

ARCHIVES OF ECONOMIC HISTORY

Volume XIX

No 2

July–December 2007

ΑΡΧΕΙΟΝ ΟΙΚΟΝΟΜΙΚΗΣ ΙΣΤΟΡΙΑΣ

Τόμος XIX

Τεύχος 2

Ιούλιος–Δεκέμβριος 2007

CONTENTS - ΠΕΡΙΕΧΟΜΕΝΑ

G. HALKOS: Environmental thinking in Economics	5
N. KYRIAZIS: Economic democracy and decision making for public goods	19
J. PORFIRIDIS: The importance of development of congress tourism in Greece	35
D. ITHAKISIOS: Scholastic economic thought and the establishment of the new credit institution “Monte di Pietà”	45
C. KYRITSIS–I. SOTIROPOULOS–C. GOGOS–E. KYPRIOTELIS: Note on the effect of the 11 years global climate cycle on the prices of the capital markets	65
A. PANAGOPOULOS–D. STERGIUO: Public relations and the communication of corporate identity: An exploratory investigation	83
D. KOKOTOS–P. CURTIS: Analysis of the competitiveness of tourism using trees rules	107
S. VARVARESSOS–M. SOTERIADES: Mountain tourism and winter resorts: A study of Greek ski centers	119
J. PAPOUTSIS– V. PANAGOU–A.ZAFIROPOULOU: A reference model for information system design and development	145
I. KOUTSONIKOS–I. MITROPOULOS: Teleworking: Trends and implications ...	157
M. IOAKIMIDIS: Human capital, education and the future-An historical review of theories of human capital and their continued relevance to the economics of education	181
D. STAVRAKIS–D. KARAGEORGOU: Evaluation of quality in the academic process of Greek higher tourism education summary	199
BOOKS, MAGAZINES AND ARTICLES RECEIVED	221

ATHENS - ΑΘΗΝΑΙ, 2007

ENVIRONMENTAL THINKING IN ECONOMICS

G.E. HALKOS*

Abstract

This paper discusses the development of environmental economics from the Industrial Revolution in Europe to today. Specifically, it comments on the general similarities and differences between the representatives of the schools of economic thought concerning the environment. Among others, the issues of scarcity of natural resources, of population growth as well as the limits to growth are discussed and the various views are presented.

JEL classification: N53, N54, O13, B12, B13, B14.

Keywords: Natural resource scarcity, limits to growth, environmental economics.

1. Introduction

Throughout the history of mankind, civilizations have continually been built in fertile land areas where the growth of societies was supported by the availability of sufficient resources. As economies enlarged, a point was reached where resources were used faster than they could be refilled. If the society kept growing producing populations overrun one or even more vital resources could potentially disappear and this could lead to economic but also social collapse.

The main interests in environmental history have been, at least at the beginning, the scarcity and exhaustion of natural resources. During the 1960s environmental pollution became more widespread and led economists to look at resource scarcity in relation to possible users. From 1870 to 1970 most economists with some remarkable exceptions believed that economic growth was sustainable indefinitely.

Economic history has a wider spotlight than strict economic theory and has reflected the development in Economics. But after 1970 the majority of economists believed that growth remained feasible with no need to exhaust natural resources. At the same time this growth may be desirable in the sense that we don't have to reduce the total quality of life. The necessary element was an efficiently

* Associate Professor in Economics of Natural Resources, Director of Postgraduate Studies, Department of Economics, University of Thessaly.

functioning price system capable of accommodating higher levels of economic activity with an acceptable level of environmental quality.

Although environmental economics is a recent concern we may say that it has been a concern from the writings of the classical economists. Referring to the classical economists we identify a number of economists writing in the 18th and 19th centuries where the Industrial Revolution was taking place together with the increase in agricultural productivity.

The classical economists paid attention to the supply analysis assuming that the amounts of supplied commodities were determined by the labour costs of production. Neoclassical economists also considered the demand side in the price determination and used as the norm full employment taking the overall level of economic activity as given. This full employment norm was not consistent in the post-First World War experience of most western economies, where we have persistent unemployment for more than a decade.

At this time most economists explained the problem with the reasoning that wages didn't fall in the existence of unemployment. They believed that the way out of the problem was to reduce wages. John Maynard Keynes (1883-1946) totally disagreed with this policy. He argued that the proper solution was for the government to intervene in the economy in order to maintain the demand for goods at a level capable of creating full employment. Keynes developed his theory of income and output determination. Keynesian macroeconomics was opposed to the microeconomics of neoclassical economics, and inspired a recovery of interest in growth theory in the middle of the 20th century and the development of the neoclassical theory of economic growth.

In this paper we will discuss the development of environmental economics from the Industrial Revolution in Europe to our times. Our major task is to discuss the general similarities and differences between and within economic schools of thought concerning the environment. An effort is also made to distinguish the terms environmental, ecological, resource and agricultural economics.

The structure of the paper is the following. Section 1 introduces the paper. Section 2 discusses the issues of natural resource scarcity as well as the limits to growth according to the classical economists and the Marxists. Section 3 presents the main views of the neoclassical economists to humanists and institutional Economics. Section 4 examines the evolution of economic thoughts and the emergence of ecological economics. The final section concludes the paper.

2. From classical economists to Marxists: Scarcity of natural resources and limits to growth

The classical economists were concerned with limits to growth but from a different angle to the modern theories that call for sustainability. A common component for the classical economists was the growth of population. Population growth was the main determinant of returns redistribution. This together with the dependence of production on labour and on the scarcity of land implied that economic growth may be inactive as capital profits would be reduced relative to wages. For this theory the absolute resource constraints were abundant.

The systematic allocation of resources and the importance of markets were emphasized by Adam Smith (1723-1790) who gave attention on the dynamic effects of markets. Smith in 1776 published the book *The Wealth of Nations*, where he uses economic analysis in order to suggest economic policy. He emphasized the distinction between the true value of a product or service and its market price. The latter is determined by the relative scarcity of commodities in little supply while the former by the amount of labour in the market. In this way, price may act as an indicator of relative scarcity of commodities in short supply.

Smith did not take into consideration that the natural resource scarcity problem would create an obstacle to economic growth. On the contrary, he believed that nature was generous and agriculture was capable of offering outputs far in excess of inputs (Barber, 1967). Smith emphasized the contribution of accumulation of capital in the increase of labour productivity in agriculture. According to Smith's writings, destroying economic dependency on agriculture would at the end increase demand for agricultural output in excess of supply. This will lead to distributional impacts in private property institutions, exchange relationships and the income distribution (Barber, 1967).

Smith through the principle of the invisible hand argued that self-interested rational individual behaviour may satisfy needs and wants but at the same time may serve the interests of the society as a whole. The important issue for economic and social prosperity was that economic transactions would be free on the basis of freely competitive markets.

Like Smith, Thomas Malthus (1766-1834) and David Ricardo (1722-1823) were pessimistic about long run economic growth. Specifically, for the classical economists the origin of this pessimism was the law of diminishing returns in agricultural production. Malthus and Ricardo expressed their thoughts for environmental limits in terms of the limits on the supply of good quality of agricultural land and thus diminishing returns in agricultural production.

The starting point in Malthus' Essay on *The Principle of Population* is the

Malthusian law that states that population increase and the growth in food production follow mathematical paths which may reasonably result in food shortages and probably in poverty and deprivation. This is justified, according to Malthus; through natural laws which specify that population growth is quicker compared to the increase in the level of agricultural production (Malthus, 1798; 1820).

The Malthusian view was that the stock of agricultural land was completely limited and when this limit was reached, the population growth to continue would require increasing level of cultivation and thus would create diminishing returns per capita. On the other hand, the Ricardian view considered diminishing returns as a current issue which was representing the lowering in the quality of land as more and more correspondences were brought within the margin of profitable cultivation (Ricardo, 1973).

Barnett and Morse (1963) were the first who distinguished Malthusian and Ricardian economic approaches in natural resource scarcity. Malthusian scarcity treats natural resources as homogeneous in quality while Ricardian considers them as varying in quality. In both cases economic activity is constrained if technological change is present. In the Malthusian scarcity diminishing returns appear only in the absolute limits of natural resources available stock. In the Ricardian case, diminishing returns do not require any assumption of the absolute limit in terms of natural availability as well as no need for time horizon identification.

In the Ricardian scarcity, the reduced productive (fertile) land requires more effort leading to an increase in average cost. On the contrary, in the Malthusian scarcity there is no difference in quality terms of the resource stock and thus costs do not increase until the absolute limits of the natural resources are reached.

The classical economists tried also to analyze the distribution of income and wealth within a society. For the former they believed that prices were determined by the production costs and tracked all production costs back to labour costs in the labour theory of value.

John Stuart Mill (1806-1873) thought of economic progress as a battle between diminishing returns in agriculture and technical change. Mill (1857, 1909) accepted the potential of renewable resources to act as one of the constraints on economic growth regardless of population pressures. He claimed that technology may postpone constraints imposed by resource scarcity which should increase relative prices. This will not necessarily produce a rapid disaster.

We can say that compared to the other classical economists Mill was more optimistic due to the fact that knowledge and technical progress would have provided most of human individualistic material needs and in this way society can pursue other social goals like education.

This influenced Marxist economists. Karl Marx (1818-1883) agreed with the labour theory of value from the classical economists. He supported the thesis that as capitalism is developed exploitation increases to a point where a worker's revolution will take place. In this way socialism would replace capitalism. For Marx workers were the only source of net economic product. He was as pessimistic as the classical economists concerning the future living standards for the working class (the majority of people) in the capitalist society. Power would be acquired with the control of economic resources.

Marx (1960) considered the political state as an alternative to the natural environment. Nature was available to be exploited with the help of science in such a way that inherent value became use value. We may argue that Marx adopted what we call today a materials balance approach to the production process over time. Capitalist systems are not sustainable and environmental damage may be considered as a source of non-sustainability. Damage costs become class costs due to their unequal social incidence. Workers are exposed to more than the fair amount of pollution. In this way the maintenance of labour productivity requires more and better medical care. If unions demand better health care compensations their real wage will be increased at the expense of profits and capital accumulation.

3. From neoclassical economists to humanism and institutionalism

In the 1870s, a number of works started the replacement of classical economics with neoclassical economics. Classical economists (and Marx) considered value to originate from the labour power embodied in the output of the production process. Neoclassical economists considered that value is determined by production costs and preferences. Absolute scarcity was replaced by relative scarcity.

In terms of methodological issues, the marginal analysis (relations between small or unitary changes) was approved giving a formal notion to diminishing marginal productivity in the case of an explicit production function. Stanley Jevons (1835-1882) and Carl Menger (1840-1921) formalized the theory of consumer preferences in terms of utility and demand theory. Jevons (1865) was more pessimistic on the limits to growth in Britain due to coal exhaustion. Technological advance together with the oil substitution led to a failure of his predicted catastrophe and enabled the formation of what remains in mainstream economics as an argument against considering depletion as awkward.

It is worth mentioning that in the early neoclassical models there is an absence in the production functions used in such models of any natural resources. The introduction of natural resources into neoclassical models of economic growth

took place in the 1970s with the systematic investigation of optimal resource depletion.

Leon Walras (1834-1910) developed neoclassical General Equilibrium Theory embodying the concepts of efficiency and optimality. Alfred Marshall (1842-1924) elaborated the partial equilibrium supply and demand analysis of price determination. Marshall (1890) in his *Principles of Economics* summarized the main arguments such as the use of marginal analysis and the potential of mathematical modelling.

The neoclassical theory of the market was assumed neutral and value free considering tastes as exogenous. Persons searched for the satisfaction of substitutable needs in a rational way improving society's welfare. Thus the heart of the neoclassical synthesis was a specific model of human nature the "rational and egotistic individual" (Pearce and Turner, 1990). The determination of the economic value of goods and services traded in the market, unpriced environmental commodities or worries for future generations was a function of the individual utility created. The choices that people make expose their preferences and rationality was displaced in the consistency and efficiency of these choices.

The followers of the minority of humanistic theory didn't accept the rational economic individual. On the contrary, they agreed to a behavioural psychology approach that gave emphasis to a hierarchy of needs rather than wants. Humanists' preferences are dynamic, interdependent and determined by genetics. They claim that an extended rationality concept is needed within a single person – on one side self-interest and on the other group-interest. Eventually, a final ranking of the alternative motivations will take place judging group-interest as better to self-interest one. That is notions like altruism, entropy and connections to bioeconomics appeared for the first time (Pearce and Turner, 1990).

Similarly, the followers of the minority of institutionalism appeared in the beginning of the last century and considered the economy as dynamic process. They connected economics and ecology and paid attention to technical progress. They also explained socio-economic change on the basis of cultural determinism, giving importance to scientific and technological change. These changes are the factors that give the structural and functional dynamic change of the economic system. What is still unclear is the degree of intervention necessary to attain a social harmony. Some neo-Malthusians believed that a strict system would be able to achieve and impose the appropriate changes in order to protect the environment although some others believed that decentralized socialist systems may play this role.

4. The evolution of economic thought and the emergence of Ecological Economics

After the Victorian economists and in the first part of the last century economists showed little or no concern for resource exhaustion or environmental issues (Dasgupta and Heal, 1974). The only exception may be assigned to Hotelling (1931) and his theory of the mine that describes optimal non-renewable resource exhaustion¹. Thus the literature in the first part of the last century is considered as dealing with the optimal use (not preservation) of the economics of conservation related mainly to agriculture and forestry as well as the establishment of a theoretical approach to non-renewable resource exhaustion.

A number of modern theories of natural resources scarcity in the 1960s and 1970s were proposed by Hotelling (1931) and Ramsey (1928). There is no big difference between Marshall's and Hotelling's views on exhaustible resource depletion but we may say that Hotelling's theory is more completely developed.

The resource economists of the 1950s relied on the conservation work mentioned before. They considered the environment as a source of materials that required specialized management due to characteristics which separated them from the traded goods. These economists can be viewed as within the neoclassical school of thought and we may say they have a strong relation with agricultural economics. Nowadays, resource economics is based on the study of conceptual mathematical models that illustrate the optimal and efficient use of minerals, forests and fisheries.

Ciriacy-Wantrup (1968) may be considered as inspiring the development of environmental economics. His work in 1950s motivated a number of researchers who verified environmental economics as a different sub-discipline in the 1960s and 1970s (Krutilla, 1967).

Although not in the mainstream, Kapp's (1950) work may be considered as an important contribution. His analysis was based on institutional economics and criticized a number of important points in environmental economics. For instance, he claimed that social costs and benefits are not quantitatively comparable in a cost benefit analysis (CBA). His reasoning was that environmental protection provides social benefits throughout the society and in this way environmental policy formation was a matter of political economy and not a technical issue to be decided by a CBA (Spash, 2005).

Additionally, Kapp (1970) was against monetary valuation as power structures in real markets distort prices which then fail to reflect resource scarcity. This was justified as markets are expected to be oligopolistic and not perfectly competitive. But the interactions between environment and economy within economies looked like moving in the reverse track to Kapp.

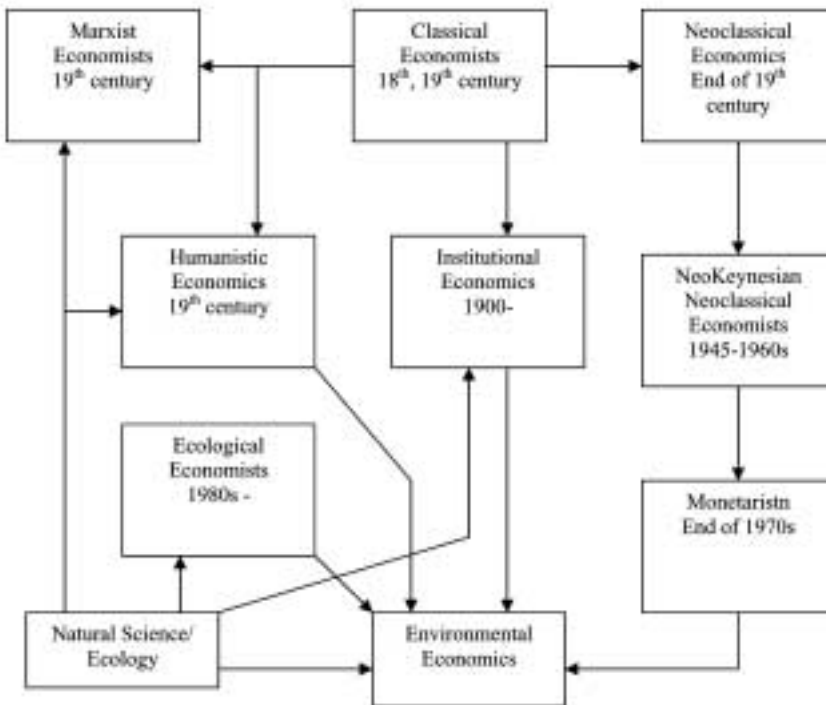
A tradition of thought classified as ecological economics may be traced back almost to the middle of the previous century (Martinez-Alier, 1987). However, the current progress relies on the concerns of the 1960s and 1970s for limits to grow (Boulding, 1966; Meadows et al., 1972) on the study of Georgescu-Roegen (1976) on the flow of energy and materials in the economy and the management of environmental externalities as persistent social costs and the restrictions in the application of CBA in Kapp (1950).

Ecological Economics emerged in the last two centuries and treats the economic system as part of the larger system that is planet earth. It recognizes first that economic and environmental systems are independent and then it studies the joint economy-environment system with the help of developments in the natural sciences (thermodynamics) and ecology in the last two centuries.

Nowadays, much of ecological economics relies on the role of nature described as Malthusian. Specifically, this is expressed through the importance of thermodynamic laws for the relationship of nature and the economy. The second theorem of thermodynamics is significant in ecological economics and the physical laws of nature impose significant restrictions of economic processes (Daly, 1980, 1996; Faber et al. 1995). These considerations are replicated in Malthus' view of nature in its ability to enduring certain laws which tackles humankind with a necessary condition and absolute external limit of his economic activity (Isenmann, 2003).

Thus Ecological Economics have exposed a necessary determination of the economy with the help of thermodynamic laws and their consideration as sufficient conditions for sustainability. But these thermodynamics laws cannot recognize all aspects of the relationships between the economy and the environment, like homo economicus selfishness and rationality of utility maximization (Manstettean, 2000; Soderbaum, 1999; Nyborg, 2000; Jager and Janssen, 2000; Gintis, 2000).

Figure 1 presents the schools of Economic thoughts and the environment, where the interactions between the various schools of economic thoughts can be seen

Figure 1: *Schools of Economic Thoughts and the Environment.*

5. Concluding remarks

In this paper we presented the evolution of environmental economics from the industrial revolution in Europe to our times. We examined the views of the classical, neoclassical and Marxists economists as well as these of the humanists and institutional economists.

Smith did not consider as an obstacle to growth the resources scarcity problem, but for him nature was generous and agriculture capable of offering outputs in excess of inputs. The approaches proposed and adopted by Malthus and Ricardo have more in common between them compared with the modern views of scarcity in natural resources.

The main characteristic to Ricardo's and all classical theories is the main function of the Malthusian theory in terms of population increase and the associated

assumption that economic development and growth especially in agriculture is a function of increasing labour inputs. Economic stagnation may result from the interaction of these two factors with the relative scarcity of land and the implied distributional effects such as the fall in profits in terms of wages and rent.

On the contrary, Mill, Jevons and Marshall moved economic theory to a newer era and claim a significant evolution from the classical to modern analysis of natural resource scarcity. Exhaustible resources in an industrialized economic process played an important part together with the associated welfare consequences. Marshall and the new neoclassical economists adopted an optimistic view of natural resource scarcity which holds till 1960s. Also modern Marxism has seen natural resource scarcity as a possible constraint on growth but has not proposed an alternative view.

In the neoclassical economics relative scarcity replaced absolute with a clear absence in the production functions of any natural resources at least in the early neoclassical models. We meet an introduction of natural resources into growth models in the 1970s with examination of optimal resource depletion. The hardcore of the neoclassical synthesis was a model of human rational behaviour.

Humanists' claim that extended rationality was needed with individuals having to face self-interest and group-interest. Similarly, institutionalism considered the economy as a dynamic process connecting economics and ecology and giving attention to technical progress and changes which are the factors that create the structural and functional dynamic change of the economic system.

These interactions led to the emergence of Ecological Economics. For many people (mainly not economists) ecological economics cannot be differentiated from environmental economics or even agricultural and resource economics. However there are important differences as the recognition of the need to fundamentally change the current approach to economic analysis. Conventional economists believe that environmental and natural systems are basics of human production and welfare. Ecological Economics has been considered as refreshing Environmental Economics but it is considered as either at its best a poor substitute for environmental economics or at worst bad economics by self-promoting natural scientists (Spash, 1999).

NOTES

1. Other literature on the economics and management of mineral resources can be found in Spash (2005) who cites among others Gray (1914) and Ciriacy-Wantrup (1968).

REFERENCES

- Barber, W.J. (1967), *A History of Economic Thought*. Penguin Books: Harmondsworth, England.
- Barnett, H.J. and Morse C. (1963), *Scarcity and Economic Growth: The Economics of Natural Resource Availability*. John Hopkins University Press: Baltimore.
- Boulding, K. (1966), *The economics of the coming spaceship Earth*. In H. Jarrett (ed.), *Environmental quality in a growing Economy*, John Hopkins University Press, Baltimore.
- Ciriacy-Wantrup, S. von (1968), *Resource Conservation: Economics and Politics*. 2nd Edition. University of California Press, Berkeley, California.
- Daly, H. (1980), *Valuing the Earth, Economics, Ecology, Ethics*. Cambridge, London.
- Daly, H. (1996), *Beyond growth*. Beacon Press, Boston.
- Dasgupta P. and G.M. Heal (1974), *The optimal depletion of exhaustibles sources*. Review of Economic Studies, Symposium on the Economics of Exhaustible Resources, 3-28.
- Faber, M., Niemes, H. and Stephan, G. (1995), *Entropy, Environment and Resources*. An essay in Physio-Economics. Springer, Berlin
- Georgescu-Roegen, N. (1976), *Energy and economic myths: institutional and analytical economic essays*. New York: Pergamon.
- Gintis, H. (2000), *Beyond homo economicus: evidence from experimental economics*. Ecological Economics 35, 311-322.
- Gray, L.C. (1914), *Rent under the assumption of exhaustibility*. Quarterly Journal of Economics 28, 466-489.

- Hotteling H. (1931), *The economics of exhaustible resources*. Journal of Political Economy 39, 137-175.
- Isenmann, R. (2003), *Further efforts to clarify industrial ecology's hidden philosophy of nature*. Journal of Industrial Ecology 6, 27-48.
- Kapp, K.W. (1950), *The social costs of private enterprise*. Harvard University Press, Cambridge, MA.
- Kapp, K.W. (1970), *Environmental disruption and social costs: A challenge to Economics*, Kyklos 23(4), 833–848.
- Krutilla, J.V. (1967), *Conservation reconsidered*. American Economic Review 54(4), 777-786
- Malthus, T.R. (1798), *An essay on the Principle of Population*. Ed. By P. Appleman New York, London: W.W. Norton and Company.
- Malthus, T.R. (1820), *Principles of Political Economy: Considered with a view to their practical application*. John Murray: London.
- Manstettean, R. (2000), *Das Menschenbild der Ökonomie*. Der homo oeconomicus und die Anthropologie von Adam Smith. Alber, Freiburg, Munchen
- Marshall, A. (1890), *Principles of Economics*. MacMillan London.
- Martinez-Alier, J. (1987), *Ecological Economics*. Basic Blackwell, Oxford.
- Marx, K. (1960), *Capital*, 3 volumes. Foreign Languages Publishing House, Moscow.
- Meadows D.H., Meadows, D.L., Randers, J. and Behrens, W.W. (1972), *The limits to growth: A report for the Club of Rome's Project on the Predicament of Mankind*. Earth Island, University Books, New York.
- Mill, J.S. (1857), *Principles of Political Economy*. J.W. Parker and Son (6th edition 1865, Augustus M. Kelly, New York).
- Mill, J.S. (1909), *Principles of Political Economy With Some of their application to social philosophy*. Augustus M. Kelley: Clifton, New Jersey.
- Nyborg, K. (2000), *Homo economicus and homo politicus: interpretation and aggregation of environmental values*. Journal of Economic Behaviour and Organization 42, 305-322.
- Jager, W. and Janssen, M.A. (2000), *The human actor in Ecological Economics Models*. Ecological Economics 35, 307-418.

