statements regarding "Structure".

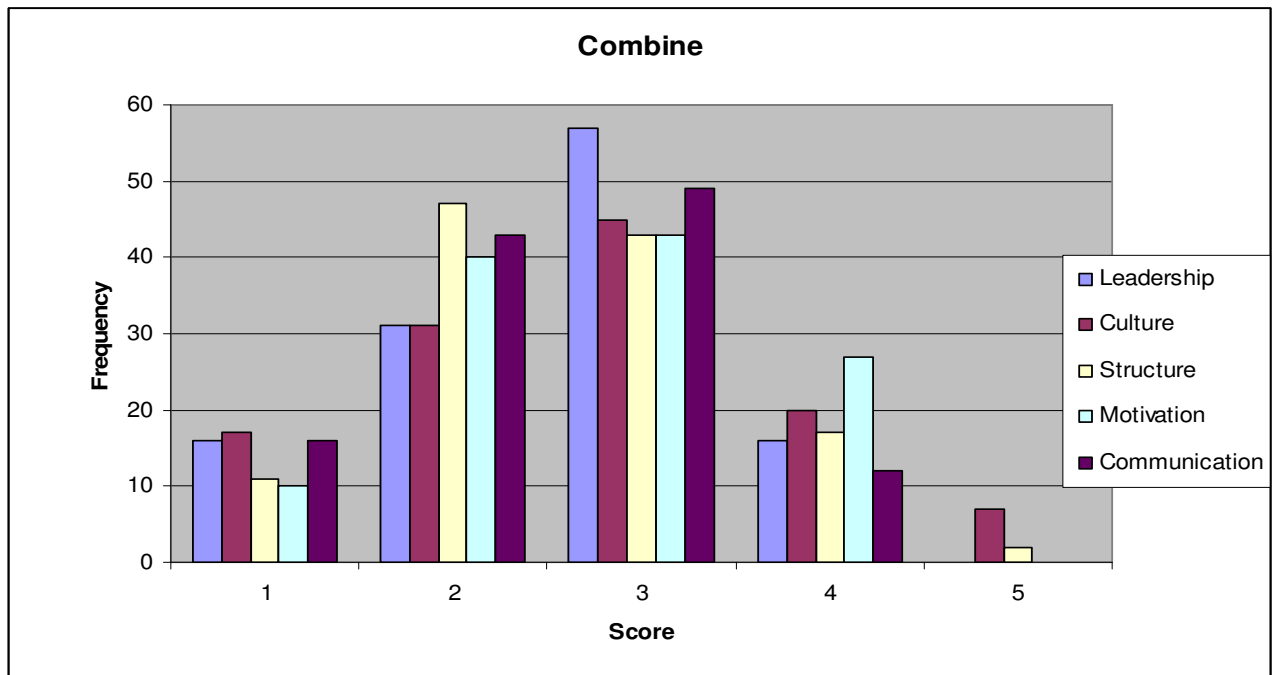
DIAGRAM 3

As of the diagram below, the larger frequency rate towards "Motivation" lies with Score 3 showing that there is no identified tendency towards either "Agree" or "Disagree". However, it is interesting to note that there is no big difference between Score 2 and Score 3. However Score 4 is significant enough to conclude that the balance between Score 2 and Score 4 is stable. Therefore it could be said that "Motivation" for Managing Directors of Cypriot SME's is not a very important factor for developing creativity in the workplace.

DIAGRAM 4

In this diagram the larger frequency rate towards “Communication” lies with Score 3. In this case there is no big difference with Score 2, showing that “Communication” is considered to be an important factor and basic necessity for SME's. Communication among the employees could help in developing Creativity in the workplace.

DIAGRAM 5



The combined chart shows that Score 3 is the most frequent on all factors with the second highest comprehensive mark lying with Score 2: Agree. These results raise a lot of questions and introduce areas of further exploration at least on a local level such as the following:

1. The local businesses do not comprehend the meaning and role of these factors in creativity and innovation
2. These factors are important in very specific industries/ operations/ expertise and do not apply to all industries of the Cyprus economy
3. These factors are understood by businesses but their adoption and implementation into daily operations is not concrete and monitored
4. Creative ideas may be perceived by Managers as threatening for the smooth operations of their companies. Unwillingness to implement creative ideas is a weakness within companies. Creative ideas are discouraged because a lot of Managing Directors feel that could threaten their business.
5. Most managers may believe that investing time and resources on promoting innovation and creativity within their company does not yield direct result/ profit/ benefit. Therefore, investing in creativity and innovation may be considered as a factor for strategic long run planning which cannot be undertaken within a busy schedule.
6. The problem of Creativity is highly embedded in the nature and processes of the organization.

4. CONCLUSIONS - RECOMMENDATIONS

Creativity and innovation are fairly new in the country and as it is revealed in the diagrams Managing Directors lack significant knowledge and experience in understanding Creativity. The problem is that most managers are not aware of the importance of creative ideas and the impact that will have in the personal and economic development in work place.

However, this could change by accepting the concept of creativity and welcome it in the business context. Cypriot managers could promote creative ideas by: a) Fostering and promoting creative activities, b) Understanding the needs and motivations for creative ideas, c) Identifying and assess the risks and last d) Providing helpful feedback to their employees.

5. REFERENCES

Government and legislative bodies

RPF Cyprus Research Promotion Foundation
<http://www.research.org.cy>

Human Resources Development Authority of Cyprus
<http://www.hrdauth.org.cy>

Ministry of Commerce, Industry and Tourism,
http://www.mcit.gov.cy/mcit/mcit.nsf/dmlindex_en/dmlindex_en

Ministry of Education and Culture
<http://www.moec.gov.cy>

Planning Bureau of Republic of Cyprus
<http://www.planning.gov.cy>

Private sector organizations and entrepreneurship promotion

KEBE Cyprus Chamber of Commerce and Industry
<http://www.ccci.org.cy>

Knowledge institutes (R&D and education bodies)

Technical University of Cyprus
<http://www.cut.ac.cy>

University of Cyprus
<http://www.ucy.ac.cy>

Industrial research centres and innovation intermediaries
Talos
<http://istworld.dfki.de/partners/TALOS>

ERMIS Research and Incubation Centre
<http://www.ermis.org/MAIN/default.aspx>

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