- Jevons, W.S. (1865), *The coal question: An inquiry concerning the progress of the nation and the probable exhaustion of our coal mines*. In Flux A.W. (ed.) (revised 3rd edition 1965). A.M. Kelly, New York.
- Panagopoulos, An., (2002), *A comparative analysis of the development of tourism in Ionian Islands and the rest of Greece (1900–1999)*, Archives of Economic History, Volume XIV, No 1, p. 39–54.
- Pearce, D. and Turner, D.W. (1990), *Economics of Natural Resources and the Environment*. Harvester and Wheatsheaf.
- Ramsey F. (1928), *A mathematical theory of saving*. Economic Journal 38, 543-559.
- Ricardo, D. (1973), *The principles of Political Economy*. J.M. Dent and Sons: London.
- Smith, A. (1776), *The Wealth of Nations* (1961 edition, edited by Cannan, E.). Methuen, London.
- Soderbaum, P. (1999), *Values, ideology and politics in ecological economics*. Ecological Economics 28, 161-170.
- Spash, CL (1999), *The development of environmental thinking in Economics*, Environmental Values 8, 413-435.
- Spash, CL (2005), *The development of environmental thinking in Economics*. In L. Kalof and T. Satterfield (Eds) *The Earthscan Reader in Environmental Values*, p. 41-56, Earthscan, London.

ECONOMIC DEMOCRACY AND DECISION MAKING FOR PUBLIC GOODS

N. KYRIAZIS*

Abstract

The present essay analyses decision making procedures concerning economic issues such as the choice of public goods in the prototype democracy, Ancient Athens of the fourth century B.C. (the “Age of Demosthenes”). It shows how Athenians practised the concept of “economic democracy” as against or as a parallel to political democracy, and the sometimes ingenious solutions adopted for the finance of public goods like defence, education and “social security”. The prototype political democracy was advanced in questions of public administration finance and institutions, on which political democracy was based.

The paper concludes with some proposals as to what we could “learn” from the workings of “economic democracy” that is relevant for today's democracies.

JEL classification: N00, N01, N03

Keywords: Public choice, Direct Democracy, Finance and Growth, Ancient Athens.

1. Introduction

There is a vast literature on the history, politics, warfare the arts etc. of the ancient Athenian democracy, which is considered the prototype and the origin of Western democracies.¹ Much less attention has been paid till recently on the economics of the Athenian state, which is actually astonishing, since the Athenian state could not have developed its advanced political institutions without a sound economic basis, as I will purport to analyse later on in the present essay. (Kyriazis and Zouboulakis 2004, Kyriazis and Halkos 2005, Cohen 1997, Gabrielsen 1994).

The Athenian democracy was established first by Solon, sometimes during the 6th century B.C., abolished by the tyrant Hippias and his sons, and re-established by Cleisthenes in 510-507 B.C. It lasted, with small interruptions (during 404-403 B.C. after the defeat by the Spartans at the conclusion of the Peloponnesian War, and after 322 B.C. for about a decade after the defeat by the Macedonians) till Greece's

* Associate Professor, University of Thessaly.

occupation by the Romans during the second half of the 2nd century B.C. Even during the first centuries of Roman occupation Athens had some form of democratic self governance, within the limits of the Roman Empire (Kagan, 1991, Burn, 1962).

Athenian democracy was evolutionary in its character, with various political leaders like Cleisthenes, Themistocles, Ephialtes, Lykourgos, Euboulos and Demosthenes introducing political and economic reforms and developing more democratic and representative institutions. From a democratic point of view, Athens reached its highlights during the second half of the 4th century B.C., for which we possess also substantial extant information from ancient sources, mainly contemporary orators and philosophers². This period has aptly been called. “The Age of Demosthenes” and I will focus my analysis on the workings of economic democracy on this period.

In the next section the concept of economic democracy is analysed, followed by a presentation of its application in the choice and finance of public goods. The essay concludes with some theoretical concepts and proposals as to what we can “learn” from economic democracy that might be of relevance for modern democracies.

2. The workings of economic democracy

For Ancient Athenians, political freedom and economic freedom were perceived as being two faces of individual democratic freedom. It was self-evident to them that the one could not exist without the other. Thus again it seemed evident to them that the same decision-making procedure should apply to both kinds of decisions, ie political and economic. Both were to be decided by direct voting procedures in the Assembly, which needed a quorum.³

From many points of view, Ancient Athens could be characterised as the “first modern economy”. It was the first economy in history, where contributions from the services and handicraft (“industrial”) sectors to GDP and employment, exceeded that of agriculture⁴: It had an elaborate system of public administration, laws guaranteeing property rights and courts to solve differences of an economic nature. Also, as will be analysed later on, it was the first economy to adapt “modern” forms of progressive taxation and social policy measures.

The dictum “No taxation without representation” was fully applied in the Athenian democracy, with the difference that in a direct democracy representation meant at least a quorum of 6.000 citizens, and usually for important decisions, many more. Going one step further, they maintained, that taxes on income and

wealth represented oppression and were not deemed fit for free citizens. So, for most of the period, taxes on income and wealth were not imposed. Only in extraordinary circumstances, such as protracted war, was an income tax imposed on wealthy citizens.

Further, they believed in the predominance of the private sector versus the state one, with some notable exceptions to be discussed later on, Xenophon for example writing: “Those who know how to administrate the private affairs are successful also in the public ones, those that are ignorant in the first, fail in both” (Xen. Mem. C. IV, 6-12)⁵.

Also, Athens was one of the first market economies, showing high specialisation and a great variety of skills within it⁶.

This was the economic framework within which economic democracy was practised.

Democracy is a constitution based on argumentation (Dem. 19.184). In an assembly democracy like Ancient Athens, debate plays a far more important role than in modern parliamentary (indirect) ones. In modern democracies there is often a gulf between political debate, which takes place in the media, and decision-making, which is mainly done in offices and committee rooms. Also, many modern critics maintain that the supply of public goods does not correspond to citizens demand, either concerning the total supply (oversupply of some public goods) or their mix. Some authors, as for example J. Buchanan (1986) go as far as arguing that there are ethical limits to taxation, given by a point at which an individual citizen would rather choose to ‘secede’, ie to withdraw simultaneously from both the tax and the benefits sides of the fiscal account⁷.

Following this one step further, the existence of the ‘black economy’ and tax evasion can be interpreted as a conscious effort of economic agents to avoid excessive tax burthens that they feel goes to finance public goods that are of low quality or even of no benefit to them (Karayiannis, 2005, Halkos-Kyriazis 2006a).⁸

In Athens debate took place in the Assembly and led directly to decisions therein, concerning all state matters, be it external policy, law making, and finances, ie the provision of public goods and how to finance them. Ancient Athens is of course well known as the ‘prototype’ political democracy. As I purport to show, it was also the prototype economic democracy, in the sense of active and general participation of it’s citizens in decision making concerning economic issues, such as the choice of public goods, mainly but not only, defense. I want to underline here, that decisions taken under the principle of ‘economic democracy’ are not necessarily better or more correct than those taken under other forms of decision making, although in many cases the solutions adopted do seem to be farsighted, welfare promoting and also more ‘equalitarian’, as I will analyze below.

But what is indisputable is that decisions taken under ‘economic democracy’ increase responsibility of the individual citizen. By having the right to vote on every issue, and very often using actively this right, the Athenian citizen did not delegate authority in decision-making, as citizens of modern democracies do by delegating decision-making to parties and governments. He took the personal responsibility of shaping economic policy and public choice upon himself. Correct or wrong decisions were the outcome of his choice and voting. Using modern concepts, this decision-making procedure is the first example of internalising the benefits and costs of the outcomes of decision-making for every active citizen-voter. The outcome could not be perceived as an externality, ie something given and where the citizen had no, or at best minimal influence, as for example in today’s decision making concerning defense, but depended on his own choice, expressed through his vote on every issue. In this aspect, I argue that Ancient Athens was more advanced than today’s democracies, where decision-making is indirect. Since Athenians participated by lot in the main “administration” bodies, like the Council of 500 and the courts, for a year each time, and most of them in the Assembly, each Athenian accumulated over the years a substantial amount of general, but also in some cases of more specialised knowledge. Compared to the modern average citizen, the average Athenian citizen was better informed on policy questions (Manville and Ober, 2003).

Economic democracy can be further viewed as a market place for the circulation of ideas, in the form of specific proposals on various issues, which could be introduced by any citizen. The debate in the Assembly led to the adoption (“buying”) of some ideas, and the rejection of others, but the system guaranteed the continuous generation of new ideas and proposals. The continuous debate in the Assembly can be further seen as a process of optimisation finding in collective decision making and the choice of public goods, under competitive conditions among those proposing the various policies (Kagan, 1991).

To paraphrase Arrow (1962), under economic democracy, Athenians ‘learned by voting’, ie they gained experience in financial matters and financial administration, learned from past mistakes and restructured their institutions as needed. One example is trierarchy. Under this, a rich Athenian was charged with the running expenses of a warship (trireme) for a year, as well as giving personal service as captain of the same ship. Trierarchy fell on the beginning on single rich Athenians. Athenians realised during the course of the 4th century, the limitations, both from a ‘justice’ and practical points of view, of this system. So, after a proposal by Demosthenes, they introduced the ‘symmoriae’ system, under which a group of rich Athenians was collectively responsible for each trierarchy.

In the second half of the 4th century, for which we have sufficient information in

the extant ancient sources, the Athenian state had the following sources of revenues: 1. Rents from state owned property. 2. Minerals and whatever lay beneath the soil belonged to the state, as the silver mines of Lavrion. 3. Custom duties, of which the most important was the “pentecoste”, a two percent one on the value of all imports and exports. 4. The “metoikion”, a personal tax on metics (non Athenian free citizens living and working in Athens). 5. The “pornikon telos”, the license fee paid by all prostitutes to carry out legally their profession. 6. Court fees, fines and confiscations. 7. “Eisphora”, property tax, which became established on a permanent basis during the second half of the 4th century. 8. “Liturgies” under which wealthy citizens undertook some “payment cum personal service”, of which trierarchy and the plays and religious festivals were the most important (Andoc. 1.92-3, 1.133-6, Arist. “Ath. Pol.” 47.2, 47.4, 52.1, Dem. 35.29-30, 23.167, 24.50, 47.31, 50.8, Aesch. 1.199-200, Harp., “metoikion”, “parakatabole”, and “theorikon”, Hansen 1999, Gabrielsen 1994).

Athenian state revenues varied during this time from a low of 200 talents per year to an average of 400 in the 340’s, rising to 1200 by the early 330’s after the reforms and the capable administration of Lykourgos⁹ (Plut. Mor. 852F).

What is important to underline is that at that time Athens did not possess an empire like it had during the 5th century, so it had to finance its policies from its own revenues. What is truly important to keep in mind is that due to the changes in its economic structure, the Athenian economy was flourishing and generated enough revenues for the state to finance the various public goods that will be discussed below. All the more, during the 4th century Athens showed social stability, without upheavals, revolutions etc. that characterised many other Greek city-states. It offered enough opportunities of employment to its citizens so that there was no need for some of them to seek new “homes” abroad by creating new colonies. Even more, it offered so many good employment opportunities that it attracted substantial numbers of metics (free foreign citizens) to work in Athens, as many as one third of the number of free adult Athenian citizens. In this respect also, Athens showed modern characteristics like today’s developed countries (fe EU, USA, etc) where a substantial number of foreign citizens live and work (But in none of today’s countries, except perhaps some Arabic ones like Dubai, is the percentage of foreigners to citizens as high as above 30%!).

3. Financing of public goods

The revenues were used to finance:

1. Administration (Assembly, Council of 500 and Courts, for an estimated total of 80-100 talents per year (Hansen 1999).
2. Military expenditure, which, as with most ancient states was the most costly item. This included the fixed naval berths and port installations, cavalry fodder, foreign mercenaries and citizens armies, the naval crews, and the “police force”, of mercenaries called “Scythian archers”. It did not comprise the upkeep cost of warships (trieres) when in service, which was the task of trierarchy. What is of interest here, is the fact that Athens was the first state to have both a standing navy (the biggest in the Eastern Mediterranean at the time) and a standing army (although a small one, mainly a cavalry force). This was a decision taken many times during different periods under the principle of economic democracy. The citizens decided, after hearing the various arguments in favour and against, to provide for themselves the public good “defence” at specified amounts (ie so many ships to be build, to be in commission, the number of mercenaries to be hired for a specific time of service, the number of citizens to participate for duty and specific expeditions etc), at a specific cost, which would be financed out of state revenues whose burthen would fall on all citizens. (On some, the rich ones directly, in the form either of “trierarchy” or payment of the “eisphora” tax, or both, on the rest indirectly in the form of opportunity cost, since once the state revenue was earmarked for defence, it could not be used for other policies, some of them of direct benefits of some citizens groups).

But what was unique at the time was the introduction of financing of “public goods” which have a modern character: “Education” and “social policy”.

The Athenian state was the first one in history to introduce a ‘public education system’ and some ‘social policy’ measures.

It may appear strange to write that Athens spent revenue on the public good ‘education’. It is of course true, that ancient states did not have a system of public education (schools, universities etc), this being considered a private choice, the cost of which should be born by the beneficiary.

The famous private philosophic schools of the 4th century, like Plato’s Academy, are well known. But Athenians seem to have felt that these schools, as well as the children’s private teachers (known as ‘paidotrivai’) could be afforded only by relatively well to do families, and not the poorer ones. They felt that poorer citizens should at least partake of some sort of education, financed through the state’s (ie the Assembly’s) decision to introduce the ‘theorika’ i.e. the production of theatrical plays. The cost of producing the play was one of the litourgies, falling on the richer citizens, and thus having again a redistributive function. But Athens went a step further, by being the first state in history to introduce at least one

element of publicly financed 'education', this being the theatrical plays. As we have seen, theatrical performances had to perform one important educational function (teaching 'morals', history, mythology and religion). All Athenian citizens should be able to benefit from attending the performances. Since performances took place during daytime and lasted during the whole day for a four-day period, the poorer citizens would have to lose four days wages (or remuneration from work) in order to attend. Many would not be able to afford this loss. So, they had to be compensated, and the 'theorika' was introduced, being a payment to poorer citizens, allowing them to attend performances and compensation for wages and remuneration lost. Seen in this light, 'theorika' was the first educational programme in history financed by a state for the benefit of a substantial part of the citizen's population.

Lastly, social policy measures. Athens was again the first state in history to introduce social policy programmes that have a 'modern' character. They had a sort of 'social security' (or poor relief) for disabled persons with no means of support. These persons could be registered with the Council and receive a subsidy of one obol and later two obols per day. Further, if a citizen died in battle the state undertook the upbringing of any under-age sons. Moreover, at times of food shortages, the state often distributed corn, either free or subsidized (Lys. 24.26, Arist. Ath. Pol. 49.4. Aeschin. 3.154, 1.103-4). The re-distributive character of these social policy measures is clear and strong, since the beneficiaries, poor citizens, were paying no taxes at all, while the rich were taxed to generate the revenue used to finance these measures.

4. Economic democracy as a system of check and balances

By the middle of the fourth century (about 355 B.C.) new politicians appeared in the Athenian political scene, Euboulos, Lykourgos and Demosthenes among them. While the first two represented a new policy line, that of peace and concentration on internal affairs, Demosthenes represented the "war party", trying to make the Athenians aware of the new threat, that of the rising Macedon of Phillip. During the period up to 338 B.C. (battle of Cheronia, in which Philip decisively beat the Athenians and Thebans) the peace party seemed to have the upper hand, with some years of peace, and some of rather localised hostilities, but never full scale war like during the Peloponnesian and the first half of the fourth century. Then, during 338-322, under Lykourgos, Athens enjoyed years of total peace (Sakellariou 1972).

During these periods, Euboulos and Lykourgos used the principle of economic democracy in order to propose and have accepted, a new policy of check and

balances between the various interest groups among the Athenian citizens, and possibly also metics. Metics did not vote, but I assume that they could exert some influence through Athenians with whom they collaborated.

Euboulos and Lykourgos proposed the following compromise: The poorer Athenians, the main benefactors in war time, since they had permanent employment and remuneration as rowers in the fleet, would refrain from voting for war, in exchange of remuneration in peace time. This took the form of increased payment for “theorika” (ie attending public ceremonies like the theatre, but also employment in the various public bodies like the Assembly and the Courts, as stated above). Through the continuous voting procedure under the principles of “economic democracy”, the poorer citizens-voters were guaranteed that they would have stable employment and remuneration in peace-time. The richer citizens, entrepreneurs, bankers, etc. gained from this compromise by having the possibility to pursue their interest (profit making) without the uncertainty and dangers of war. In exchange, they accepted some forms of contributions to the state (ie to the benefit of the poorer citizens) both out of the state revenues per se, (as exposed above), but also out of their own revenues, in the form of accepting “litourgies” and also the imposition, for the first time, of an income – wealth tax (eisphora).

This was the ingenious solution implemented by Euboulos and Lykourgos in order to achieve peace through a policy which balanced the interests of the various interest groups.

In today's interpretation, it can be argued, that Euboulos and Lykourgos implemented for the first time a “social contract” which was not a fiction as postulated by philosophers of the Enlightenment like J.J. Rousseau, Voltaire, J. Locke, D. Hume, etc. but a reality that came about through direct voting on economic issues.

Through the system of continuous voting and consequently learning to calculate benefits as the outcome of each voting round (or game) the Athenians achieved a system of mutual advantage.

During this period, prosperity returned to Athens, which showed, as mentioned above, signs of economic strength and growth. In fact, public finances were so flourishing, that after paying for the various standard expenditures described above, there was a substantial surplus, which was used to continue the embellishment of the city with public monuments (like the theatre of Dionysus under the Akropolis).

In the light of modern theory, another additional interpretation is possible.

Buchanan and Tullock (1962, chapter 14) postulate that individuals in their constitutional roles do not choose directly the size and scope of the public sector. First, they choose the fundamental organisation of activity. Second, they choose

the decision making rules. According to my interpretation of economic democracy in Ancient Athens, the above seems to be exactly what happened. First, during the 5th and early 4th century B.C., the Athenians agreed and elaborated the fundamental framework of democracy, ie who would have voting rights (all free male citizens above the age of 18), who would have the right to be elected to various magistrates (all free male citizens according to some seniority rules, different for each body) and the various government bodies and magistrates. (Assembly, Courts, heads of different Funds, "President of the Democracy" (the "eponymos archon", who was elected for a year in the beginning and later chosen by lot and who gave his name to the year), the heads of the military ("generals", always elected) etc.

After establishing the framework (which evolved steadily during the two centuries), they established the decision-making rules, which were fairly simple and remained unchanged: Universal voting in the ruling body, the Assembly, and decisions under simple majority. All free male Athenians over 18 could vote, and a quorum of 6000 was necessary. Additional rules (again simple majority voting) were elaborated for the other bodies, like the Court (the "judges", 500, were chosen by lot).

The finance of public goods, and thus also the size of the state budget and sector, resulted out of the voting-decision-making rules in the framework of economic democracy.

Again, Buchanan and Tullock (1962 p. 37) remark that private action forces the individual to exercise his freedom by making choices compulsory, while in collective choice the individual loses the sense of decision making responsibility. This seems to be one of the major problems of modern democracies, manifested in great abstinence from voting in general elections etc. Economic democracy, as practiced in Ancient Athens was a practical solution to this problem: Individuals were compelled by their own rational – individualistic calculations of their personal interest, to behave in matters of public choice (choice of public goods, their "quantities" and their finance) in exactly the same way as in questions of private choice.

Through economic democracy the effects of public choice are no more perceived as externalities (on which individuals can exert minimal influence, if at all) but they are internalised.

"Constitutional economics", while accepting that politics are the adjustments of interests, postulate that this is done not statically (ie in a single point in time, the election day) but through a continuous process. In other terms, politics is a dynamic game, and participants can calculate their "returns" through a cost-benefit analysis over a certain time horizon. Allowing this, two very important

conclusions follow: First, we have a learning possibility for each individual, which is taken into account after each decision and the calculation of its net welfare effect on him. Learning means in this case, that the individual decision maker includes each additional information resulting from past cost-benefit calculation in his decision making, thus enlarging the set of his strategic options for the next step of the “game”, ie the next decision. The individual tries to maximize his welfare on each step of the game, but taking account of past results, he can adopt new strategies in the future, which he believes will give better results. Within this set of new strategies, a more “dramatic” option would be for him to try to change the rules themselves, for example by trying to establish a new coalition with other individuals having similar interests.

Again, we have the first example of this happening, in Ancient Athens in 482 B.C. Then, perceiving the threat of a new Persian invasion, Themistocles proposed his famous Naval Law or Decree, to build 200 new “triremes” warships within two years. In order to pass the law in the Assembly, Themistocles managed to bring about a new coalition, mainly based on the poorer citizens, who up to then could vote, but could not be elected to offices. He convinced them, that the fleet would offer them employment and remuneration as rowers, and once the Persians were repelled, they would have full political rights (They would be eligible to all state offices). The new coalition united the poorer citizens with the then emerging entrepreneurial class (shipowners, merchants, “industrialists” and handworkers-artisans) against the old aristocracy of landowners and farmers. The new coalition won, and thus Athens was transformed into a seapower and the most representative democracy in the world till then (Kyriazis – Zouboulakis 2004).

Second, once we accept the possibility of learning and the formation of new coalitions, the possibility of side-payments within the coalition becomes also a possibility. This again makes the formation of larger and more stable coalitions possible. In a dynamic situation, logrolling becomes a possibility and this brings about compromises between the interests of the various individuals and groups. In the long run this may result in a positive sum game (Buchanan and Tullock, (1962, pp. 148, 151-154).

Economic democracy as practised in Ancient Athens, achieved such a result. The policy of Euboulos and Lykourgos described above corresponds exactly to a situation when logrolling is practised and side payments are involved. In this case, side payments were the “social policy” measures (“*theorika*” etc) in favour of the poorer members of the coalition.

The interpretation of economic democracy in the light of constitutional economics as applied to Ancient Athens can be extended further.

5. Conclusions: Can we learn from the prototype democracy?

I have analysed above the working of the Athenian democracy with emphasis on the decision-making procedures concerning public finances and the choice and provision of public goods. As already stated by Aristoteles and later taken up by many philosophers and political scientists, notably J.S. Mill (1861), perhaps one of the most important ideas to be found in relation to democracy, is the one which aims at the creation of a citizens society where they are active in politics and economics so that they achieve the completion of their personalities. They express their 'virtue' (the Greek word being 'areti') in taking part in decision-making in solving public problems for the 'common good'. Sovereign citizens in a democracy must take part in this decision-making procedure, because this is the way, for them to be masters of their own fate, and the fate of their societies and their states (Macpherson 1977, Paparrigopoulos 1984). Seen in this light, citizens participation and involvement in decision-making is the cornerstone of democracy.

Recently, some modern authors (Manville and Ober 2003, Doukas 2005) have pointed out that there is much to learn from the workings of Ancient Athenian democracy when applied to modern organisation theory, concerning mainly the motivation of persons working for organisations and enterprises. Manville and Ober characterise fe. the Athenians as a moral community with a business orientation.

But, as pointed out by modern authors, (fe. Downs (1957)) citizens of today's democracies are both ill-informed about the issues on which they have to decide (even if this decision takes the form of one all encompassing "general" vote for one party) and reluctant to vote. One of Downs somewhat surprising conclusions is that a rational person will devote little effort to becoming well informed before voting. Throughout the history of political theory there has been much preaching aimed at "improving" the voter. Down's demonstration that the voter was behaving sensibly not only suggests why all of this preaching has been unsuccessful, but also indicates that the preachers have been wrong, or that preaching is not the correct means of "improving" the voter.

Buchanan and Tullock (1962 p. 204) support Down's finding by their introduction of the cost of decision making. These costs may become too large relative to the possible reduction in expected external costs that collective action might produce. If direct democracy were required, the individual, in his presumed role as constitutional choice maker, would leave many activities of the State to be organised in the private sector. Representative government is a means of reducing this decision making costs.

Economic democracy on the other hand, gives strong incentives to voters to be well informed, since through their decision making they internalise both benefits and costs.

Athenians evolved under this principle an elaborate structure of decision-making, but also forms of revenues for the budget that have a very modern character, like progressive income-property taxation. They solved also successfully problems facing modern democracies concerning public choice and the provision of public goods like defense. Through the procedure of continuous voting (or ‘referendums’, as they may be called using modern terminology) they acquired knowledge, evolved an elaborate institutional setting, and expressed their preferences concerning both the choice and the amounts of the public goods to be provided.

Today's representative democracies have gone away from the old Athenian (and other Greek city-states) ideal of participative democracy.¹⁰ Still, during the last decades of the 20th century and the beginning of the 21st, some states and societies seem to have started to reintroduce elements of participative democracy at many levels, while some, like the Swiss Federation never stopped using it.¹¹

Tomorrow's technology, through for example an electronic ‘voting-card and signature’ for every citizen, may enable the increased reintroduction of ‘economic democracy’, while increased awareness by citizens of their rights, as well as of the repercussion of decisions taken which affect their lives, may force politicians to move in this direction. Once introduced, this is a self-reinforcing process, as it was in Ancient Athens. Citizens become more aware of the stakes, and they have incentives to acquire more information and become more ‘qualified’ in decision-making. Coupled with modern technology, which reduces the cost of decision-making, economic democracy is a practical means of improving the working of today's democracies.

Thus “economic democracy” and “teledemocracy” become mutually reinforcing.¹²

Could we perhaps foresee in the future an emulation of the Athenian economic democracy, by introducing an electronic market place for debate on ideas and proposals on specific issues, in which every citizen would be able to put forward his proposal or counter-proposal? Could this lead then to referendums if any issue invites a sufficient number of electronic votes? (i.e., some kind of quorum). In the sense of constitutional economics, this kind of electronic market place would lead to consensus building, at the same time lowering expected decision making costs (or transactions costs according to Coase) which without the existence of the electronic market place are sometimes very high and so inhibit the building of decisive coalitions.

Thus, it is worthwhile to study the model of Ancient Athenian democracy, also in the case of decision-making concerning public choice, finance and economics in general.

NOTES

1. For the political institutions etc of 4th century Athens, see Hansen (1999) and the extensive literature given therein, and for a review of the discussion concerning the economic and social aspects, see M.M. Austin and P. Vidal-Naquet (1980).
2. This period was the “golden age” of letters and orators, like Plato and Aristoteles, Lysias, Aeschines, Hyperides and the greatest orator of ancient times, Demosthenes.
3. The Assembly was one (the most important) political body in Athens. All free male citizens (about 30.000 according to most estimates during the 4th century) had the right to participate and to vote. The quorum required was 6.000. For details see Hansen (1999).
4. The same may also have been true of the maritime Phoenician States in the 6th century, like Tyre and Sidon, and possibly 3rd century Carthago, for all of which we lack sufficient extant ancient evidence to “prove” it. This happened again during late Medieval times for some Italian maritime-commercial states like Venice and Genoa, and for the first time in the modern era with the United Provinces-Dutch Republic in the early 17th century.
5. In this sense Ancient Athens anticipated the proposals of the monetarist school proponents like Friedman, Lucas, Sargent etc. and the liberals like F.A. von Hayek etc. by 24 centuries!
6. Aristophanes in the “Birds” makes fun of it. Before the main character Pisthetairos creates his ideal state (a pun of course to philosophers attempts to create ideal states, like his near contemporary Plato) various experts come forward to him and offer their services, for a fee: Among them a lawyer to sell good laws, a geometrician to sell “urban planning services”, a seer, an overseer etc. For us, this is a good indication of the workings of a market of services and of the variety of services to be had!
7. Aristotle in the “Politics” (Arist. Pol. 1304^b19-1305^a7) points out that the majority decisions of the humble folk (who are the majority in a democracy and in the Athenian Assembly) may drive the well-to-do minority into

rebellion. Yet, that never became a problem in 4th century Athens, showing that the Athenian state had managed to establish a system of, in modern terms, “checks and balances” so that the advantages of democracy, even for the well to do evidently outweighed the disadvantage of being sometimes in minority. (Lys. 19.57, Dem. 21.62-3, Hansen 1999). See also text for Euboulos policies in this context.

8. According to Karayiannis (2005) answering a questionnaire, 56% of the Greek entrepreneurs of the survey maintained that they committed tax evasion as a purely defensive measure, because they felt that they paid too high taxes compared to the benefits derived from the states various policies.
9. A talent was 6,000 drachmae, when at this period a skilled worker or artisan received a daily wage of about one and a half drachmae.
10. For a history of ‘participative’ democracy within liberal democracy, see Macpherson 1977.
11. An example of this are the referendums undertaken in some European (France, Netherlands) Union states concerning the new European Constitution.
12. Concerning “teledemocracy” see Slaton (1992), Grossman (1995) and Morris (1999).

REFERENCES

Ancient Authors

Aeschines, *Speeches*, in particular *Against Timarcus*, *Against Ktesiphon*, (Aesch.).

Andocides, *On the Mysteries* (Andoc.).

Aristophanes, *Birds*.

Aristoteles, *Politics* (Arist. Pol.).

Demosthenes, *Speeches*, in particular *On the False Embassy*, *Against Meidias*, *Against Timocrates*, *Against Macartatus*, *Against Aristocrates*, *Against Polycles*, *For Phormio*, *Against Neaera*, *Against Aphobus*, *Against Lacritus*, *First Phillipic* (Dem.).

Harpocraton, *Lexikon* (Harp.).

Lysias, *Speeches* in particular *On the Property of Aristophanes, Against the Treasury, Against Eratosthenes, For Polystratus, Against Diogiton, For the Invalid*, (Lys.).

Plutarchus, *Moralia* (Plut. Mor.).

Xenophon, *Memoirs* (Xen. Mem.).

Modern Authors

Arrow, K. (1962), *The economic implications of learning by doing*, in *Review of Economic Studies* 29, pp. 155-173.

Austin, M.M., and P. Vidal-Naquet (1980), *Economic and Social History of Ancient Greece*, University of California Press.

Buchanan, J. (1986) *The Ethical Limits of Taxation*, in 'Liberty, Market and State', Harvester Press.

Buchanan, J. and G. Tullock (1962, 2004), *The Calculus of Consent*, Liberty Fund Incorporated, quotations from the 2004 edition.

Burn, A.R. (1962), *Persia and the Greeks*, Minerva Press.

Cohen, E. (1997) *Athenian Economy and Society: A Banking Perspective*, Princeton University Press.

Doukas, P. (2005), *Economic Theories, Principles of Governance and Ancient Greek Thought*, Livanis Publisher, Athens, (in Greek).

Downs, A. (1957), *An Economic Theory of Democracy*, Harper and Bros.

Gabrielsen, V. (1994) *Financing the Athenian Fleet: Public Taxation and Social Relations*, Baltimore, John Hopkins University Press.

Grossman, L.K. (1995), *The Electronic Republic: Reshaping Democracy in the Information Age*, Viking.

Halkos G., N. Kyriazis, (2005), *A game theory approach to institutional change*, in *Archives of Economic History*, Vol. XVII, No 2, pp. 63-90.

Halkos, G., N. Kyriazis (2006a), *Is tax competition harmful and is the EU an optimal tax area?* in 'European Journal of Law and Economics', 21, pp. 163-177.

Hansen, M.H. (1999) *The Athenian Democracy in the Age of Demosthenes*, Bristol Classical Press.

- Kagan, D. (1991), *Pericles of Athens and the Birth of Democracy*, Free Press – Macmillan.
- Karayannis, A. (2005), *Direct and indirect effects of Greek economic policy*, in *Social Sciences Tribune*, 43, pp. 87-112 (in Greek).
- Kyriazis, N., M. Zouboulakis (2004), *Democracy, Sea Power and Institutional Change: An Economic Analysis of the Athenian Naval Law*, in 'European Journal of Law and Economics', 17, pp. 117-132.
- Macpherson, C.B. (1977), *The Life and Times of Liberal Democracy*, Oxford University Press.
- Manville, B., and J. Ober (2003), *A Company of Citizens*, Harvard Business School Publishing Corporation.
- Mill, J.S. (1861), *Considerations on Representative Government*.
- Morris, D. (1999), *Vote.com*, Renaissance Books.
- Paparrigopoulos, X. (1984), *Administrative Science, Administration, Democracy*, in 'Administrative Reform', Issue 17, pp. 17-33 (in Greek).
- Sakellariou, M. (1972), *Old and new Greek Powers*, in 'History of the Greek Nation', Vol. C2, pp. 6-95 (in Greek).
- Slaton, C.D. (1992), *Televote: Expanding Citizen Participation in the Quantum Age*, Praeger.

THE IMPORTANCE OF DEVELOPMENT OF CONGRESS TOURISM IN GREECE

J. PORFIRIDIS*

Abstract

The conditions of development of congress tourism: Safety, social peace, stable political situation, hotels of high standards, ease access from origin country, general infrastructure of reception venue, favorable climate conditions, the image of the country or the destination.

JEL classification: M00

Keywords: Congress tourism, conditions of development.

“Tourism economy is worldwide in a continuous and dynamic development. In its course it is faces various problems like any other sector of economic activity. Some of these problems cannot be solved, unless political power will take measures”. (N.G. Igoumenakis, Tourism Policy, p. 84)

1. Importance of development of congress tourism in Greece

The contribution of congress tourism to development of tourism sector could be vital beyond anyone’s imagination taking into attention only the number of visitors for the following reasons:

- The average expense per congress visitor is much higher than any other tourist increasing in that way the economic cost, which is of great importance.
- Congress tourism, maybe, is not expected to influence on total tourism impressively. However, because of its smoother seasonal distribution in comparison to general tourism and its seasonal complementary features of congress comparing to total tourism traffic, the low number of additional tourists could increase the booking numbers of hotel units benefited on congresses. Taking into account the cost of hotel units the improvement of their booking numbers could be of vital importance for their financial results and health. In its

* Assistant Professor, University of Macedonia, Department of International and European Studies.

turn, the improvement of their financial robustness could influence on perspectives of their further development and effectiveness.

- Congress events lead to a very significant secondary increase of tourism.

2. Conditions of development of congress tourism

Congress tourism with its forms relating to incentive tourism is considered to be selective tourism characterized by high tourism expenses. The participants not only provide the quality but they seek it in any form and dimension. They require it, since they are disposed and able to cover the cost. The conditions of development of congress tourism (and business one) are as follows:

Table 1: *Criteria for selection of a congress venue.*

Criteria	Private Sector	Federations & organizations
Appropriate venues	62%	67%
Food quality	36%	47%
Entertainment in the venue	38%	47%
Easiness, Comfort	42%	47%
City Centre, accessible by public transport	35%	47%
High facilities standards	10%	20%
Others	2%	2%

2.1. Safety, social peace, stable political situation

This condition is general and concerns tourism to its total, given that it is connected to the environment, where it exists and is developed. Tourism is, indeed, sensitive because of social and political influences. Congress tourism has the same behaviour. It is worth remembering that this type of tourism was cancelled, not just decreased, because of “War of Gulf”, while the congresses arranged in our neighbouring country of Serbia were cancelled and other venues were found, when the war appeared.

2.2 Congress and exhibition facilities

The excellent and specialized facilities is a basic criterion examined always by the organizer of the congress or exhibition. These facilities could be provided by a hotel unit or independently by congress and exhibitions centers. The second doesn't exclude the first, but it complements it, given the fact that independent centers cover more needs compared to a hotel. Greek State include the construction of such facilities in beneficial clauses of Development Law defining their standards.

2.3. Hotels of high standards

The quality of congress tourism requires the appropriate services concerning not only accommodation but also any additional service for more effective and pleasant environment:

- Excellent communication system in hotel
- Secretarial assistance, on request
- Rich and innovative entertainment programmes in the hotel and its surroundings

2.4. Easy access from origin country

Pleasant and easy transport is of great significance including, mainly, the following points:

- a. Avoiding any transit and intermediate stops. Destinations with direct connections are proved to be in favor of organizers.
- b. Punctuality in schedules and high quality services at the flight.
- c. Quality services from ground airport authorities at arrival and departure. Its importance is even higher in groups.
- d. Distance between the departure point or country and the congress venue.

2.5. General infrastructure of reception venue

Transportation means, the quality of provided services (travel services, entertainment, pleasant natural and technical environment, department stores, hospitals, etc.) are considered as preconditions of high importance. Moreover, the quality of citizens and, mainly, whoever is coming in close contact with congress tourists, are of great significance.

2.6. Favorable climate conditions

Climate conditions, without being a decisive factor- are desirable. For its climate our country is considered especially privileged. The fact that all other tourist destinations are scattered, Greece is allowed to support extra promotion campaigns combining the required facilities and variety of natural and cultural monuments.

2.7. The image of the country or the destination

Table 2: *Positive features of reception venue.*

For congress tourism:

- A. quiet and picturesque
- B. cultural and intellectual interests
- C. scientific research
- D. peace initiatives
- E. business and trade activity

For exhibition tourism:

- A. business and trade activity
- B. secondarily, the a, b and c points of next column.

This condition is referred to the image of the place as reception venue and organizer of congresses and exhibitions and its success to promote this image in the right way. For example, positive features for congresses and exhibition tourism are considered the above points of a reception venue. It is understandable that any promotion effort of congress tourism should include the above mentioned features.

Concerning exhibitions, their successful and repeated organization establishes an “institution”. Thus, any marketing and promotion campaign is based on this aspect.

2.8. The country or destination is known and “in”

This criterion is estimated to be extremely decisive for incentive tourism. Such a trip doesn’t aim only to success and satisfy the participants but the destination should also impress before and after the organization of the event.

3. Development perspectives of congress tourism in Greece

The development perspectives of congress tourism in Greece are positive, because according objective estimations the majority of the above mentioned conditions exist. Beyond this undisputed positive fact, the optimistic prospects are strengthened by the increasing course of private business trips, congresses and business meetings, incentive tourism and exhibitions worldwide.

3.1. Required conditions

Greece meets the most of the required conditions for the development of congress tourism.

- Moderate hotel facilities (in quality and quantity) with steady increase. The high quality hotels have already or establish congress venues with emphasis on main tourist destinations.
- Nice weather conditions.
- Positive image of main tourist markets.
- Natural beauties and monuments scattered in all over Greece and, especially, in its tourism destinations.
- Organization of exhibitions-institutions under the aegis (but not exclusive) of International Fair of Thessaloniki with impressive facilities in Athens, too.
- The beneficial geographical position is proved because of all regional developments. The participation of Greece in European Union provides the opportunity to the country for tourist benefits promoting the features of its position making a 'different' European country.
- Low cost of life allowing the accommodation length.

3.2. Prevalent tourist destination

The fact that Greece is a prevalent tourism destination allows the easier and more economical development of congress tourism.

The total Greek tourist product doesn't exclude this market, given that its base is, more or less, the same with few differences. These variant features, especially the qualitative improvements in general facilities, have beneficial influences on both other tourism types and citizens of the country.

3.3. Scientific & business potential of international reputation

Many important Greek scientists and businessmen participate in international organizations and associations. With their participation in the above bodies, they could influence them for the selection of Greek destinations for their mass events.

Very important was the contribution of the leading Greek psychiatrist and Professor of Psychiatrist Department of Medical Faculty of Athens University, Konstantinos Stefanis, to the organization of "World Psychiatrist Congress" in Athens in October 1989. The 7.500 participants stayed for average 10 days in our country and paid 'door' prices. This fact was characterized as 'tourism spring' by Athens hoteliers.

It is worth mentioning that Greeks abroad has great potential in scientists, politics, governmental authorities, great organizations, in business and social field in their hosting countries. The contribution and activation of this potential could result to many positive developments.

3.4. The reappearance of trend

In 1975 for first time the point that tourism destinations have a deadline of 25 years was expressed in U.S.A. This view was scientifically proved and explained the fact that tourist products have a life cycle as any other product and service. In the turn of years it is noted that this view is not valid and that tourism destinations have a wave periodicity in their tourist arrivals. This trend benefits the traditional countries of holiday tourism. Greece is also included. This point involves it more in 'incentive' tourism which is more sensitive in 'trend' of destinations.

4. Proposals

Analyzing the development perspectives of congress tourism in Greece it is noted that our country claims a great percent of this market, which is steadily increasing. Besides, Greece meets the appropriate conditions (not all the required) for its goal.

4.1. Proposals for creating or improvement of the conditions

Below some proposals for better facilities and meeting more conditions for congress tourism are presented.

- Improvement of ground airport services at arrivals and departures.
- Improvement of services in Olympic Airways concerning punctuality in departure and arrival times and provided services at the flights.
- More flights of Olympic Airways, especially in the region of Greece, because destinations of congress and 'incentive' tourism are dependent on charter flights.
- Improvement of first impression of our portals (airports, ports, marinas, etc.)
- Improvement of telecommunications network.
- Adaptation of hotels in high quality standards of this market (construction of congress halls, education of staff, entertainment facilities, excellent telecommunication services, their marketing and promotion in these markets).

The new congress halls of hotel units should be for great potential of participants.

4.2. Proposals for marketing and promotion

The marketing campaign of Greece abroad should be strengthened and intensified with increase of the relative expenses by state both for general tourism market and congress tourism. Especially, for congress and incentive tourism the uniqueness of Greek environment should be promoted because of its differences from other competitive countries.

The following and more specific proposals about the intension and specialization of marketing and promotion of our country¹ are submitted by Mr.Nikos Lavrentidis, ex Director of Department for Congress Tourism of Greek National Tourism Organization in Ascot of United Kingdom. The suggestions are the following:

- i. Activation of Greek (in the country and abroad) scientific and business potential (first contact, invitations and informing).
- ii. Recording of professional videos for congress and incentive tourism and business meetings.
- iii. Preparation of high quality promotion material with the appropriate information brochures.
- iv. Promotion of Greek congress and tourism destinations to specialized congress magazines taking into account that every year congress change their venue.
- v. Inviting possible investors in Greek congress product or study visits in important hotel units and contact to Greek 'environment' (history, culture, tradition, nature uniqueness, 'colours' and life style).
- vi. Construction of great independent congress halls in biggest cities.

The fact that only 2,8% of congresses is referred to higher participation of 2.500 members doesn't excuse the absence of a great congress center in Athens. The reasons are the following:

- ✓ Congresses of such dimensions are, most of the times, international and are well promoted.
- ✓ International conferences with their potential could establish a place as congress venue.
- ✓ Consequently, the beneficial and various consequences are stronger.

Finally, besides the proposals concerning the public authorities, the participation and further activation of private tourism sector is decisive in quality of services.

NOTES

1. "Communications Marketing".

REFERENCES

- Goeldner R.Charles & Ritchie J.R. Brent, (2003), *Tourism–Principles, practices, philosophies*, John Witey & Sons, Inc., New Jersey.
- Igoumenakis G.Nikos, (1997), *Tourism Economy*, Vol. I and II, Interbooks Publications, Athens.
- Igoumenakis G.Nikos, (1990), *Tourism Policy*, Interbooks Publications, Athens.
- Koltsidopoulos Dem. Georgios, (2000), *Tourism – Theoretical Approach*, Hellene Publications, Athens.
- Kravaritis K., *Congress and Incentive Tourism*, Interbooks Publications, Athens 1992.
- Lytras N.Pericles, (1989), *Tourism to 2000–Theoretical points & practical approaches*, Interbooks Publications, Athens.
- Lytras N.Pericles, (1983), *Tourism Development: infrastructure, education and environment*, Papazisis Publications, Athens.
- Panagopoulos, An., (2002), *A comparative analysis of the development of tourism in Ionian Islands and the rest of Greece (1900–1999)*, Archives of Economic History, Volume XIV, No 1, p. 39–54.
- Smith L.Valene & Eadington R.William, (1994), *Tourism alternatives*, John Witey & Sons, Inc. England.
- Williams M.Allan & Shaw Gareth, (1995), *Tourism & economic development*, John Witey & Sons, Inc., England.
- Varvaresos Stelios, (1997), *Tourism–Economic Approaches*, Propompos Publications, Athens.
- Velissariou E., (2000), *Management of special and alternative tourism*, Vol. IV, E.A.P.Publications, Patra.

GREEK MAGAZINES

<http://www.eurofound.eu.int/emire/GERMANY/PARTICIPATIONRIGHTSOFTHEWORKSCOUNCIL-DE.html>,

<http://xroads.virginia.edu/~MA98/pollklas/thesis/codetermination.html>

<http://www.eurofound.eu.int/emire>

<http://www.tatsachen-ueber-deutschland.de/625.0.html> Works constitutions and co-determination

<http://www.ilr.cornell.edu/cahrs>

http://www.dmreview.com/article_sub.cfm?articleId=6516

SCHOLASTIC ECONOMIC THOUGHT AND THE ESTABLISHMENT OF THE NEW CREDIT INSTITUTION “MONTE DI PIETA”

D.D. ITHAKISIOS*

Abstract

From the beginning of Christianity many Fathers of the Church in both the East and the West, following the teachings of the Holy books and the theses of Aristotle, turned against the imposition of interest mainly on consumption loans. Such opposition had some negative economic consequences as the rate of idle hoarding was increased while saving did not turn to investment. Moreover, the standard of living of individuals in need of consumption loans was low. In Western Europe in particular, this situation lasted until medieval times, when some scholastic fathers started to change their attitude towards usury. During this time (13th-14th centuries), because of such a position vis-à-vis usury and consumption conveniences, a new institution came into operation, the so-called Monte di Pietà. Its main goal was to lend money for consumption purposes to poor people at a very low interest. The purpose of this paper is to analyse the above issues and to show the impact of economic ideas on the emergence of a new economic institution.

JEL classification: B11, G21, N23.

Keywords: Monte di Pietà, scholastics, credit, banks.

1. Introduction

The purpose of this paper is to investigate the origin, the importance and the social and economic contribution of an important as well as innovative institution in the area of credit, that of the Montes Pietatis, which emerged in Western Europe during the late Middle Ages. The idea for this institution was first conceived by the Western Christian Church and in particular by its wandering representatives, clerics and monks, who, imbued with the spirit of Scholasticism -the principal philosophical tendency of the Middle Ages- reacted against the secular practices of everyday economic reality of the time. The Monti di Pietà,¹ or “banks of the poor”, rapidly spread throughout Europe and were to become an important credit

* Lecturer, University of Piraeus, Department of Economics.

institution to assist the poor and weak strata of society, in fact with a historical continuity, since in several areas of Europe these “charitable” foundations remained in existence until the end of the 19th century (one example being the territory of Greece).

Moreover, in our times, when globalisation and neoliberal capitalism are again bringing “poverty” strongly to the surface as a (global) economic, social and ethical problem, this paper will attempt to offer a historically documented approach and throw light on the period and its reference space. Moreover, the timelessness of the phenomenon of “poverty” and the institutions for addressing it has constituted an important factor for economic reflection, which has always sought and is seeking a solution.

The paper is structured in four sections. The first deals with the role of the Western Church in the early Middle Ages, as well as the prevailing social and economic situation in Western Europe during the same period. In other words, it essentially refers to the institutional framework of social and economic life and the historical realities relating to the later appearance of the innovative institution of MdPs. The second section refers to the emerging preconditions for the creation, acceptance and spread of this new form of credit institution. Its starting point is the emergence of urban patterns in renescent Europe, the revival of economic activity and their relationship with the spatial expansion of this new institution. Also are examined the various types and means of credit, which served to meet needs for obtaining loans at that time. The third section attempts to trace the events relating to the establishment of those proto-banks, by referring to the people who inspired and established them, as well as the discord that erupted on the philosophical and theological level. Reference is also made to the establishment of the first MdP as well as to those that followed, primarily in their birthplace, the towns in the Italian peninsula, but also in many other areas of Western Europe, including Greece. Lastly, the paper will conclude with a recapitulation about the great social and economic importance of the MdPs, initially a hybrid credit institution and later one of particular importance.

2. The Role of the Christian Church in the Medieval Economy

It is well-known that the economy in most areas of Western Europe, at least in the early years of the Middle Ages, were characterized by two features: the rigid institutions which were predominated in the land-based socio-economic system at that time, and economic profit opportunities were extremely limited.

Together with all the other manifestations of economic decline, the references at

our disposal show that the concentration of economic life within the narrow limits of the fief had reflexive impacts on the use of money, credit institutions and society's views of accumulation of wealth (Pirene, 1956; Postan, 1972). On the other hand, the dogmatic positions of the Roman Catholic Church on secular practices, among them its rigid positions on money, the pursuit of accumulating wealth and by extension lending at interest, were inhibitory factors that acted as impediments to economic expansion in that period (Viner, 1978, pp. 46-113; Gilchrist, 1969).

Religiously brought up within the environment of the family and parish, thus the 13th century European continues to practice Christian ethics, and, ostensibly at least, such behaviour was not the product of coercion. Religion determines all behaviour and constitutes a basic element of medieval education. Among the moral principles it puts forward, which stem partly from Roman law but mainly from Aristotelian views,² some go beyond the level of the individual to impact social and economic life. In fact, they lend Christianity special characteristics which are quite often perpetuated in later centuries. Among other things, scholastic teachings include a condemnation of the pursuit of wealth and avarice.

Depending on commercial development and the transformation of economic structures, the problem - at least up to the end of the 15th century - appears in the front line together with its ethical and social content (Fanfani, 1935, pp. 119-159). The representatives of the church themselves know that their teachings are purely idealistic and that only a few can put them, or more modestly, try to put them into practice. Above all, therefore, they urge the faithful to reflect on the dangers that wealth entails and they present a model that should serve as a guide to the lives of all Christians. More specifically, Christians should not regard profit and wealth as the scopes of their lives, but should rather acquire the spirit of humility, self-restraint and poverty. This will allow them to more easily understand “the grace of God”, and is in complete agreement with the teachings of the gospel. The Scholastics (*doctores scholastici*), within the framework of the just price for goods (*justum pretium*), desire above all to “convert” the rich and convince them that God has entrusted their property to them temporarily for the good of the whole community and particularly those in need, namely the poor, and not only for their own benefit, otherwise they will be at fault because their responsibility is enormous (see St. Thomas Aquinas, “*Summa Theologica*”).³ In fact, in order to rectify any abuses or sins the rich people may have committed, the scholastics urged them to assume the obligations of benefaction, charity and almsgiving. In this framework, which constitutes the essence of medieval thought, society is regarded as an integrated whole, where God, nature and man, occupy predetermined and unshakeable positions.

As far as usury⁴ is concerned, the Church's positions do not ostensibly change, even when there are indications of a revival of economic activity during the 12th and 13th centuries, as we will see further on. The Church's representatives do in fact realise that workers can make money from their work and even set some aside (savings) for situations where they might have to deal with exceptional difficulties. They also admit that merchants may make a profit on the products they resell, since they perform work as well as a social service, provided, however, that such a profit is moderate (or socially acceptable) and calculated in such a way as to allow them to live a modest life (*stipendium laboris*) - in fact, this assumption constitutes the basis of the just wage doctrine expounded by Aquinas (Rima, 1978, pp. 24-25). However, usury (*usura*) is banned outright, because it is judged to be unethical and contrary to Christian law (Noonan, 1957). Imbued with the teachings of the Scholastics, the church functionaries find it inconceivable that money can "beget money" without work (*nummus non parit nummos*) or that a person can "put his money to work". The use of money to acquire additional money constitutes a distortion of its proper function, since it was invented only as a means for measure and exchange and nothing more. Thus the dogmatic view prevailed that money is non-productive or "sterile" as it was called. Of course, the condemnation of usury is not absolute, since, as we will see, circumstances are recognised where it becomes acceptable (*damnum emergens*) (Aquinas, *ibid*), particularly as compensation and security for the possibility of partial or total loss of the loan principal (*periculum sortis*) (Knight, 1940, p. 39; de Roover, 1958), a position which Plato had earlier put forward (see *Laws*, 742c, 743d).⁵ Using these arguments, the Church was able to forbid "laymen" to lend at interest and to keep the judgement of usury cases within the jurisdiction of the ecclesiastical courts.

Everyday economic reality was different, however. Entrepreneurs, bankers and merchants engaged in such practices using various and devious means, and extolled for their own benefit certain logical arguments, including the needs of the economy, which require the observance of rules without which economic activities would run the risk of collapse, with catastrophic consequences for all but mainly for the more humble (poorer) classes. In this case they used the principle of the responsibility of the rich very adroitly: invoking it, they state that the rich man must make money, otherwise he would not be able to carry on his business as manager of a fortune he acquired which he administers for the good of all.

Thus everyone, and primarily the representatives of the Church, acknowledge that although enrichment, hoarding and capitalisation are condemned with vigour, they are things on which it is difficult to place a value and that it remains to each person to submit the matter first of all to his conscience and make the right decision. Under pressure from the developing economy, some of the later

Scholastics such as John Duns Scotus, St. Bernardinus di Sienna, took a less rigid view of usury and attempted to find a theological basis for certain of its forms, always setting a maximum allowable rate of interest (Gordon, 1975, pp. 230, 240-241). Thus, they acknowledge that a loan, when is tied up and thus not being used in commerce, could yield income proportional to what it would have yielded had it been invested in business activities (*lucrum cessans*). In other words, they acknowledge that when there is "loss of profits", the rate of interest should be in proportion to the amount of profit lost or equal to the "opportunity cost" of the capital lend. They also acknowledge that there should be compensation for initiatives regarding monetary activity undertaken in conditions of uncertainty which at the same time involve risks and losses. Thus the banker (*bancherius*), whose occupation is justified, must indicate the value of this uncertainty (*ratio incertudinis*) using an arithmetical calculation, that is, he must carefully examine only the frequency of non-payment and not seek to enrich himself by profiteering.

As a result of all these - although they continue to declare that usury is a very serious sin - the Scholastics allow practices to develop that are essentially no different from usury, because it was difficult for them to continue to oppose everyday economic reality and because most if not all people, clerics and monks included, think and act in this manner. Economic reality ultimately has more weight for society than the ethical aspect of the matter. Moreover, from the time of the Third Lateran Council (Laterano, 1179), faced with evolving conditions, the Church, while it had gone forward to institute strict ordinances against usury, considering it to be an "ignominious" act (*ignominiosa*), considered loans granted solely for philanthropic purposes to be utilitarian (de Viazis, 1892, issue No. 43, p. 2). What is more, one way for the faithful to express their piety - and this still holds true today - was for them to dedicate their wealth, or part of it, to those foundations that held the keys to eternal salvation. And of course we should not overlook the fact that the Church acquired most of its property through donations from people seeking "passports to heaven".⁶

The Church's strict attitude towards usury changed only when economic development began and capital was needed for business purposes, among other things. This development basically started from certain areas of Europe which, for reasons given further on, were more innovative than others.

From the above it becomes clear that, based on religion, economic thought in the medieval world, derived from Scholasticism, can be characterised as deontological rather than analytical. It was more interested, that is, in what ethical economic behaviour should be and less in the manner in which people's economic behaviour functioned. On the other hand, "Scholastic economics", in condemning selfishness and greed and in an effort to adapt economic beliefs to the development of a well-

governed Christian society, brings once again onto the medieval scene the Aristotelian conception of justice and for that reason can even be regarded as a branch of distributive justice.

3. The Revolution of Cities and the Emergence of Modern Capitalism

The appearance and growing importance, as early as the 11th and 12th centuries, of the medieval towns, the rise of their bourgeoisie and the consequent revival of the economy drastically changed the structures of society and economic life existing in Europe up to that time (Pirene, 1970; Le Goff, 1971, pp. 71-106; Van Werveke, 1971, pp. 3-41; Hyde, 1973). From that period until the 16th century, Italy was in the forefront, not only of economic growth and technological innovations (White, 1962; Ashtor, 1989, pp. 7-36; Epstein, 1994, pp. 459-482), but as the birthplace of a range of new business methods (Pounds, 1974, pp. 362-373; Cipolla, 1980, pp. 242-251, 252-265). At the epicentre of these developments were certain towns in the Italian peninsula, which from very early on failed to adhere faithfully to the medieval model described above. These towns, which had commercial transactions with other far-flung areas of the Eastern Mediterranean basin, as far away as the Black Sea (Ithakisios, 1990, pp. 67-68), in an era when commerce in the rest of Western Europe was practically non-existent, ushered in many innovations in the organisation of trade, the evolution of business methods and the emergence of new credit mechanisms (Clough and Rapp, 1977, pp. 93-146).

We will not enlarge further on these new developments. We will, however, examine the importance of some of them and in particular their effects in relation to the stimulation of the spirit of saving and the need to create new means of credit able to facilitate the smooth transfer of capital and its transformation into productive investments. It is well known, moreover, that from this period (11th century) on, savings were stimulated to an extent inconceivable in the past, and many contemporary economic historians considered this to be a watershed in the economic history of Europe (see e.g. Cipolla, 1980, p. 252).

One of the prevailing demands in the great centres of commerce of the 13th century, especially the great urban centres of Northern Italy and primarily Venice, was the demand for monetary reform. People engaging in business activities and banking in particular, for example, wanted a currency that would be respected and accepted across broad geographical regions. They also sought a currency that would not be subject to constant devaluation, so that borrowers could not expect to pay off their debts in a cheaper currency (Cipolla, 1963). The improvements made to the monetary system when those towns adopted the gold currency

standard, and in particular the stability and predominance of the new currencies (such as denari, genoins, florins and mainly the Venetian gold ducat or *ducato d'oro*), were of great importance for economic development in this period.⁷ However, the parallel developments in the area of credit were of even greater value in the long run. With the rise of the towns, the system of credit developed rapidly in the form of enabling buyers to pay for products over a long period of time, or extending credit in the form of consumption and productive loans. This had a positive impact to a large extent, causing both consumption and investment to increase.

As time passed, the credit mechanisms aimed at facilitating the concentration and stimulation of savings for productive purposes began to be improved. The time when most loans were extended by the Church and the monasteries to the noblemen so that they could obtain consumer goods was drawing to a close (Woodward, 1966). With the new credit mechanisms, most loans took on a commercial character, since their main purpose was movement of and rapid payment for goods. In addition, the new means of credit offered the means for the smooth transfer of capital, and most importantly the collection of interest was not noticeable to the competent officers. Thus various means were devised that were used to get around the prohibitory ordinances against interest, such as bills, drafts, payment orders, the *contratto di commenda* or *collegantia* as it was called in Venice, the keeping of a *giro* account, and the *lettre de foire*.⁸

Despite all this and apart from the beneficial effects brought about by the new prevailing credit trends, the spread of profiteering became an ever greater threat, since the strict laws emanating from the ideological base and from the more general institutional framework imposed by the church, restricted the moneylenders on the one hand, but on the other hand made more demanding (profiteering) those who despite the strict measures continued to lend, exacting exorbitant profits in exchange for their audacity.⁹

4. The Appearance and Function of the Institution of MdPs

In the conditions and circumstances described above, and as a counterbalance to the credit mechanisms that came into being within the bounds of evolving economic activities, countervailing forces appeared in the form of new credit institutions, such as those of the MdPs, imposed by the church through the proclamations of its wandering clerics and monks. In other words, the whole prevailing economic climate played a decisive part in the appearance of this new economic institution and gave it a substantial impetus.

As the Middle Ages neared an end, even though the Church, as already mentioned, was not opposed to certain forms of interest (*interesse*) - particularly in those cases where the lender ran a great risk of loss or delay in repayment of his money (*damnum emergens*) - the daily practice of commercial activity indicates that it was generally accepted (Roll, 1945, p. 47 et. seq.). Thus the Church had to adapt its teachings, placing them on a new, more realistic basis. But between accepting certain forms of interest and reaching the point where it would give its blessing to usurious activities, there was a gap where the teachings of Scholastics left no room at all for their future acceptance. The wandering clerics in particular, who belonged to the lower ranks of the church hierarchy and by extension the lower rungs of the social ladder,¹⁰ possessed by philanthropic sentiments and at the same time by anti-Semitic passion, fought fiercely against usurious practices, and it was they who first conceived of the idea of establishing the “Sacred Philanthropic Foundations” (*Santi MdP*).¹¹

As a result, the usurious activity that mainly repressed the poorer and weaker social strata also served as a stimulus to the corresponding ecclesiastical ranks of poor priests and monks. The proclamations of these representatives of the Church had a great impact on the broader public and particularly on the church circles and philanthropic associations of the time. Thus the idea rapidly spread throughout Western Europe. The first traces of the creation of such foundations, although they are not recognisable as pure MdPs but rather as community or private initiatives, aimed at creating small credit associations with no historical permanence, date from the end of the 12th century. More specifically, in 1198 at Freisingen in Bavaria one such credit institution was set up for the purpose of granting consumption loans without interest (de Viazis, 1892, issue No. 42, p. 2); a similar foundation was established in Mende in 1326. Later, in 1350 in the town of Salins in Franca Contea a significant number of philanthropists provided capital for the same purpose consisting of 20,000 florins, establishing the “Citizens’ Credit Union” (Marx, 1894, p. 601). In 1361 the Bishop of London Michael de Northburg left in his will 1,000 silver denari (pence) for the same reason (de Viazis, 1892, issue No. 42, p. 3). These were the first known reactions designed to address the secular practice which according to the clerics was leading to an increase in loans at interest.

However, the history of the real “sacred philanthropic foundations”, the pawn banks or *Santi MdPs*, which were set up with strictly defined goals and rules of operation, dates from the mid-15th century. It was natural that the first such credit institutions were established in the area of direct influence of the Roman Catholic Church, and particularly in the provinces of central (the Papal State, *Lo Stato della Chiesa*) and northern Italy, in Latium, Umbria, Romagna, Emilia, Liguria,

Lombardia, Friuli (Waley, 1961; Hay, 1966; Ullmann, 1972, pp. 91-115, 201-226, 306-332).

For the most part these foundations were inspired and established by members of the Order of Franciscan Monks (*Minori Osservanti*), who apart from their theological and pastoral occupations carried on intense social activity. In the framework of this activity, they were often employed as counsellors in various towns, showing particular interest in the poor and in the lower social strata in general. It is therefore no accident that those figures that helped the Order reach its heyday and flourish and contributed to its social work (15th century) were the main inspiration behind the institution of the MdPs (Desyllas, 2006, pp. 46-47). Later, various other brotherhoods followed the example of the Franciscan monks, establishing MdPs whose ultimate purpose was to put money to productive use through the process of credit, as distinct from almsgiving, where money remains non-productive. Several universities also contributed to the creation and co-establishment of many MdPs, obtaining founding capital from the collection or leasing of taxes or from rents on properties. The MdPs of Avellino (1589) and Lecce (1520) constitute such examples (Barbieri, 1962, p. 62 et seq.).

One who played a leading part in establishing these foundations is believed to be the Franciscan monk Barnaba from the town of Terni in central Italy (Barnaba da Terni). Whilst performing his ecclesiastical duties in the town or Perugia, he exhorted the faithful against usurers, mainly against the Jews, in fact proposing “...that everyone should be in the habit of giving his mite in alms and this amount be used for a beneficial bank” (de Viazis, 1892, issue No. 42, p. 2). This monk’s idea met with a great response from the public, and the establishment of the first Santo MdP became reality in 1462 in the town of Perugia in the Umbria region of *Lo Stato della Chiesa*.¹² Its founder was the Franciscan monk and formidable preacher from Milan, Michele Carsano, who held forth on the beneficial effects that would accrue from the creation of a *banco*, a bank that is, similar to those of the Jews, but operating on better terms. Its specific difference would be that it lend at a much lower rate of interest, as it was a non-profit institution. When it did come into operation this first bank, a type of pawnshop, granted small, no-interest consumption loans against pawns, whereas people desiring larger amounts paid, in addition to the object pawned, a low rate of interest in order to cover foundation’s expenses (employees’ salaries, rents, ink, etc.); (de Viazis, 1892, issue No. 42, p. 2; Houmanidis, 1986, p. 22).

The signal had been given, and many preachers representing the Church in Italy’s urban centres, imitating the example of the monk Barnaba, intensified their preaching against usury and moneylenders. One of them was the celebrated monk Bernardino from the town of Feltre in northern Italy. Martino Tomitano (his

secular name), or Beato Bernardino da Feltre (1439-1494), as history remembers him (Blanqui, 1880, pp. 143-144; Cipolla, 1980, p. 253), wandered all over Italy fulminating against the usurers, while his social teachings included the establishment of the MdPs.; in fact, he preached 3,600 sermons towards this end. Beato Bernardino, following the precepts of the Scholastics and, like Plato and Aristotle, combining them with the voluntarist spirit, stressed in his “*De Republica*” the importance of solidarity within the Christian brotherhood and the supremacy of the public good against the private (Barbieri, 1962, p. 62). In Bernardino’s view, the MdP was an agent for the accumulation of money (*congregation denariorum*), which was created to serve people in need of credit, because “...there are many poor and little money which instead of being distributed uniformly is rather poorly distributed so that some have a lot and others a little” (Desyllas, 2006, p. 31).

The idea of establishing similar credit institutions was considered to be salutary and in a short time they spread throughout the Italian peninsula. Their spatial diffusion is of particular interest. MdPs in the regions of central Italy were established first in small and medium-sized urban centres and later in the large towns. In the large urban centres such as Milan and Venice, they were established in the late 1400s. The MdPs followed the same pattern of distribution in southern Italy, in the area of the Kingdom of Naples, beginning in 1466 when the first MdP was established in Aquila, but mainly after 1550, when their distribution had reached its greatest extent. Towns where MdPs were established included Orvieto in 1463, Viterbo in 1471, Savona in 1479, Mantova in 1484, Padova and Parma in 1491, Pavia in 1493, and Milano in 1497. It should be noted that, when the prevailing economic and social conditions were right, the establishment of an MdP proved to be a relatively easy and unremarkable endeavour, whereas in other circumstances it was an extremely difficult undertaking. This was directly related to the fact that certain towns (mostly in the north) had strong economic institutions and structures, as well as a more flourishing economy, resulting in limited interest in accepting this new economic institution. Moreover, it is possible that the geographical distribution of MdPs went hand in hand with the large numbers of Jews who settled in those same towns and areas. Many Jews, who had been driven out of Rome in the 13th century, were bankers by occupation.¹³ In the late 15th century, at any rate, almost all the sister cities of Italy, following the example of Perugia, established similar foundations, which gradually evolved into regular savings banks, giro accounts or the so-called *transfer* or *giro banks* for deposits (Knight, 1940, p. 44), extension of loans on collateral, etc. (Houmanidis, 1981, pp. 71-72; 1986, p. 22).

Thus, within the spirit of Scholasticism, which continued in the late Middle Ages to influence the financial practices of medieval society, the MdPs emerged in the

social and economic space at first of Italy and later of the rest of Europe.

Since the Christian Church attributed such significance to this important issue, it is not at all strange that the successive heads of the Roman Catholic Church, the Popes, were quick to commend the importance and the role of the Montes Pietatis. It must also be noted that these “charitable establishments” also met with opponents, among them the Jewish merchants whose usurious activity had made many of them rich; the appearance of the Montes took away a substantial part of their clientele.¹⁴ At any rate, a part of theologians and the clergy believed that the MdPs were deceiving the public, since they were carrying on usurious activity even though they were known as “philanthropic”.¹⁵ These were mainly the Dominican monks who, imbued with the thinking of Plato and Aristotle, as it had been transubstantiated in the work of St. Thomas Aquinas, were in constant conflict with the forces behind the Montes, the monks of the Franciscan Order. This conflict was conducted both on the philosophical level and on the level of Christian ethics, since the difference between *interest* (*interesse*), that is, the amount the MdPs required in order to meet their operating needs, and usury (*usura*), that is, anything exceeding this interest (filthy gain, *turpe lucrum*) was not clear.

This discord, along with simmering social tension due to the constantly increasing prices of agricultural products during this period, were the subject of intense discussion at one of the biggest reformist Councils of the Roman Catholic Church held in the town of Trento in northern Italy on 13 October 1545 under Pope Paul III. The Council of Trent, among other things, opined in favour of the MdPs, recognising them as “beneficial” for the common interest and characterising them as “charitable foundations” (*pia loca*), “... *Hospitalia, collegia quae cumque ac confraternitates laicorum... clemosynas Montis pietatis sive charitatis ac pia loca omnia*” (de Viazis, 1892, issue No. 43, p. 2). In fact, relative to the current economic situation in which these foundations were already operating, the Council ruled in favour of control and reinforcement of the church’s role as regards the movement of money. The dispute over the matter of the MdPs’ lending at interest - resulting from the revival of the economy in the urban centres and the new needs that had arisen - was ended by the Fifth Lateran Council (1515), which although it condemned usury (*usura*) accepted the legality of a low rate of interest (*interesse*, 5%-6%) to meet their operating expenses.

In any case, the MdPs proved to be an institution of decisive importance, not only because they succeeded in highlighting the importance of the social role of the credit institution, but most importantly because in everyday practice they helped shape the market rate of interest, causing it to fall by half, whereas at the time of the Renaissance even Christians did not hesitate to lend money at up to 40% interest (Barbieri, 1962, pp. 54, 57; Houmanidis, 1981, p. 72, ft. 2).

While in Italy the MdPs served to curb the creation of high interest rates, in the rest of Renaissance Europe usury still predominated. In the Low Countries for example, at the beginning of the 16th century interest rates were as high as 130%, and a priest named Joseph Wolf, responding to the spirit of his colleagues, founded in 1594 in the town of Ypres in Belgium a “lending establishment” (*Leenbourse*), to provide credit to the poor. A similar pawn bank (*Mons Perfectae Charitatis*) was founded immediately afterwards in the town of Bruges. In Germany and Austria the MdPs were introduced in the late 15th century. In France, the establishment of such foundations got a late start, and only in 1611 did Ugo Delestre draw up the 1140-page “*Premier Plan du Mont de Piété Français*”. In Britain, as already mentioned, as early as 1361 the first efforts were being made to found a credit bank, although this was not a form of MdP, and in Spain similar banks (*Montes Piedades*) came into being only after 1702, in Madrid (de Viazis, 1892, issue No. 43, p. 2).

Furthermore, in the 17th century MdPs could be encountered in some areas of Greece, such as Corfu (1630) and Zante (1670) in the area of Western Greece (Ionian Islands), as well as Candia (1613), now known as Iraklion, in the “Great Island” of Crete.¹⁶ The establishment of MdPs in the Venetian controlled parts of Greek territory, which were in effect an organic continuity at a later stage of the respective Italian MdPs (Ithakios, 1988, ch. 4), were in a period of overt crisis a meaningful effort towards structural control of economic activity and improvement of the living standards of the lowest social strata. But indirectly and by managing credit they aimed at doing away with the hidden economy and usurious activities, and at controlling movements of money, providing in conditions of scarcity of financial resources the ability to directly convert securities into money and vice versa (Ithakios, 1990, pp. 74-79).

5. Conclusions

It can be inferred from the above analysis that a study of the broad field of ideas of economic history, which records the way that previous generations behaved and thought, points up critical and substantive phenomena and economic data that interact and evolve dynamically. Likewise the existence of an innovative institution, that of the MdPs, in the economic and credit reality of the latter part of the Middle Ages refers back at the same time to the basic principles of Christian ethics, even when it is secularised. As is often happens, the springboard was the idea which, when it is successful, flexible and adaptable and able to survive the melting pot of everyday practice and reality, is transformed into an institution. In

this transformation, the inventive wandering monks of the Franciscan Order emerged as leading players; familiar with business matters, they took up the implementation of the venture, since in the medieval political and social panorama they had the ability to be actively involved in urban processes, and through the MdPs to enter into financial relationships with whole urban populations. Theological thought, however, does not cease to play a leading part, since it defines the ethical framework of action to a decisive degree and in parallel it alone can effectively ensure the accumulation of founding capital on the practical level.

In addition, the MdPs went down in economic history as singular and peculiar in nature, since they attempted in a unique way to harmonise credit in the urban economic framework with the idea of implementing a non-profit economic practice in order to effectively address the phenomenon of poverty. The MdPs also served to revitalize the process of economic development at a time when money was beginning to assume an ever more important role in the marketplaces. As the credit institution par excellence, the MdPs gave rise - apart from their economic function - to influences and relationships that were political, religious and social in nature. These functions served as the basis for the supply of credit services in a social category that was fairly dynamic, that of the transitory poor, whose overall financial situation was directly dependent on the prevailing economic conditions at any given time. In other words, the credit model of the MdPs served a variety of functions and combined the economy with ethics, aiming at reducing the cost of money, increasing liquidity, keeping credit in check and by extension at marrying investment and salvation.

NOTES

1. Hereafter, for brevity the term will be denoted by the initials MdP.
2. The views of the Stagirite philosopher (see *Politics*, 1257b, 25-30, 1258b, 1-10, 24-36; *Nicomachean Ethics*, 1122a, 1-5, E 1131a) on the sterility of money, justice in the exchange of goods and the distribution of wealth and the condemnation of avarice are considered to be among his best known economic ideas and those that had the greatest influence on medieval ecclesiastical circles.
3. See Monroe (1975), d' Entreves (1939 and 1981). The positions of Aquinas, the most important canonist, who was a student and successor of Albert

- Magnus, were later followed by Jean de Gerson; see Ullman (1975, pp. 174-184, 211). Similar ideas had already been developed by the Fathers of the Eastern Orthodox Church; see Karayiannis (1994).
4. The term is cited here, obviously, not in its present-day sense of lending at excessive rates of interest, but in the sense of lending at any rate of interest.
 5. Apart from the above-mentioned position, there are many bases in Platonic thought (e.g. *Republic*, 417a, 556b, 587c and 581d) that influenced the early Scholastics. For an extensive analysis of Plato's ideas, see Karayiannis (1990).
 6. Regarding this matter, the golden age of the Christian Church was the period prior to the 11th century; see Latouche (1961, p. 55 et seq.). More on this matter see Knight (1940, p. 39), Nelson (1949, p. 47 et seq.), Pirenne (1956, p. 208 et seq.), Ullmann (1972, pp. 240, 265), Clough and Rapp (1977, p. 87).
 7. On currency and credit, particularly in the Italian towns, see Spufford (1952, pp. 788-873), Tuma (1971, pp. 225-245), Cipolla (1980, p. 260 et seq.).
 8. For a more detailed description of these and similar credit mechanisms, see Usher (1934, p. 401 et seq.), Postan (1954, pp. 65-71), Clough and Rapp (1977, pp. 134-141), Houmanidis (2002, pp. 51-76).
 9. There are reports of cases of interest as high as 100% or even 200% (Roth, 1954, pp. 67-145; Postan, 1972, pp. 165-287).
 10. Furthermore, the distribution of wealth within the church - cardinals, bishops and monasteries on the one hand and poor country clerics and begging monks on the other - essentially reflected the unequal distribution of wealth in medieval society (Cipolla, 1980, pp. 80-86). For the unequal distribution of wealth in medieval society, see also Woodward (1966), Berenger - Contamine - Rapp (1980, pp. 107-110).
 11. The term *Monte* literally means mountain, heap, great quantity, and by extension deposit, fund, treasury or a foundation in which money is deposited (savings bank, depository for money). In church literature the term had already been used to mean respectively the accumulation of money from offerings of the faithful, or the collection of donations for philanthropic purposes. The term *Pietà* refers to its relationship with alms, since its character is defined as not for profit, but rather philanthropic, based on offerings by the faithful and aimed at assisting people facing a problem with usury. Lastly, the image that became directly connected with the MdPs and became the trademark of those foundations was that of the *Pietà*, the extreme degradation, the most holy icon, which is both the high point of the Divine Drama and at the same time represents in the most realistic way the pathos of human nature (an icon

brought to the West in the 13th or the beginning of the 14th century from Agion Oros, initially to the region of Tuscany). The icon of the Pietà predominated on the standards in the processions held in order to raise the founding capital for the Montes. See (Desyllas, 2006, pp. 29-32; New Advent: *The Catholic Encyclopedia*, www.newadvent.org/cathen/Montes).

12. Reference to this fact can be seen in the inscription that survives at the entrance to the foundation, which was placed there in 1571 and states that: “this Monte di Pietà was the first in the world” (*Hic mons pietatis primus in orbe fuit*). The Holy See gave official recognition to this foundation in 1467; see (Desyllas, 2006, pp. 58-59).
13. Throughout the Middle Ages, the Jewish usurer, i.e. the irreplaceable moneylender, was an object of hatred (there are many reports of persecution and massacres, contributing to the anti-Semitism raging in Western Europe after the 11th century), but on the other hand was necessary and useful. See Roth (1954); Grayzel (1968, pp. 263-384).
14. It is worth stressing that when in later times the Jewish usurer lost the (almost) exclusive handling of cash and the banking monopoly changed hands, he evolved into a much more conservative and honest financier than the big Christian bankers like the Medici, Bardi, Peruzzi, etc., irrespective of whether this resulted from his social (and legal) disadvantaged position, since sources of that period and the relevant bibliography - at least as far as we are aware - fail to show even one bankruptcy (deliberate or not) of a Jewish capitalist, whereas the bankruptcy of the House of Bardi, for example, shook the very foundations of the Western financial structure. See Blanqui (1880, pp. 190-208), Usher (1934, pp. 399-428), Knight (1940, pp. 42-25), Roth (1946), de Roover (1966, p. 39 et seq.).
15. This was partially true, since as already mentioned many of these charitable establishments were on the one hand charging interest on the pretext of meeting their expenses, but mainly because some of them evolved into ordinary banks, escaping from the purpose for which they were originally established (Marx, 1894, p. 601, ft. 21; de Viazis, 1892, issue No. 43, p. 2). One such example was the establishment of the MdP in Naples (1539), which evolved into the Bank of Naples (*Banco di Napoli*), which engaged in banking activities and in 1584 became a public bank (Houmanidis, 2002, p. 70).
16. On the transplantation of the institution of MdPs into the territory of Greece and the areas mentioned in particular, see Papadia-Lala (1987), Ithakisios (1990), Desyllas (2006).

REFERENCES

- Aquinas, Thomas, St. *Summa Theologica*, in A.E. MONROE (ed.) (1975), *Early Economic Thought*, New York: Gordon Press, pp. 52-77.
- Aristotle, *Politics*, Modern Greek transl.: N. Paritsis, Athens: Papyros, 1975.
- Aristotle, *Nicomachean Ethics*, Modern Greek transl.: A. Dalezios, Athens: Papyros, 1949.
- Ashtor, E. (1989), *The Factors of Technological and Industrial Progress in the Later Middle Ages*, *The Journal of European Economic History*, No. 18, pp. 7-36.
- Barbieri, G. (1962), *Il Beato Bernardino de Feltre nella Storia Sociale del Rinascimento*, Milano.
- Berenger, J. - Contamine P. - Rapp, F. (1980), *General History of Europe - Europe from 1300 up to 1660*, (Directors of French publication: G. Livet and R. Mousnier, *Histoire Généralè de l'Europe*, Paris: Presses Universitaires de France), Greek transl. of Vol. 3: M. Papadopoulos, Athens: Papazisis, 1987.
- Blanqui, J.A. (1880), *History of Political Economy in Europe*, Engl. transl.: E. J. Leonard, New York: A.M. Kelley, 1968.
- Cipolla, C.M. (1963), *Currency Depreciation in Medieval Europe*, *Economic History Review*, 2nd series, Vol. XV, pp. 413-422.
- Cipolla, C.M. (1980), *Before the Industrial Revolution: European Society and Economy, 1000-1700*, (N.Y.: W.W. Norton Co.), Greek transl.: P. Stamoulis, Athens: Themelio, 1988.
- Clough, S.B. - Rapp, R.T. (1977), *European Economic History - The Economic Development of Western Civilization*, (McGraw-Hill Inc.), Vol. A', Greek transl.: F. Diamantopoulos, Athens: Papazisis, 1979.
- De Viazis, S. (1892), *The Charitable Establishments of Zante: A: The Pawnshop (Monte di Pietà)*, *Newspaper Theatis*, Year A', issues Nos. 42-52 (in instalments), Zante, 7 February - 13 March 1892 (in Greek).
- Desyllas, Chr.T. (2006), *The Bank of the Poor - the Monte di Pietà of Corfu (1630-1864)*, Athens: Piraeus Bank Group Cultural Foundation (in Greek).

- D' Entreves, A.P. (1939), *The Medieval Contribution to Political Thought: Thomas Aquinas, Marsilius of Padua*, Engl. transl.: R. Hooker, London: Oxford University Press.
- D' Entreves, A.P. (ed.), (1981), *Aquinas: Selected Political Writings*, Engl. transl.: J. G. Dawson, 8th ed. Oxford: Blackwell.
- De Roover, R. (1958), *The Concept of the Just Price: Theory and Economic Policy*, *Journal of Economic History*, No. 4, pp. 417-438.
- De Roover, R. (1966), *The Rise and Decline of the Medici Bank, 1397-1494*, New York: Norton.
- Epstein, S.R. (1994), *Regional fairs, institutional innovation, and economic growth late medieval Europe*, *Economic History Review*, Vol. XLVII, No 3, pp. 459-482.
- Fanfani, A. (1935), *Catholicism, Protestantism and Capitalism*, engl. transl. of *Cattolicesimo del Capita e Protestantesimo nella Formazione Storica della Capitalismo* (London: Sheet and Ward), Indiana: University of Notre Dame Press, 1984.
- Gilchrist, J. (1969), *The Church and Economic Activity in the Middle Ages*, New York.
- Gordon, B. (1975), *Economic Analysis before Adam Smith*, London: Macmillan.
- Grayzel, S. (1968), *A History of the Jews*, new revised ed., New York: Mentor Books - New American Library, 1974.
- Hay, D. (1966), *Europe in the 14th and 15th Centuries*, London: Longman's General History of Europe, 1970
- Hyde, J.K. (1973), *Society and Politics in Medieval Italy: The Evolution of the Civil Life, 1000-1350*, London: Macmillan Press.
- Houmanidis, L.Th., (1981), *Economic History and the Evolution of Economic Theories*, Vol. B1, Athens: Karamperopoulos (in Greek).
- Houmanidis, L.Th. (1986), *History of Economic Theories: Interest Theories from the Classical Age to the Present*, Athens: Sbilias (in Greek).
- Houmanidis, L.Th., (2002), *The Evolution of Banks and Credit Institutions*, Athens: Synchroni Ekdotiki (in Greek).
- Ithakisios, D.D., (1988), *The Economic Development of the Island of Zakynthos: An Historical Analysis from Antiquity to the present*, PhD Thesis,

University of Piraeus - Department of Economics (in Greek with extended English summary).

- Ithakios, D.D., (1990), *The evolution of the first credit institutions, Montis Pietatis, in Medieval Europe and its transplantation in the area of Western Greece in the XVII century*, Archives of Economic History, Vol. I., No. 1, pp. 65-130 (in Greek).
- Karayiannis, A.D., (1990), *The Platonic ethico-economic structure of society*, Quaderni di Storia dell' Economia Politica, Vol. VIII, No. 1, pp. 3-45.
- Karayiannis, A.D. (1994), *The Eastern Christian Fathers (350-400) on the Redistribution of Wealth*, History of Political Economy, Vol. 26, No. 1, pp. 39-67.
- Knight, M.M. (1940), *Introduction to Modern Economic History*, © M. M. Knight.
- LA Touche, R. (1961), *The Birth of Western Economy: Economic Aspects of the Dark Ages*, New York: Barnes and Noble.
- Le Goff, J. (1971), *The Town as an Agent of Civilization, 1200-1500*, The Fontana Economic History of Europe, Vol. 1: The Middle Ages, London: Collins/Fontana Books, 1972, pp. 71-106.
- Marx, K. (1894), *Capital*, New edition, Vol. 3, London: Lawrence and Wishart, 1959.
- Nelson, B.N., (1949), *The Idea of Usury*, N.J.: Princeton University Press.
- Noonan, J.T., (1957), *The Scholastic Analysis of Usury*, Cambridge (Mass.): Harvard University Press.
- Papadia-Lala, A. (1987), *The Monte di Pietà of Candia (1613 - mid-17th century) - Contribution to the Social and Economic History of Venetian-occupied Crete*, Parousia, Athens (in Greek).
- Pirenne, H., (1956), *Economic and Social History of Medieval Europe*, New York: Harcourt, Brace and World.
- Pirenne, H., (1970), *Medieval Cities: Their Origins and the Revival of Trade*, Engl. transl.: F. D. Halsey, N.J.: Princeton University Press.
- Plato, *Laws*, Modern Greek transl.: I. Gryparis, Athens: Zacharopoulos, 1978.
- Plato, *Republic*, Modern Greek transl.: I. Gryparis, Athens: Zacharopoulos, 1979.

- Postan, M.M., (1954), *Credit in Medieval Trade*, in E.M. CARUS-WILSON (ed.), *Essays in Economic History*, Vol. 1, London.
- Postan, M.M., (1972), *The Medieval Economy and Society*, London: Weidenfeld and Nicolson.
- Pounds, N.J.G., (1974), *An Economic History of Medieval Europe*, London: Longman.
- Rima, I.H. (1978), *Development of Economic Analysis*, (N.Y.: Irwin, Inc.), Greek transl.: N. Stamatakis, Athens, Gutenberg, 1983.
- Roll, E., (1945), *A History of Economic Thought*, 2nd ed. revised and enlarged, London: Faber and Faber, Ltd.
- Roth, C., (1946), *The History of the Jews in Italy*, Philadelphia: Jewish Community Series.
- Roth, C., (1954), *History of the Jews*, N.Y.: Schocken Press.
- Spufford, P., (1952), *Coinage and Currency*, The Cambridge Economic History of Europe, Vol. II: Trade and Industry in the Middle Ages, London: Cambridge University Press, 1987, pp. 788-873.
- Tuma, E.H., (1971), *European Economic History: 10th century to the present*, (N.Y.: Harper & Row, Publishers, Inc), Vol. A', Greek transl.: M. P. Xatziprokopiou, Athens: Gutenberg, 1978.
- Usher, A.P., (1934), *The Origins of Banking: The Primitive Banks of Deposit, 1200-1600*, *Economic History Review*, Vol. IV, pp. 399-428.
- Usher, A.P., (1943), *The Early History of Deposit Banking in Mediterranean Europe*, Cambridge (Mass.): Harvard University Press.
- Ullmann, W., (1972), *A Short History of the Papacy in the Middle Ages*, London: Methuen and Co. Ltd, 1974.
- Ullmann, W., (1975): *Medieval Political Thought*, Middlesex: Penguin Books.
- Van Werveke, H., (1971), *The Rise of the Towns*, The Cambridge Economic History of Europe, Vol. III: Economic Organization and Policies in the Middle Ages, London: Cambridge University Press, London, pp. 3-41.
- Viner, J., (1978), *The economic doctrines of the Scholastics*, *History of Political Economy*, Vol. 10, No 1, pp. 46-113.

-
- Waley, D., (1961), *The Papal State in the 13th Century*, London: Longman.
- White, L. Jr, (1962), *Medieval Technology and Social Change*, London: Oxford University Press, 1964.
- Woodward, G.W.O., (1966), *The Dissolution of the Monasteries*, London.

* I wish to thank A.D. Karayiannis (University of Piraeus) for his valuable comments and suggestions.
The usual disclaimer applies.

NOTE ON THE EFFECT OF THE 11 YEARS GLOBAL CLIMATE CYCLE ON THE PRICES OF THE CAPITAL MARKETS

C. KYRITSIS*

I. SOTIROPOULOS**

C. GOGOS***

E. KYPRIOTELIS****

Abstract

In this paper we prove and analyze the effect of the 11 years sunspot, and global climate cycle, on the volatility of the prices of Stock Exchanges. We predict an increase of the prices from the present time (2007) till 2011, a next major maximum of the prices during 2010-2011 and a fall of the prices for the period 2011-2017. We discuss sequences of causal explanations based on the balance of demand and supply and comment on the general value of such an omniscience wisdom that involves at least five different sciences.

JEL classification: C32, C4, C53, E32, E37, E41.

Keywords: Stock Exchanges, volatility index, 11-years sunspot cycle, spectral analysis.

1. Introduction

In this short note, we shall try to describe the effect of the 11 years sunspot and meteorological global climate cycle, on the growth and decay of the prices in the stock exchanges. We shall also try to give a sketchy sequence of causalities based on the balance of demand and supply that may help to understand this effect. We are not of course the first to have discovered this effect. In the contrary it is an old discovery, there is extensive (although not much known) literature, and the last 20 years, it has been considered to be more and more important. Nevertheless the first of the authors re-discovered this effect during 2000-2001 while performing simulation and statistical analysis of time series of stock exchanges. The more we studied it, the more we overcome our hesitations and doubts, and the more we are

* Assistant Professor, TEI of Epirus, Department of Finance and Auditing.

** Assistant Professor, TEI of Epirus, Department of Finance and Auditing.

*** Lecturer, TEI of Epirus, Department of Finance and Auditing.

**** Lecturer, TEI of Epirus, Department of Finance and Auditing.

scientifically convinced for its validity and reality. We must mention that the study of cycles in time series, even when they are weather data time series, is a difficult, and tricky endeavor, and only the last decades, due to the advance of computers and massive data analysis, it has started to become clear how to detect and analyze them. The idea of business cycles is of course old (e.g. see Henry, Ludwell, Moore [9] in references) but it was never handled in a static, sufficient, robust way, by the economists. The same, surprisingly, was also the situation with the idea of weather cycles, in academic and practical applications, research. (see Burroughs Williams James 1981 [4] in references).

We shall also discuss the value of such a knowledge. If we are in search for a common systematic behavior of the capital markets, other than the assumed constant long run trend (drift), then an eternal of astronomic source cycle, of nature seems the only first good solution. If we are in search for a systematic reliable behavior that is not incidental to specific historic contingencies of the evolution of economies, and thus non-repeatable, or it is not a short-term shock-wave of non-repeatable historic situations, the resorting to the effect of eternal “pace” originating in nature (e.g. meteorology) seems to us to be the first best solution. Of course the seasonal cycles (winter-summer) is a traditional concept of how nature may have an effect on the prices. But searching for other not so obvious cycles like the 11-years cycle, that can be also very strong and significant, seems to be an intriguing matter. In addition forecasting or risk management of investments, that is based on such eternal cycles, is entirely more reliable and scientifically clear, compared to forecasting based on news from newspapers, that either are already late, or of unknown eventual effect on the prices of the capital markets. In involving sources of causalities in macroeconomics, that go beyond classical macroeconomics, to the areas of ecology and meteorology, widens our concept of “world” in economic causalities. It creates a significant “omniscience wisdom” that may be of benefit to all, and also makes us more conscious of the overall functions of life and society. This eventually increases the awareness of ourselves and the determination we have to our fate, and the success of our goals. Each time we take advantage and go parallel to the flow of time and power of evolution, in larger time intervals, we increase our ability of success in our goals, and we also increase the awareness of our consciousness. The psychologist reassures us that increasing awareness in our activities unavoidably increases our self-esteem and success as individuals and collectively. Including nature in economics is probably an important ingredient of the philosophy contained in the newly developing trend of “green economics” that claims to transcend classical economics. The effects are also invertible. If we know the details of the sequence of how nature influences the changes in the prices of business, then we are also more aware of how business in their turn have an effect on nature. As an important

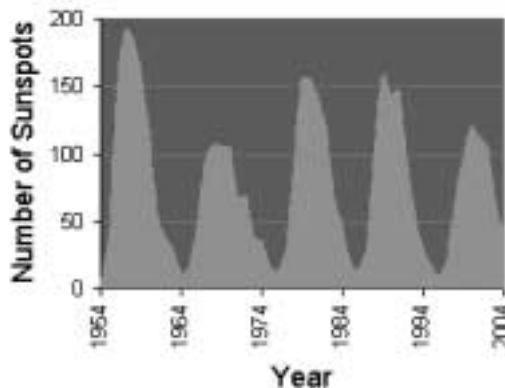
development in this direction is the issuing and trading of weather financial derivatives, in the stock exchanges, that are based on meteorological variables, like average temperature, humidity etc of various town in USA, and Europe. The main intended value of such financial derivatives is the hedging in the prices of commodities of energy consumption (like electricity, oil, natural gas etc) to eliminate waves of prices based on seasonality, but also to hedge for the systematic increase of the average temperature of the planet, and for the extreme weather phenomena.

Finally there is, of course, the restricted financial benefit in investments for individuals, enterprises, or domestic national economies, when forecasting is based on existing eternal cycles of nature. Budgeting becomes more successful. When the individuals are investing in capital markets, they are unavoidably based on faith, and even the metaphysical element is involved. Such a knowledge helps them to overcome fears, avoid bad decisions, based on public panic, control more their emotions, keep an optimistic metaphysical context, with positive hopes, helps them to avoid the worn-out of their soul, while at the same time it contributes in taking more successful financial risk management decisions.

2. The 11 years sunspot and the 11-years global climate meteorological cycle

In this paragraph we present some basic and useful to have in mind (while reading this paper) facts of the 11 years cycle. We have to enter the jurisdictions of three sciences: astronomy, meteorology, and ecology.

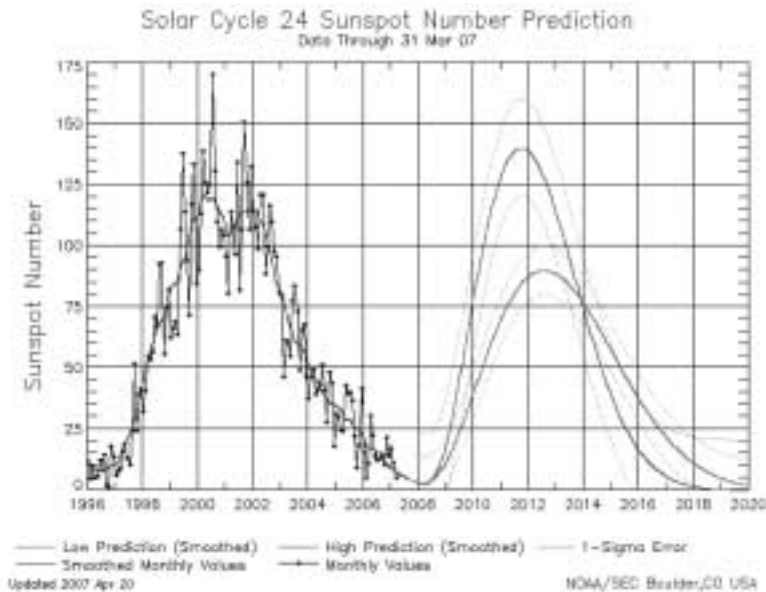
Figure 1:



From Astronomy: There is much material in the internet and some of the interesting sites and panels are mentioned in the references. The north and south magnetic poles of the sun, interchange every 11 years. After 22 years the magnetic north pole has returned back to its initial position. This phenomenon is parallel with a cycle in the number of appearing sunspots on the surface of the sun. The sun spots are observable as darker spots on the surface, but essentially they are a known effect of the “meteorology” of the solar plasma, as most probably are anti-cyclones of the solar plasma, in other words at this spot the plasma is rotating fast (like a vast tornado) generating strong magnetic field, and with an inward to the center of the sun direction. This blocks the radiation from inner layers to the surface, giving the appearance of the darker spot.

In the chart in this paragraph we see the cyclic behavior of the number of appearing sunspots when plotted in time. We must mention that although it is an astronomic cycle the period of 11 years, is statistically only constant with variations that maybe longer than one year! We see in the figures 1, and 2 that the last peak of the sunspots activity was during 2000, and the next peak is estimated during 2011 or starting 2012. The predictions mentions a delay of the next peak towards the end of 2011 or during 2012. In addition it is predicted that the intensity of this peak shall be much higher by a factor 30%-50%.

Figure 2:



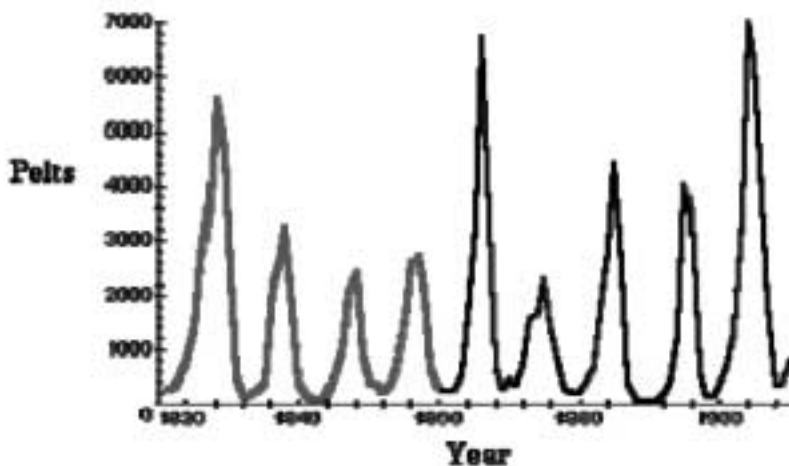
From meteorology: A very good book on weather cycles is that of Burroughs (see [4] references). Satellite measurements since 1978 confirm that the total output of the solar energy varies in cyclic way every 11-years in exact proportionality with the number of appearing sunspots. Also measurements of the earth's magnetic field give that the 11-years sun's cycle produces an 20-22-years earthly magnetic field cycle (Hale cycle). Thus through radiation, and through the solar wind that reaches the earth, (and which is responsible for the polar aurora phenomenon) the meteorological phenomena are influenced by the 11-years sun-cycle, to produce the 11-years cycle in the global climate. This cycle includes cyclic behavior of successive maxima-minima of earthly surface temperature, level of rainfalls, drought severities, electromagnetic storms, frequency of appearing tornados etc. A seemingly related famous meteorological cycle of the global climate, is the QBO (quasi-biennial oscillation) that seems to have period of 2.75 years ($11/2 = 5.5$, $5.5/2 = 2.75$). The QBO appears as a cycle of the speed of the stratospheric wind. In this short paper we presented only one major cycle that of the 11 years of the global climate. But we have found that there are at least 5 more cycles with their harmonics, that range from the 11 years to 5 minutes. The presentation and analysis of them cannot be the content of the present short paper. We hope to enlarge on them in other papers or in a book dedicated to them. All of the above cycles have also been discovered in meteorology. Meteorology has also discovered and studied longer cycles that range from 300 years to thousands of years that cannot be related with the modern form of capital markets.

From Ecology: Finally the sequence of causalities reaches the growth of life on earth. A most impressive example are the tree-rings. If we cut vertically a tree, we observe in its main body, rings that are the growth of the thickness of the body of the tree every year. These are the tree-rings. It is impressive that every 11-years the tree-rings are thicker. This means a more intense growth of the trees (dendroclimatology) This seems to be due to increased rainfalls, increased radiation, surface temperature extremes etc. Similar cycles appear in varves (layer lines) of clay, corals, ice cores, etc. The same 11-years cyclic behavior is observed in the water level of the lakes. It is obvious that the growth of grains in agriculture is more intense and follows the same 11-years cyclic pattern.

It has been also measured an impressive coincidence of the 11-years cycle with the number of lynx furs purchased by Hudson's Bay Company in the McKenzie river region from 1821 to 1910. This is seen in the figure 3, This reflects the periodic fluctuations of the species that traditionally is described by the Voltera's Prey-predator equations that do create oscillations. Nevertheless the real measurements prove that the coefficients of the Voltera equations are such that the actual period coincides with the 11-years cycle of the global climate. We see the

chart below. (Data from the Global Population Dynamics database, University College, London, England)

Figure 3:



3. How are the cycles detected in the time series?

In searching for cycles in time series it is of key importance to know technical ways to detect them. As with statistics, so with time series too, it is very easy to be misled when analyzing with standard ways the data. For example it is very easy to miss obvious cycles, or to think you have found cycles when in fact it is only a peculiarity of a particular piece of the sample. The present state of the art in academic research is such that on the same sample data many different and often contradicting models may fit quite well. Thus, the successful research, requires not only standard fit of a model, but at first exhaustive familiarization with the data. We have to observe them many hours and make many simple calculations with a calculator, in relation with the actual situation from which they emerge, before we start analyzing them in a more sophisticated way with many different techniques, in many different areas of the sample etc. After the wide success of the theory of the random walk and the efficiency of the markets, most of the research for cycles or cycles-based systematic correlations, became the least publicly enforceable category of ideas. We must mention also that different sciences are oriented to different techniques for cycles detection in time series. For example electric

engineering signal experts use FIR and IRR filters, and spectral analysis, of which the classical economist are not very familiar. Experts in seismology, use much different techniques. Physicists may, still use other techniques, like operator theory of quantum oscillators, that engineers or economists, or meteorologist may know very little. We must mention also that the Box-Jenkins parsimony of low p , q order e.g. ARMA(p,q) time series, would entirely make invisible long run cycles, that involve higher order, longer term memory.

To detect cycles in time series we may assume either stationary or non-stationary time series. But if the time series is assumed non-stationary, then the classical spectral analysis cannot be claimed to apply, as almost all of its theorems are proved for stationary time series. It is an assumption after all significant for the multitude of paths, rather than a single path. The fact that most time series models are fitted on a single path, explains why so many different models, fit to the same data. After all a stochastic process is defined on a sample of paths. Any one-element sample would be vague enough to support many different assumptions. A more reliable method is to produce, in a standard way many overlapping paths, of the same time interval (from a single long path or even better e.g. for indexes from all components securities of the index), and then let the data decide clearly if it is stationary or not process. In other words it is best to use the non-parametric data-generated process or time series.

An other phenomenon that, any researcher that has studied extensively, time series, will come to it, and seems to escape the dominating mentality of academic researchers of time series is the next: A spectral analysis based on the finest bins of the data, would not give the same cyclic behaviors, with analysis based on many different time scales, with many different larger bins. In other words the element of time scale and time bins, almost defines a different world of phenomena in the data, not derivable by a flat spectral analysis on the finest (smallest) time steps (bins). Similarly the relative size of the sample and the suspected major period of cyclic behavior, is very important factor in extracting the necessary information.

We find that the methods that meteorologist use to detect cycles in time series data, are the most natural, simple, and the ways that they fail to detect existing cycles have been quite well studied. We mention them briefly:

- a. *Sherman's statistic*: It is a simple statistical test based on a chart, that decides if randomly spaced, in time, events, are uniformly random, or are clustered in concentrations, or have a cyclic periodicity.
- b. *Spectral Analysis*: (see Lambert H. Koopmans 1995, [16] in references) A classical tool based on Fourier transformation, and available in many software packages. Its limitations are quite well known. We may add here new relevant techniques like the maximum entropy spectral analysis (mesa), that tries to make analysis

based on assumptions for the available data, that are maximally non-committal with regard to the unavailable data. Then the singular spectrum analysis that is detecting best anharmonic oscillations to the basic frequency (resorting to classical techniques of orthogonal functions and principal components).

- c. *ARMA, SARIMA, FIR, IRR filters etc*: The classical fit techniques of linear recursive models. If the characteristic roots are complex and not real, and of norm one, we detect cyclic effects. Economists usually avoid complex roots.
- d. *Wavelet analysis*: Originally used to study the way that the spectrum changes, when we move to successive intervals in the data. (see Percival D.B. et al 2000, [19] in the references) It reproduces the time series as superposition not of constant repeating cycles but as superposition of “shock waves” which, at a frequency start with low amplitude go to a maximum and then diminish again. Much like the sound of “vowels” in speaking. It is best for time series with many abrupt peaks, and the orthogonal base of “wavelets” can be after all, any of conceivable pattern.
- e. *Best frequency finder*: This is a technique devised by us, that we have used extensively in our research. It is a technique that does not seem to be known by the majority of the researchers, or at least used in their research. It would deserve a separate paper to describe it. Its goal is not to find all frequencies with their amplitudes, and phases, but to find the one and most strong frequency if it exist at all. It consists in fitting with ordinary least squares method, a linear recursive equation of the type $\Delta(x_n - x_{n-1}) = a x_n$. (See Goldberg Samuel [7] in references). The equations is so chosen that the least squares fit of it is very easily done, e.g. in Microsoft excel with the function Linest, and the coefficient a is estimated as slope of a least squares line. Such an equation, if the constant a , turns out to be negative, has complex, characteristic root, and thus models an harmonic cycle. If a is non-negative no cycle exists. If a cyclic frequency is found then it is the best frequency, of period T and afterwards we fit a classical Fourier series trigonometric term, on this period (defined by a) to find the best fit amplitude and phase.

When analyzing time series for cyclic behavior it would give more vivid results if we “detrend” the original time series. In this note we adopt a rather classical method: We apply the analysis not on the original series, but on the volatility time series of the original (volatility = standard deviation of the continuous time, one-step percentage rate of change). Even if the original time series was an “almost” (non-stationary) random walk, the detrended in this way would be an (stationary) “almost” white noise.

In this short note we shall use only the classical spectral analysis technique, to prove the existence of the 11-years global climate cycle in the prices of the stock exchanges.

4. The 11 years global climate cycle in the stock Exchange markets.

To prove the effect of the 11-years global climate cycle on the stock exchange markets we select the most highly stock traded index that of S&P500 of the CME (Chicago USA). We present a chart of its data from the period 1985-2006 in figure 4. We put a vertical line in this figure at the year of most recent solar sunspots peak. In the figure 5 we present the options implied volatility index VIX on S&P500, of the CBOE exchange. We put a vertical line in this figure at the year of most recent solar sunspots peak. We also plot a least squares fit of a 5-order polynomial that shows its slow periodic motion. This index is a kind of “de-trending” or “pre-whitening” of the index S&P500. We prefer nevertheless to calculate directly a “de-trending” or “pre-whitening” of the index S&P500 by taking its volatility. In particular we take its 10 days volatility adjusted for year scale. In other words we take the $x_n = \text{Squarer-root}(252) * \text{Standard-deviation-for-10-days-of-Log}(P_n/P_{n-1})$ Where P_n is the prices of the initial S&P500 index. The volatility is thus the standard deviation of the continuous time daily rate of change. We present this time series in the figure 6. We put a vertical line in this figure at the year of most recent solar sunspots peak. Then we apply spectral analysis for this volatility time series, that the periodogram by frequency is shown in the figure 7. The spectral analysis is calculated by the software SPSS. We put a vertical line at the frequency of the 11-years. We see also clearly the frequencies of harmonics of this cycle especially of the half 5.5 years cycle.

Figure 4:

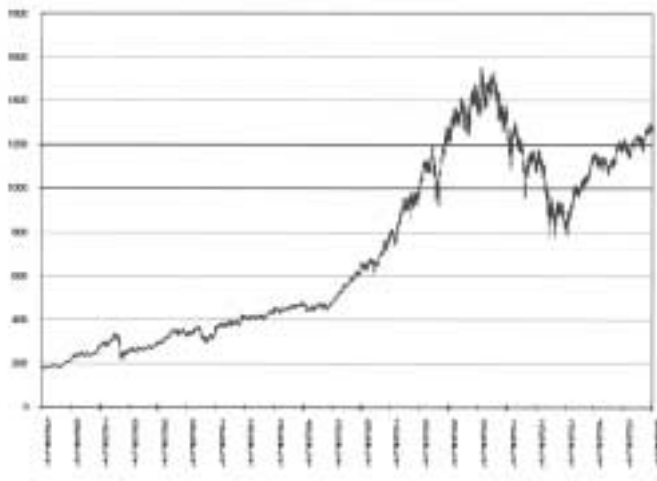


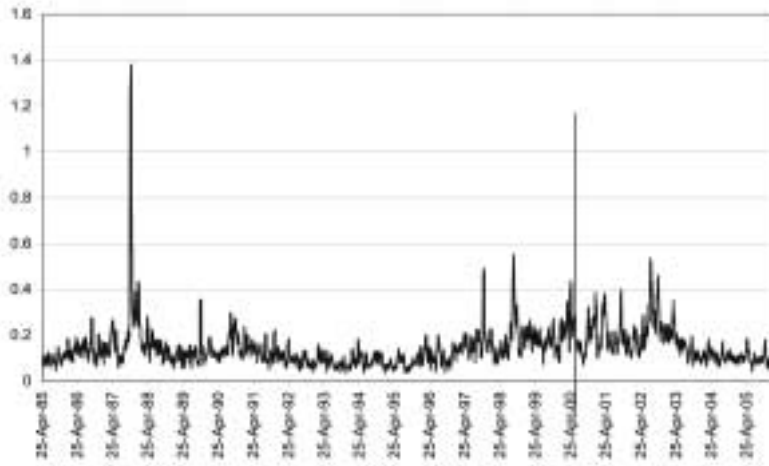
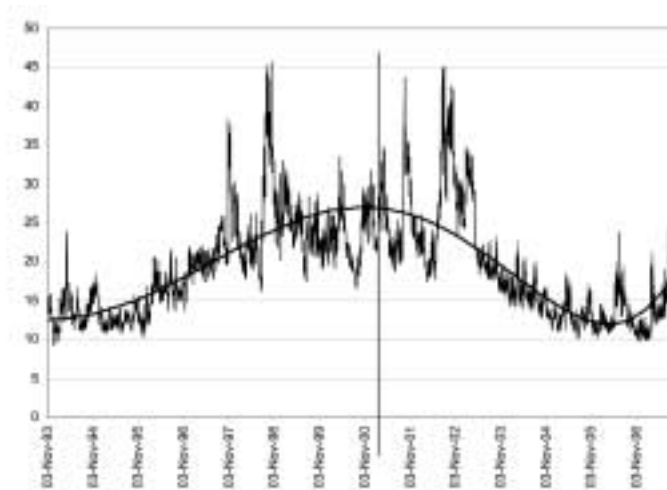
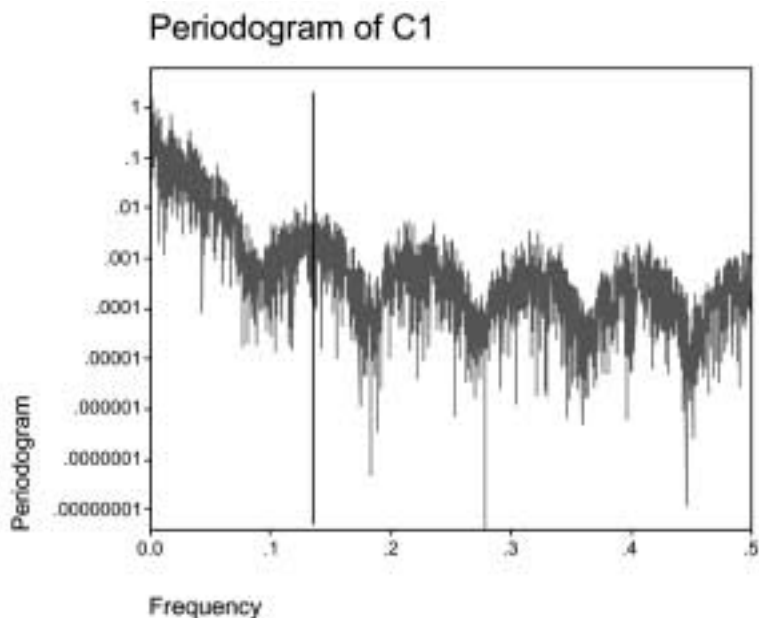
Figure 5:**Figure 6:**

Figure 7:

5. Sequences of causalities, demand-supply and cosmic habitforce.

In this paragraph we shall discuss the causalities behind the 11-years cyclic behavior of the capital markets. We have shown this behavior only for large stock Exchanges, like that of the CME, CBOE, ECBOT (futures on the index S&P500) at Chicago, in USA. But we have discovered the same cycle in many other large exchanges, including the vast Interbank Market of the cross-currencies exchanges rates, that is operated by the banks. The techniques and the volume of the results could not be appropriate for this short note.

Let us analyze, shortly, how the seasonality in the prices e.g. of grains like Soya, are explained by the balance of demand and supply in the classical seasonal cycle.

The Soya is not collected all the weeks of the year, therefore the supply of this grain is concentrated in a single season. The supply follows a cyclic annual pattern in time as time series. Assuming an average constant demand during the year, the balance of demand-supply (on higher supply on the same demand the prices decrease) would result in a time-series of prices that is annually cyclic in time. We

shall not complicate the reader with various types of equations of the balance of demand-supply (there is an extensive literature on it), but we shall be content that almost all of the systems of equations of demand and supply would give the above mentioned result. The previous is a well known and accepted fact. It is easy to extend it for an 11-years cyclic pattern of prices, if we know that the supply of Soya follows in addition, an 11-years cyclic pattern. This is plausible from what has been mentioned in the paragraph 2 on the 11-years cycle in ecology.

Similar arguments can be produced for the energy commodities like electricity, crude oil, heating oil, gasoline, natural gas etc. This time the supply may be considered in the average constant, while the demand by cyclic in time with period 11-years. In fact all the volume of the activities follows this cyclic patterns of 11-years. In the paragraph 3 we proved it for the 10-days volatility of CME index S&P500. It seems that it holds that the time series of volumes of transactions is very strongly and directly correlated to the volatility time series of the transaction prices (see e.g. Chen, Gong-Meng, Michael Firth, Oliver M. Rui, 2001 [1] in the references). It is classical in intrinsic value investments (see [22] in references, Warren Buffet 2001 p 84), that the prices of the stocks in the longer run (more than 2-5 years) follow the intrinsic value of the assets of an enterprise. And the value of the assets of an enterprise follows depends naturally on the tides of the volume of human activities and prices of raw input material and energy. Therefore we may safely conclude that the 11-years cycles exists also in the intrinsic value of the assets of enterprises. Therefore it is traceable as we prove in this paper in the volatility of the stock prices. But the volatility is also correlated to the volume of transactions. As the volume of transactions is directly related to the cash, and exchanges of currencies, we deduce that such a cycle is expected to be found in the currencies commodities too of the Interbank Market. In fact this 11-years cycle is not confined to the prices of the capital markets. It exists in all business activities, including real estate. It is only that in capital markets the data are easier available, and more sensitive in time.

Still we believe that the various paths of demand-supply balance in various industries, and through e.g. input-output equations among them, is not the whole system of the causalities that could explain this phenomenon. Maybe it is only one side of the coin. Probably there are deeper lines of causalities that go parallel to the demand-supply causalities. Andrew Carnegie the well known major owner of the steel industry at the beginning of the 20th century in USA, mentioned the term *cosmic habitforce*, to discuss how the various human activities in business tune between them like precession motion, have their own momentum conservation and eventually are compiled to the human subconscious. The size of this paper would not permit us to enlarge on it.

6. The value of the knowledge of the effect of nature's cycles on the growth of the wealth of nations

It is difficult to underestimate the value of such a prognostication, as the above, that was sketchy only presented, in the present short paper. We prefer to talk about prognostication which is a rather philosophical and social concept than mere stochastic process forecasting. The reason is that, as it seems, in modern sciences what is missing is not techniques and analysis, but a strong merging with good values and goals. It is usually said that prognosticating is of two kinds objective (if I do nothing such and such will happen) and subjective (if I do so and so, such and such will happen).

At first we shall mention some of the values in such a prognostication that refer not in the forecasting itself but rather on the nature of involved concepts and methods. As a scientific method the value has the next basic characteristics:

- 1) It is not narrow statistically phenomenological (mere technical analysis or mere econometrics)
- 2) It is multi-science
- 3) It is synergistically wise
- 4) It is based on inside the planet and solar system celestial physics predictable action and flow of energy.
- 5) It is based on the functions of life on earth
- 6) It is intriguing for self-knowledge and knowledge of interrelations of phenomena in different cosmic scales (astronomical, ecological, social etc)
- 7) It is still mainly unexplored in its full details from the scientific point of view
- 8) It is essentially optimistic as far as scientist's ability to handle the random, to forecast and realize that "pure randomness" and "chaos" may be in the scientist minds rather than in the hidden reality of the observed phenomena.
- 9) It gives to scientists, who love their quantitative work, the opportunity to prove that knowledge may bring directly good luck in wealth creation, when there is diligence for good risk management and the character in practice is strong, following not only the laws of the intellect, but also the laws of the emotions. In this way they may avoid the classical accusation of "paralysis by analysis" from the world of business to the world of academics
- 10) It gives hopes, for avoiding, public panic, economic disasters, suicides of individuals etc

During 20th century lived Buckminster Fuller, (see [3] 1981 references) a rare

and fine, global thinker that had omniscience wisdom, besides being a mellontologist (futurist). He was awarded by 42 honourable titles of various universities during the 20th century. We would like to quote him as he expresses once more the value of prognostication which is neither bad news neither good news but it can become good news to those that would respond appropriately and bad news to those that would ignore it. "...I am firmly convinced that I can see clearly a number of coming events, and I am therefore vitally, eager that people should not be hurt by the coming of these events, particularly when I can see ways in which it would be possible not only for them to avoid hurt, but even to prosper by and enjoy what now seems to me to be inevitable".

According to him wealth starts from physical energy, which is so abundant as coming from outside the planet, that humanity can be consider to consists from a few billions of "billionaires" in this energy and power. To quote him again:

"...Wealth is, then, the already organized human capability and know-how to employ the fixed inanimate, planetary assets and omni-cosmically operative and only celestially emanating, natural energy income, in such a manner as to predictably cope with so many forward days of so many human lives by providing for their (1) protection, (2) comfort, and (3) nurturing, and for (4) the accommodation of the ongoing development by humans of their as-yet-untapped store of intellectual and aesthetic faculties, while (5) continually eliminate restraints and (6) increasing the range and depth of their information-accumulating experience".

In the next, lets run through the scales from the individual to a government and a group of nations to state some of the benefits of the prognostication of the 11 years cycle.

- 1) The individuals in their investments and wealth creation can use such a prognostication so as to know what sequence of 5-6 years shall have almost year after year gains and which 5-6 years shall have year after year losses. Some of the successful millionaires have revealed in their books, one of their "secret rules of success in the capital markets". The rule is: "Buy whenever you have the funds and keep the assets at least for 10 years. Then during the next 15 years, find a year that the capital gains are satisfactory and sell". Obviously such a rule holds good because of the 11-years cycle. Furthermore this rule does not require that you know the phase of the 11-years cycle, in other words which year is the peak and which year the minimum. If they would also know the concept of the 11-years cycle and its source in nature, they could improve the rule, and reduce its duration from 25 years to just at most 11.

- 2) The brokers are also much interested in such a prognostication, as the volumes of their transactions follow also this cycle. We mentioned that the volatility of the index is directly correlated with the volumes of the transactions. Therefore the brokerage companies can budget reliably for their revenues and thus for the size of their human capital.
- 3) As the enterprises assets contain investments in the capital markets, or real estate, such a forecasting, is valuable to anticipate their revenues.
- 4) Insurance companies, may very well adjust the hazard rates of many insurable events. The hazard rates (not only of disasters originating from extreme weather phenomena, but also of car accidents, and human diseases) wave following the 11-years cycle. Thus insurance premiums can be in other sequence of years, cheaper, and in other sequence of years, more expensive, in all cases better handled by both insurance companies and insured customers.
- 5) Also for governments budget such a prognostication is valuable. The government can know when to expect capital gains or losses and also when to expect public satisfaction or discontent (usually their personal gains or losses in the capital markets are related faulty by the public to bad or good financial policies by the government)
- 6) Finally whole unions of nations can benefit by such a prognostication in the same way that a domestic government can. Industries production and operations, and not only capital markets are influenced by the 11-years cycle. Budgeting that takes in consideration this cycle is obviously a more realistic and successful budget.

If more investors are aware of this cycle, in their investment decisions, will have as effect by the supply-demand balance to smooth-out and reduce the severity of the wave. This is exactly what the Buy-and-Holders would wish for.

But to realize and make best use of such a prognostication in society and unions of nations, we must adopt the philosophical and practical attitude of win-win in the deals and interrelations. The creation of new wealth by new technology and procedures is unavoidably a wealth of all society not only of parts of it. This excludes the concept and belief of “zero-sum game” in the capital markets. Only the win-win attitude and principle is appropriate and true in the global economy. This win-win attitude goes parallel with a mentality of abundance of resources and technology, rather than a scarcity mentality of resources and technology in business and investments.

REFERENCES

- Benhabib, J., R.E.A. Farmer, (1999), *Indeterminacy and sunspots in Macroeconomics*, in J. Taylor & M. Woodford (eds.), *Handbook of Macroeconomics*, Volume 1A, Chapter 6, Amsterdam: Elsevier Science.
- Buckminster, R., (1981), *Fuller Critical Path*, St. Martins Press N.Y.
- Burroughs Williams James *Weather Cycles: Real or Imaginary?* Cambridge 2003.
- Chen, Gong-Meng, Michael Firth Oliver M. Rui, (2001), *The dynamic relation between stock returns, trading volume, and volatility*. *The financial review* 38, 153-174.
- Dewey, Edward R., (1967). *The Case for Cycles*. *Cycles magazine*.
- Duffy John and Xiao Wei, (2007), *Instability of Sunspot Equilibria in Real Business Cycle Models Under Adaptive Learning*, (University of Pittsburgh) (University of New Orleans) *Journal of Monetary Economics*, vol. 54, issue 3, pages 879-903
- Stephen Jewson, Anders Brix, (2005), *Weather Derivative Christine Ziehmann Valuation: The Meteorological, Statistical, Financial and Mathematical Foundations*. Cambridge University press.
- Goldberg, S., *Introduction to Difference Equation* Dover publications
- Goldstein H. *Multilevel Statistical Models* Wiley 1995, A classical and old book that contains practically all the essential ideas:
- Henry, Ludwell, (1914), *Moore Economic Cycles: Their law and cause* N.Y. The Macmillan C.
- Hmaied Dora, (2007), *The volatility-Volume relation around takeover announcements: A French Evidence. International Conference on Applied Business & Economics*, University of Piraeus, Greece, Proceedings
- Katz, Richard W. (Editor), (1997), *Economic Value of Weather and Climate*, Allan H. Murphy (Editor) *Forecasts*. Cambridge University Press.
- Koulakiotis, A., Angelidis, D., Kiohos, A. and Papasyriopoulos, N., (2007), *Impact of Creditor and Shareholder Investor Protection Difference between Markets on Volatility and Error Spillovers*, *International Review of Applied Economic Research*.

- Kyritsis C. and Kiochos A., (1999), *Optimal Portfolio from stocks of the Index FTSE/20 in the Athens StockMarket and the Period 1997-1999*, Archives of Economic History v. XII no, 1-2 pp 147-156.
- Lars Tvede, (2001), *Business Cycles*, Routledge
- Lambert H. Koopmans, (1995), *The spectral Analysis of Time series* Academic press.
- Longford Nicholas T. Random, (1993), *Coefficient Models* Oxford Science Publications.
- Malliaris A.G. and Brock W.A., (1982), *Stochastic Methods in Economics and Finance* North-Holland.
- Panagopoulos, An. and Panagopoulos, Al., (2005), *A time series method for occupancy forecasting—A case study of West Greece*, Archives of Economic History, Volume XVII, No1, p. 67-78.
- Percival D.B. and Walden T. A., (2000), *Wavelet Methods for Time Series* Cambridge.
- Pintus, Patrick A., (2006), *Sunspots in Real Business-Cycle Models with Complementary Inputs*, February 10, 2006 2003 Society for Economic Dynamics Universite de la Mediterranee Aix-Marseille II and GREQAM.
- Tsoukalas John D., (2004), *Can a Sunspot Driven Model Replicate Recognizable Business Cycles?* (University of Maryland and Bank of England) *Ekonomia*, vol. 7, issue 2, pages 89-120
- Warren Buffet and Cunningham, L. (2001), *The essays of Warren Buffet:Lessons for Corporate America*. ISBN 0-9664461-1-1

Internet links

A link for recent forecast of the next peak of sunspots:

http://www.innovations-report.com/html/reports/earth_sciences/report56294.html

A link for solar influence data center:

<http://sidc.oma.be/LatestSWData/LatestSWData.php>

For next solar cycle prediction

<http://www.sec.noaa.gov/SolarCycle/SC24/index.html>

PUBLIC RELATIONS AND THE COMMUNICATION OF CORPORATE IDENTITY: AN EXPLORATORY INVESTIGATION

A. PANAGOPOULOS*

D. STERGIU**

Abstract

Today, all leading hospitality organisations offer excellent services, which for that reason can no longer offer sufficient differentiation. Accordingly, the need for organisations to portray a unique identity is more critical than ever. Even though identity emerges as a significant corporate asset, hospitality research has not paid serious attention to corporate identity communication. In this connection, this paper presents the findings of a study of the ways in which five-star city hotels in Athens reveal their corporate identity through PR. Semi-structured interviews were carried out with a sample of PR/marketing directors in the participating hotels. The results suggest that most hotels have taken on board the concept of corporate identity. Yet, confusion over the relevant terminology continues to rage.

JEL classification: L83, M31.

Keywords: corporate identity, public relations, hotels, Greece.

1. Introduction

Management scholars argue that corporate identity is an essential part of powerful corporations. A strong corporate identity can differentiate a firm from its competitors (Dolphin 2004), significantly enhance financial performance (Cooper 1999), influence customer's buying behaviour (Nguyen and Leblanc 2001), and have a strong impact on stakeholder loyalty (Balmer 1995). However, while there is a great deal of evidence to show that organisations have become more interested in the benefits that management of the corporate identity might bring (Van Riel 1995), much ambiguity exists as to how firms should do this (Ruth and York 2004). One area characterised by such ambiguity is related to the way in which an organisation reveals its identity through communication, and in particular through the use of public relations (PR). Indeed, noticeably absent from relevant

* Associate Professor, TEI of Patras, Department of Tourism Management.

** Lecturer, TEI of Patras, Department of Tourism Management.

discussions has been any significant body of research concerning what corporations are actually doing in the way of adopting identity management as a separate and substantial aspect of PR (Hutton et al. 2001). Past studies have attempted to provide some evidence regarding the ways in which firms can communicate their identity to key publics through PR, but most discussions have remained only theoretical (see Davies and Miles 1998; Hutton et al. 2001).

From the point of view of tourism and hospitality management, corporate identity is considered as a crucial element that determines the success of an organisation. Today, all leading organisations offer excellent service and facilities, which for that reason can no longer offer sufficient differentiation (Morgan et al. 2003). As a result, the need for organisations to portray a unique identity is more critical than ever. As Nguyen (2006) argues, even for a tourist who has never visited a hotel, a particular place, or even a country, this identity is his first impression of the organisation and may have a great influence on their buying intentions. Yet, although identity emerges as an undoubtedly significant corporate asset, to the very best of the author's knowledge corporate identity has not been the subject of serious hospitality research. Although a sizeable amount of previous research has attempted to address the concept, it is fair to say that most discussions have been framed around the associated concept of image, while at the same time focusing on the destination rather than the corporate level (see Hosany et al. 2006). Not surprisingly, tourism and hospitality research is marked by the absence of any systematic effort to understand issues related to the way in which organisations communicate their corporate identity through communication (including PR). This missing element has not gone unnoticed. Indeed, Oh et al. (2004) identify the paucity of PR studies in the field. They estimate that out of a total of 97 outputs in hospitality marketing research for the period of 2002-2003, only 2.1 percent has analysed issues related to PR. The same source suggests that corporate identity did not appear as a significant topical research trend in the reviewed studies.

Against this background, there seems to be a clear need for research which is focused directly on the way in which hospitality organisations reveal their corporate identity to key publics through PR. It is in connection with this last point that this paper seeks to add a perspective by addressing issues about the nature of corporate identity and PR as an important aspect of communicating that identity. In the absence of any significant body of research in the field of hospitality marketing, the analysis is placed within the broader literature on corporate identity management and PR and is used as a specific context in which to focus on relevant questions within the context of the hospitality industry.

2. Defining the constructs

The subject of corporate identity has attracted interest among marketing academics and practitioners over the last three decades. Following the work of practitioners, such as Bernstein (1984) and Olins (1990) and academics such as Topalian (1984) and Gray and Balmer (1998), among others, knowledge and understanding of the concept has grown considerably. Evidence for this upsurge of interest in corporate identity has been reflected in the number of studies on the concept and the increased number of consultants offering services in this area (Markwick and Fill 1995). Brown and Cox's (1997) call for research on corporate image, reputation and identity, and the recently formed International Corporate Identity Group (Markwick and Fill 1995) also provide evidence of the increased attention this subject is receiving. Nevertheless, despite the increasing number of studies published in this area, defining corporate identity is a challenging task given that it is difficult to conceptualise. A subtle indication of this is given by Dolphin (2004: 78) who observes that "confusion has raged over the last 40 years as to whether image, identity and reputation are synonymous, or whether they differ starkly". Indeed, these concepts frequently appear in the literature as identical, as totally separate concepts or as interrelated phenomena, depending on the viewpoints adopted (Gotsi and Wilson 2001). Against this background the following sections consider the literature in an attempt to explore each of these concepts and the linkages that exist between them.

2.1 Corporate identity

Although the term identity is clearly defined by the Collins English Dictionary as "the individual characteristics by which a person or thing is recognised" (Markwick and Fill 1995: 397), over the years authors in this area have adopted different definitions for the term. This is confirmed by Davies (2003) who argues that because the study of corporate identity is relatively new, some of its terminology has yet to be standardised. It is therefore the aim of this section to review viewpoints in the literature regarding what is actually meant by the term corporate identity, in an attempt to clarify the concept.

The literature review has indicated that throughout the years definitions offered for the term corporate identity by marketing academics and practitioners could be broadly merged into three dominant views. These include the graphic design paradigm, the integrated communications paradigm, and the interdisciplinary paradigm (Van Riel and Balmer 1997). Referring to the first view, a number of

authors define the term corporate identity in a way that appears synonymous with tangible imagery. The following quote captures the essence of this view:

“Corporate identity is the outward manifestation of the organisation ... It includes the corporate logo, but it also includes the house style use on its letterheads and corporate publications, interior and exterior design of buildings, staff uniforms and vehicle livery, and packaging and products”. (Blythe 2000: 112)

This view of corporate identity as a visual means of identification is mainly based on the assumption that visual elements are memorable and their recognition level can be very high (Balmer and Wilson 1998). For example, McDonald’s golden arches are recognised worldwide. From a similar perspective, Baines et al. (2004) note that the most splendid liveries of modern companies have been those of airlines and that livery is one of the most effective ways of establishing corporate identity.

The second dominant view believes that organisations should be focusing on the way in which they reveal a consistent identity through a planned communication scheme. By adopting Van Riel and Balmer’s (1997) perspective, consistency in communication should be used by organisations in order to develop a coherent sense of self and deliver it to their stakeholders. This view is shared by Markwick and Fill (1995) who note that these planned communications should be orchestrated so that consistent messages about the organisation are delivered to specific target audiences. According to Gray and Balmer (1998), the methods of these communications should be defined in the broadest possible sense because stakeholders are influenced in many ways. Thus, they may include almost everything, from the way telephones are answered to the design of corporate buildings and their interior layout. For instance, even the corridor lampshades in a Hilton hotel conform to the Hilton corporate identity scheme, as do the serviettes on most airlines. However, it is important to point out once again that most discussions on the aspects of communicating corporate identity to key publics have remained only theoretical.

Within the broad purview of writings in the third dominant view, authors typically sought to transfer the attention of researchers on corporate identity from concern for visual representation and communication alone to a more balanced consideration of the concept. At issue was the proposition that the use of visual cues alone can be misleading and, in order that we understand an organisation at a deeper level, other cues must also be taken into consideration (Van Riel and Balmer 1997). The perspective is well expressed in a statement by Markwick and Fill (1995: 397):

“Corporate identity is projected to stakeholders using a variety of cues ... Some of these cues will constitute the organisation’s visual identity. Other cues will focus on behaviour, the actions of the organisation and other forms of communication”.

Howard (1998: 141) also adopts Markwick and Fill's (1995) perspective and uses the term corporate identity to "encompass all the ways a company identifies itself". Van Riel (1995), who thinks that corporate identity refers to the self presentation of an organisation and thus consists of the cues that it offers via its symbols, communications, and other signals, also supports this view. However, at the same time, unintentional or emergent messages are also being transmitted. For example, within the context of the hospitality industry, a service that fails to deliver the expected quality could counteract the impact of any planned cues. In this regard, it is the totality of these identity cues that an organisation uses either deliberately or accidentally to present itself that serves as the theoretical ideal unit of inquiry for the interdisciplinary paradigm researcher.

As the discussion above suggests, corporate identity is the reality of the corporation. It refers to the distinct characteristics of the organisation or, as Balmer (1995) states very simply, what the organisation is. In this matter he fully agrees with Markwick and Fill's (1995) observations about corporate identity that the concept refers to the organisation's presentation of itself to its various stakeholders and the means by which it distinguishes itself from all other organisations.

The management of corporate identity involves the interplay amongst the company's business strategy, the business values and beliefs of its top executives, its corporate culture, and its organisational design (Balmer and Gray 2003). Olins (1990), who thinks that corporate identity is the articulation of what the organisation is and is linked to the way an organisation goes about its business and the strategies it adopts, also supports this view. The interaction of these factors results in differentiating the firm from all others, making the organisation distinct (Gray and Balmer 1998). In Howard's (1998: 142) words:

"A successful identity does much more than simply create an identification for the organisation ... the identity should create something memorable and distinctive about the organisation, something that enables the organisation to stand out from the crowd".

All organisations have a corporate identity. Some organisations actively seek to manage their identities while others take less care, confuse their audiences, and inadvertently contribute to the formation of negative reputations (Fill 1995).

2.2 Corporate image

The way stakeholders perceive an organisation's identity cues, shapes an image which is formed in their minds and will influence their subsequent actions towards the organisation (Bernstein 1984; Dowling 1994). Corporate image can be said to

be “the totality of a stakeholder’s perceptions of the way an organisation presents itself” (Markwick and Fill 1995: 398) – or, stated very simply, what comes to mind when one sees or hears the corporate name or sees its logo (Gray and Balmer 1998). Corporate image is often used interchangeably with terms such as organisational image or institutional image (Lemmink et al. 2003). Essentially, these concepts are all the same and therefore the term “corporate image” will be used for the purposes of this study.

Images are shaped through encounters with the characteristics of the organisation, such as business name, range of products/services, ideology, and the impression of quality communicated by each person interacting with the organisation’s clients (Nguyen and Leblanc 2001). As such, corporate image has two main components: the functional and the emotional. The functional component is associated with tangible indicators of image which can be easily quantified and measured while the emotional component is related with psychological dimensions which are manifested by beliefs, feelings, knowledge and impressions about the organisation (Barich and Kotler 1991; Nguyen 2006). Taking into consideration the aforementioned views, Andreassen and Lindestad (1998: 84) suggest that corporate image can be described as “a function of the accumulation of purchasing/consumption experience over time”.

Many authors have indicated the advantages a positive image can generate for an organisation. Lemmink et al. (2003), drawing from the work of Fombrum and Shanley (1990), mention the following advantages: the generation of surplus profits for firms by hindering the mobility of competitors in an industry, the firm may be able to charge higher prices by signaling consumers about product quality, attracting investors and better-qualified applicants. In addition, Nguyen (2006) suggests that the concept of corporate image is important because it relates to the customers’ perceptions of the goods and services offered, customer satisfaction, and customer loyalty. Corporate image can, therefore, be a valuable asset to any organisation (Dowling 1994).

Each organisation deals with several stakeholders, each with different types of experiences and contacts with the organisation. When an individual is exposed to an organisation, he or she will automatically begin to form an image of the company (Lemmink et al. 2003). In view of the fact that image formation is an individual process, each stakeholder will hold a different image of the organisation, shaped by their distinct backgrounds, objectives, and exposures to the identity cues presented by the organisation (Markwick and Fill 1995). Indeed, Dowling (1993) considers this diversity of images as an essential principle on which the management of corporate images is built. Image, therefore, exists in the mind of each stakeholder and for this it cannot be managed directly. Rather, management

seeking to influence the images held of their organisation can only achieve this through the management of the corporate identity (Markwick and Fill 1995). By communicating coordinated identity cues, images may be altered in the minds of recipients.

2.3 Corporate reputation

Corporations, as stated in the previous section, want to project a positive image to their stakeholders. They also yearn for a favourable reputation in the minds of these constituents (Gray and Balmer 1998). As Rose and Thomsen (2004) make clear in their work on the impact of corporate reputation on performance, management in corporations devotes a substantial part of its resources and effort to maintain and improve their corporation's reputation, which is perceived as vital for the success and survival of the firm. Indeed, multiple benefits accrue to a firm with a favourable reputation. A sound reputation is crucially important to a firm because it can considerably enhance financial performance through its ability to attract customers, investors, and excellent employees; to motivate suppliers; and to provide a cushion of goodwill when crises hit (Fombrum 1996; McMillan and Joshi 1997; Davies 2003). Additionally, Fitzpatrick (2000) believes that consumers' buying decisions are increasingly influenced by a company's reputation. Dolphin (2004) also adopts this perspective and argues that corporate reputation is a valuable input to the decision-making process of customers, acting as a mechanism for assuring product/service quality and influencing customer loyalty. Ruth and York (2004: 14) summarise the situation well in the following passage:

“Firms with low reputational capital are often disadvantaged relative to rivals, finding it more difficult to charge premium prices, attract and retain customers, sell stock, recruit and retain top employees, and form relationships with suppliers”.

Therefore, a favourable reputation emerges as a valuable intangible asset which enhances an organisation's financial value as well as influencing buying intentions (Dolphin 2004).

Developments in the theory of corporate reputation have been well documented in a number of cross-disciplinary reviews of the relevant literature (see Balmer 1998; Fombrum and Rindova 1996; Gotsi and Wilson 2001). The common proposition appearing explicitly in these studies is that authors with different disciplinary backgrounds adopt different definitions for the term corporate reputation, based on their disciplinary perspectives. For example, “economists analyse issues of reputation in relation with product quality and price [while] organisational researchers examine reputation as a social entity” (Nguyen and Leblanc 2001: 228). Yet, despite inconsistencies in the vocabularies rendering the

term difficult to define, one can observe the consensus on the essence of the concept of corporate reputation: it is a result of a company's past actions (Ruth and York 2004). Corporate reputation may be viewed as a reflection of the historical impacts of previously observed identity cues and transactional experiences (Markwick and Fill 1995). Thus, corporate reputation has a historical dimension as it represents: "an aggregate perceptual judgement of various stakeholders of the organisations' past actions, the outcome of repeated interactions and cumulative experience". (Dolphin 2004: 79)

This definition reflects reputation as an organisational attribute associated with stakeholders' perceptions of the firm. Consequently, the formation of corporate reputation emerges as a process that accumulates the judgements over time of the various stakeholders who interact with the organisation (Herbig and Milewicz 1993). From this, it follows logically that the nature of a firm's reputation depends on the results of its perceived actions in this period. If the organisation repeatedly succeeds to fulfill its promises it should have a favourable reputation; and inversely, the firm's failure to respect its expressed intentions may create a negative reputation (DiFonzo and Bordia 2000).

3. Corporate identity and PR

Corporate identity, as stated earlier, is potentially aimed at any audience that has some stake at the company's well-being (Rose and Thomsen 2004). As Rossiter and Percy (1998) observe, a company must look at its product, material and funds suppliers, at regulators (such as government and industry bodies) and competitors, at its own employees (both management and staff), and to its customers, be they distributors or final consumers. Indeed, as already indicated, corporate identity refers to the way in which an organisation reveals its philosophy and strategy through communication to key internal and external publics. From this basic platform, it follows logically that the linkage between identity and an organisation's potential target audiences is primarily through corporate communication (Ind 1992). Gray and Balmer (1998: 696) describe corporate communication in a way that lends support to this view:

"Corporate communications is the aggregate of messages from both official and informal sources, through a variety of media, by which the company conveys its identity to its multiple audiences or stakeholders".

A further view of the link between identity and the company's diverse stakeholders is offered by Rossiter and Percy (1998), who state that an important aspect of communicating that identity to audiences is through the use of PR. In

their terms, other communication activities are less widely used and less broadly applicable than corporate identity and PR, which are activities that all companies undertake, whether in a planned way or not. Using Rossiter and Percy's (1998) interpretation, then, PR emerges as the dominant communication function of corporate identity. Hutton et al. (2001) also qualify this point strongly when they observe that if the building of corporate identity is to emerge as a significant business function, it should rest on a foundation of what is traditionally termed PR. This is also supported by Gray and Balmer's (1998) treatment of the theme, who argue that corporate identity is typically seen as the province of the PR department.

What is of interest here with respect to the above analysis is that most companies have an array of diverse publics or stakeholders to which their corporate identity is presented and, therefore, their PR directed. Within this context, the communication function of PR activities is either to create an intended image or to build a favourable reputation in the minds of the company's principal stakeholders (Balmer 1998). This line of thinking is also evident in the work of Rossiter and Percy (1998), who argue that conceptually, corporate identity is the use of consistent identity cues to enhance corporate reputation and corporate image. Put simply, corporate identity is the set of identity cues, and corporate image and corporate reputation are the communication effects as responses. This is also the view of this study regarding the proper treatment of the concept of corporate identity and PR. The proposition put forward is that PR is the nexus between the company's identity and its image/reputation.

4. Methodology

An exploratory investigation was deemed appropriate consequent to the paucity of previous research in the area. Exploratory studies are suitable for probing new areas which may rest on still unintegrated theoretical, hypothetical and methodological arguments, and where relatively little is known about a subject (Churchill 1991). In view of that, the aim of the study was to establish frameworks for future analysis rather than to specify and test particular hypotheses per se.

Information was collected via a semi-structured interview schedule comprising of three sections. The first part collected some basic data concerning the hotels' PR or marketing department, staffing, and the extent to which hotels undertook dedicated corporate identity communication work. The second section queried the nature of the PR activities undertaken by the respondent hotels with the purpose of communicating their corporate identity. It collected data regarding perceptions

of corporate identity and the hotels' major stakeholders. Respondents were also presented with a list to assess the use and effectiveness of six major PR activities for communicating corporate identity. They were also requested to report any PR activities not listed and a recent example of how one or more of these activities was effective. The final section gathered respondents' views on the role(s) of corporate identity within their own organisations and explored their perceptions and opinions regarding corporate identity generally.

The interview schedule benefited from the use of both "open" and "closed" questions. A closed or pre-coded question is one in which only answers which fit into categories that have been established in advance by the researcher are allowed (Bryman, 2004). The researcher, in this case, instructed the respondent to answer by selecting from a range of options. The options were restricted to as few as two or included lists of alternatives from which the respondent could choose (referred to respectively as dichotomous and multiple-choice questions). It is useful to point out that the final section of the interview consisted of thirteen attitude statements and respondents were asked to place themselves on an attitude continuum within the parameters of a contrasting pole (strongly agree-strongly disagree). In this case the research made use of a five-point Likert scale. Open questions were not followed by any kind of choice and the respondent was given freedom to decide the aspect, form, detail and length of his answer.

The interview schedule was pre-tested by consultation with a panel of academic experts in the PR and hospitality fields plus executives in three leading Greek marketing consultancies, one of which specialised in tourism and hospitality marketing. This pilot exercise worked fine and only minor amendments were made to the questions. The target population of the hotels that was used for the study were all eleven Athens five-star city hotels, which were listed in the Attica Hotel Association (2006) website at the time of the research. The study sample could be said to be almost wholly representative of the target population because interviews were conducted with directors from nine of these hotels. Although an attempt to secure an agreement to be interviewed was attempted with the prospective interviewees from the remaining two hotels, they did not wish to participate in the study. Prospective interviewees and the researcher arranged a mutually convenient time for the interview. Finally, it should be stressed that when arrangements to meet respondents were made, a promise of confidentiality of any data obtained was made. This confidentiality applied to the responses of individual respondents and the names of the participating hotels, none of whom is identified in any part of this paper.

5. Findings

The presentation of the findings begins with some information regarding the hotels' profile, and some basic data regarding their PR or marketing department, staffing, and the extent to which hotels are committed in undertaking corporate identity communication work. The discussion then proceeds to the presentation of data concerning PR activities in use by the respondent hotels, and the perceived effectiveness of these activities for communicating corporate identity. Data is also presented regarding definitions of corporate identity and the hotels' domestic market stakeholders. In this part of the findings, material is analysed by using a qualitative approach. The focus here is on words rather than numbers as the unit of analysis. Hence, the data analysis is less a completely accurate representation (as in the numerical quantitative tradition) but more of a reflexive interaction of the researcher with the decontextualised data that are already interpretations of the interview encounter. The aim is to delineate units of meaning relevant to the research objectives and to decide whether there seems to be some common theme that unites several of these units. Finally, study findings are presented regarding respondents' views on the role(s) of corporate identity within their own organisations and their perceptions and opinions regarding corporate identity generally. Essentially, this part of the findings is based on total sample distributions of the attitude statements. However, it should be stressed that the purpose here is to assist the interpretation of the investigated phenomenon rather than to draw statistical inferences. This is due to the small number of respondents which does not allow statistical manipulation or generalisations to be made. From the above, it follows logically that the sequence in which the findings are presented follows the sequence in which data was collected during the interview process. This plan of presentation is used to facilitate understanding of the analysis of the gathered data.

5.1 General data

All nine hotels in which interviews were undertaken are city hotels in Athens with five-star quality ratings. The capacity of the hotels ranges from 143 rooms to 559. As may be expected in city hotels, guests are either holidaymakers or corporate customers. Conference and exhibition facilities are available in all hotels. Directors responsible for PR in the nine hotels were interviewed. Three of them were PR Directors and the remaining six were Marketing & Sales Directors. None of the hotels had a separate PR department. Instead the PR function was undertaken within the Marketing & Sales department in all hotels. This is in line

with findings by Kotler et al. (1998) that while in the past it was common for the PR function and the marketing function to be handled by two different departments, today these two functions are increasingly integrated. This is an early indication that the respondent hotels are calling for market-oriented PR, i.e. they want their PR activities to contribute towards marketing the company. Indeed, when probed to comment on the responsibilities of their department, most respondents indicated that this was to serve marketing purposes.

In all hotels, the number of people employed by the Marketing & Sales department was 1-5. Within these departments, only three hotels have a separate person or section solely dealing with corporate identity issues. This again triangulates well with the work of Kotler et al. (1998) which suggests that a number of hospitality organisations are establishing marketing PR groups to support corporate promotion and identity- making directly. The majority of these departments (six) spent less than 5 per cent of their time on corporate identity issues; three departments spent between 6 per cent and 10 per cent of their time. Not surprisingly the three departments devoting more time to identity matters are those having separate persons solely dealing with such matters. What is interesting, however, is that these three departments are those having a PR director. In relating this finding with Kotler et al.'s (1998) earlier comment on the establishment of PR groups to support corporate identity matters, there is a possible indication here that PR efforts within the respondent hotels are supportive of corporate identity activities.

5.2 Communicating corporate identity

To get an indication of how corporate identity is understood by the PR executives participating in the study, the opening question of this section asked respondents to provide a definition of the term. Answers to this question raised an interesting issue, that corporate identity is often seen as synonymous with corporate image. One respondent, for example, reflected the core idea as follows: "Corporate identity is the immediate mental picture that consumers have of an organisation". In a similar way, another respondent defined corporate identity as "the total impression of a company that exists in the minds of the consumers". This is not the same as corporate identity which relates to the self presentation of an organisation and thus consists of the cues that it offers via its symbols, communications and other signals. Rather image represents a mental interpretation on these cues. This finding can be considered as indicative of the ambiguity characterising the concept of corporate identity. However, it is also interesting to note that four respondents offered definitions that are consistent

with the concept of corporate identity depicted by the conceptual framework of this study, i.e. the “self presentation of an organisation to its various stakeholders”. This is a heartening result as it indicates a degree of agreement between the practitioner and academic domains that is usually not the case in the field (Bennett and Kottasz 2000).

When asked to describe their hotels’ corporate identity as this is projected to their stakeholders through the use of PR activities, six respondents argued that their identity is built around their organisations’ distinct characteristics, which had a consistent pattern: (1) quality, (2) location, and (3) customer service. When probed to comment further on that, they stated that the interaction of these characteristics results in differentiating their hotel from all others, making their brand distinct. However, within the context of the particular segment of the Greek hospitality industry it seems that these characteristics are the norm rather than a basis of differentiation. In this sense, an identity built around these characteristics does not appear to be compelling enough to convince customers that superior performance is likely; they fail to create a unique identity for the hotel. In acknowledging this, one respondent argued that in addition to these characteristics, a principal component of their hotel’s corporate identity is a strong corporate culture that highly values company loyalty. Finally, one respondent found it difficult to respond to the question and stated, rather vaguely, that the corporate identity of their organisation is difficult to define

As regards the PR objectives relating to the hotels’ corporate identity, these were defined by all respondents as: (1) informing potential customers about the hotel’s identity; (2) persuading customers to think or act in ways that benefit the organisation; and (3) keeping existing customers aware of the organisation’s corporate identity. Most interestingly, these objectives represent three distinct orientations of PR practice as exemplified by Hutton (1999): public information, persuasion, and reminder. Two respondents indicated that “creating competitive advantage through product differentiation” was another relevant PR objective. In this case, PR efforts were aimed at attracting attention to specific features of the hotel that are not available from their competitors.

When asked to identify the major stakeholders targeted by their PR efforts with the purpose of communicating their corporate identity, all respondents indicated that these are holidaymakers, corporate customers, and tour operators. It is evident from this that customers have a central role in the corporate identity efforts of the respondent hotels. Of course this was to be expected. Earlier statements such as “the immediate mental picture that consumers have” or “the total impression ... that exists in the minds of the consumers”, as well as the PR objectives exemplified in the previous paragraph, all provide evidence of this

orientation. This clearly makes sense, but it represents a narrow perception of corporate identity communication.

Respondents were then presented with a list to assess the use of six major PR activities for communicating corporate identity. Following responses to this question, all hotels undertook press relations, product publicity, and sponsorship activities. Generally, press relations are undertaken by placing newsworthy information into the media to attract attention to the hotels' services. Also in relation to this, five respondents said that it is common practice to invite members of the press to stay at the hotel for a night, to dine in the restaurant, and enjoy the facilities of the hotel. The purpose of this is to cultivate good relations with media correspondents and consequently get written about favourable in the press. Product publicity efforts are directed towards generating media coverage at a minimum cost. Put simply, product publicity – as depicted by response within the context of this study – happens when media voluntarily decide to talk about the organisation and its services. Sponsorship mostly takes the form of financial support for sport and cultural events. Only two departments undertook counseling and this was directed at issues of environmental conservation, i.e. the actions they have taken to help protect the environment. What is remarkable is that none of the participating hotels undertake crisis management. This, the researcher feels, is unfortunate. The vulnerability of the hospitality industry to external events is considerable and the potential of damage to corporate identity incurred by such events needs PR management to be in place to deal with them (Middleton and Clarke 2001). Lobbying was the other activity of the presented list that was not undertaken by any departments. However, it is possible that given the "sensitive" nature of lobbying as a PR activity (i.e. it deals with influencing legislators and government bodies), respondents were reluctant to answer questions about it.

Respondents were also requested to report any PR activities not mentioned in the previous list. Seven respondents stated that their departments rely extensively on communication materials to create a favourable identity. These include newsletters, and audiovisual materials. Newsletters are used to help build the hotel's identity and convey important messages to target audiences. Audiovisual materials, such as videos are sent to prospective customers to give them a flavour of how the hotel operates. This provides a three-dimensional feel for the place that cannot be captured by a prospectus. These seven hotels have also developed a short video aimed at travel agents, tour operators, and other members of the distribution channel. Two departments used audio cassettes to provide a feel of the relaxing atmosphere experienced in their fine dining restaurants. Three respondents reported conducting PR activities using the Internet. These include product and service information, and press releases. In the first case, hotel websites

devote most of their web pages to descriptions of their products and services. As far as press releases on the Internet are concerned, websites have one or more pages devoted to recent press releases. Brassington and Pettitt (2000) point to the appropriateness of using the Internet for PR activities noting that the general look and feel of a corporate website can significantly enhance (or detract from) the organisation's overall identity. Interestingly, two respondents reported advertising as another PR activity that was not listed. When they were asked to clarify what sort of advertising they referred to, they said that what they were talking about was not the promotion of a specific service, but rather the type that concentrates on the hotel's name and characteristics. This sort of advertising, of course, lacks the impartiality of publicity. However, as a means of reinforcing corporate identity it holds the promise of being effective by reaching members of most publics.

Most of these activities were found to be moderately effective. The activities, number of departments who had ever used them, and mean effectiveness of those who had are presented in Table 1.

Table 1. *PR activities and mean effectiveness ratings.*

<i>PR activities</i>	<i>Number of departments who have used them</i>	<i>Mean effectiveness</i>
Press relations	9	2.5
Product publicity	9	2.7
Sponsorship	9	2.7
Counselling	2	1.5
Internet	3	2.3
Newsletters	7	2.5
Audiovisual materials	7	2.5
Advertising	2	2.5

In general, the most effective and most popular strategies were product publicity and sponsorship. Counselling was the least popular and least effective activity. All but one mean ratings were above medium average effectiveness. However, it should be stressed once again that these mean scores are given for illustrative purposes only. The purpose here is to provide insight into the investigated phenomenon, and by no means to draw general conclusions based on statistics inferred from as few as two respondents. Once again, when respondents were asked to indicate how each of these activities is related with different stakeholders, they clearly stated that all activities are directed both to their customers and tour operators. The only

differentiation mentioned by five respondents was that audiovisual materials are sent to corporate customers and tour operators, rather than to holidaymakers.

Not surprisingly, the examples reported of how one or more of these activities were effective in communicating corporate identity exemplified only two of the activities listed, namely product publicity and sponsorship. Examples of effective product publicity implementation included media coverage of new products and redesigned services, and special events, such as exhibitions. One interesting example was that of a hotel which publicised special packages for the St. Valentine's Day. This proved to be extremely popular and brought to the hotel net profits of £3,000 just for that day. Another interesting example of effective product publicity concerns a hotel which managed to be placed in a famous Greek television series. This brought great attention to the hotel's name and services. As already indicated, within the context of this study sponsorship efforts have taken the form of financial support for sport and cultural events. The most interesting example in this case was that of a hotel which sponsored a famous show put on in Greece for the first time. The leading showmen stayed in the particular hotel. This sponsoring event gave the hotel the chance to invite and host suppliers, journalists, attract customers, and bring repeated attention to the organisation.

At the end of this section, respondents were asked to specify the effect of these activities on their hotel's corporate image and reputation. The intention here was to throw some light on the relationship between the concepts of corporate identity, corporate image, and corporate reputation. Most disappointingly, the respondents were not able to make any insightful comments. They acknowledged that these activities do have an impact on corporate image and reputation but they were not able to specify this.

5.3 Views on corporate identity

This final section collected respondents' views on the role of corporate identity within their own hotels and explored their perceptions and opinions regarding corporate identity in general. For the purpose of this case, respondents were presented with a set of statements and were asked to indicate their level of agreement with these, on the basis of a five-point Likert scale. Responses to this section indicated that the clear majority of participating directors (seven respondents) disagreed/strongly disagreed that their department is generally uninterested in corporate identity. Only two respondents neither agreed nor disagreed with this proposition. On the other hand, respondents were less complimentary about their departments' ability to undertake effectively corporate identity communication. Only two respondents disagreed or strongly disagreed

with the proposition that their departments lack the expertise necessary to communicate effectively the hotel's corporate identity. Six respondents strongly agreed and one agreed that this is the case. Moreover, eight respondents strongly agreed (only one respondent disagreed) that their departments are so committed to enhancing other marketing activities that corporate identity communication takes a back seat. However, respondents did not attribute this fact to the corporate culture in which their departments operate, since eight of them disagreed with the proposition that this culture is not conducive to the introduction of corporate identity management (the remaining two respondents neither agreed nor disagreed with the statement). The majority of respondents also indicated that they were reluctant to employ extra staff to implement corporate identity communications more effectively. Five respondents strongly agreed, three agreed, and only one disagreed with this statement.

A clear majority agreed (four respondents) and strongly agreed (three respondents) that Greek hotels will increasingly turn their attention to corporate identity issues (two respondents neither agreed nor disagreed). There was also general consensus (seven respondents agreed, one agreed, and one disagreed) that corporate identity is as vital an ingredient of business as finance, accounting, etc. Opinions differed regarding whether PR expenditures switch towards identity at the expense of other PR activities. Four respondents agreed and one strongly agreed with this statement, while four respondents held the opposite view (all four disagreed). It was also the case that respondents did not distinguish communicating corporate identity from communicating corporate image. All respondents either agreed (five respondents) or strongly agreed (four respondents) with the proposition that "communicating corporate identity is really no different to communicating corporate image". In a similar manner seven respondents equated corporate identity with corporate reputation (five of them agreed, two strongly agreed, and two neither agreed nor disagreed with this proposition). Nevertheless, despite the apparent confusion over the relevant terminology, all respondents disagreed (six) or strongly disagreed (three) with the proposition that the concept of corporate identity is so complex that it does not worth dealing with it. Respondents generally felt that the Greek hospitality industry has failed to understand how to manage corporate identity (two respondents strongly agreed, five agreed, one disagreed, and one strongly disagreed with this statement). Also, three respondents believed that there is no need to differentiate between the corporate identity work a PR department does and its general PR work. Four respondents disagreed with this proposition and two respondents neither agreed nor disagreed. Interestingly, three respondents indicated that this issue depends on the size of the organisation.

6. Conclusions

The significance of this study is that it is one of only a small number of inquiries into the use of PR and the role they play in communicating corporate identity. Particularly within the context of hospitality research, studies related to the way in which organisations communicate their corporate identity through the use of PR activities are notable mainly for their absence. At a time when academics and practitioners alike have an increasing awareness of the value of corporate identity, this study will interest all those concerned with corporate identity, organisational communications, and hospitality scholars of public relations in particular. In this context, the approach and findings of this study provide what is believed to be a useful starting point for an understanding of corporate identity communication and PR.

Fill (1995) notes that corporate identity is a valuable asset for any organisation, requiring thoughtful management and communications. Evidence here is that Athens five-star city hotels regard it as such and pay attention to it in planning PR communication activities. Indeed, the results suggest that all respondent hotels have, to a certain extent, taken on board the concept of corporate identity communication. Interestingly, three hotels have a section solely dealing with corporate identity issues suggesting that corporate identity communication is acknowledged as an activity separate and distinct from general PR work, although this remains something of a grey area. This is illustrated by the differing opinions regarding whether there is a need to differentiate between the corporate identity work a PR department does and its general PR work.

The review of the literature provided numerous indications that practitioners are concerned about their companies' identity and the advantages wrought by a good identity. From the perspective of the hospitality and tourism industries, there is no doubt that today the need for organisations to portray a unique identity is more critical than ever (Morgan et al. 2003). Following the results of this study there was widespread support for the proposition that Greek hotels will increasingly turn their attention to corporate identity issues.

This study determines that all respondent hotels recognise the value accruing from corporate identity communication through public relations and that they attempt to achieve successful outcomes by adopting three distinct orientations of PR: public information, persuasion, and reminder. The results also posit that some hotels recognise that a unique identity is likely to impact favourably on competitive advantage, especially through product differentiation. The results suggest that all respondents appreciate the value of corporate identity. There was general consensus that, despite its apparent complexity, the concept of corporate

identity does worth dealing with it, and that corporate identity is as vital an ingredient of business as finance, accounting, etc. On the other hand, the responses indicated a number of barriers to the effective communication of corporate identity through PR activities. These concern a lack of expertise within the respondent departments, deep attachment to the enhancement of other marketing activities at the expense of corporate identity communication, and a reluctance to employ extra staff to implement corporate identity communications more effectively.

Another conclusion emerging from this study is that customers have a central role in the corporate identity communication activities of the sampled hotels. This suggests that the PR activities of five-star city hotels in Athens are market-centric. This is evident throughout this study's findings. In all hotels the PR function is handled by the Marketing & Sales department; corporate identity is defined from a customer perspective; PR activities are aimed at customers; and customers were identified as the hotels' major stakeholders. All these provide tangible evidence that the investigated hotels are calling for market-oriented PR. In this context, PR becomes a planned communication tool that will work in synergy with the others to achieve previously defined marketing objectives. Perhaps, the increased interest attracted by the subject of corporate identity among marketing academics and practitioners, may encourage hospitality marketers to consider the longer-term corporate input possible from PR.

Not all PR activities are widely used by the sampled hotels for corporate identity communication purposes. In general, the most effective and most popular strategies, as depicted by respondents, were product publicity and sponsorship. However, only a small number of hotels used counselling or the Internet for PR purposes. Although it is not possible to generalise about the extent to which each PR activity is used in hotel's overall corporate identity communication efforts, it appears that counselling and the Internet may be underused tools.

One final conclusion from the themes emerging in this study is that there is frequent misunderstanding between study respondents of the terms identity, image, and reputation. The issue of how these concepts should be defined has been a major issue within the field for many years. The findings of this study confirm that it continues to be a major issue. The concepts are often used interchangeably and with little understanding. This causes confusion. This study does not resolve this dilemma. It has, however, attempted to clarify the nature of and links between these concepts.

REFERENCES

- Andreassen, T.W. and Lindestad, B. (1998), *The effect of corporate image in the formation of customer loyalty*, Journal of Service Research, Vol. 1, No 1, pp. 82-92.
- Attica Hotel Association (2006), *Five-star city hotels in Athens* [online]. Athens, Attica Hotel Association, Available from: <http://www.athens-atticahotels.com/index.cfm?Level1=3&Level2=1&Level3=0&Level4=0&Level5=0&Level6=0> [Accessed 25 April 2006].
- Baines, P. Egan, J. and Jefkins, F. (2004), *Public Relations: Contemporary Issues and Techniques*, Elsevier, Oxford.
- Balmer, J.M.T. (1995), *Corporate branding and connoisseurship*, Journal of General Management, Vol. 21, No 1, pp. 24-46.
- Balmer, J.M.T. (1998), *Corporate identity and the advent of corporate marketing*, Journal of Marketing Management, Vol. 14, No 8, pp. 963-996.
- Balmer, J.M.T. and Gray, E.R. (2003), *Corporate brands: What are they? What of them?*, European Journal of Marketing, Vol. 37, No 7/8, pp. 972-977.
- Balmer, J.M.T. and Wilson, A. (1998), *Corporate identity*, International Studies of Management & Organisations, Vol. 28, No 3, pp. 12-20.
- Barich, H. and Kotler, P. (1991), *A framework for marketing image management*, Sloan Management Review, Winter, pp. 94-104.
- Bennett, R. and Kottasz, R. (2000), *Practitioner perceptions of corporate reputation: An empirical investigation*, Corporate Communications: An International Journal, Vol. 5, No 4, pp. 224-234.
- Bernstein, D. (1984), *Corporate Image and Reality: A Critique of Corporate Communication* Holt, Rhinehart and Winston, Eastbourne.
- Blythe, J. (2000), *Marketing Communications*, Pearson, Essex.
- Brassington, F. and Pettitt, S. (2000), *Principles of Marketing*, 2nd ed., Pitman Publishing, Essex.
- Brown, T.J. and Cox, E.L. (1997), *Corporate associations in marketing and consumer research: A review*, Corporate Reputation Review, Vol. 1, No 1/2, pp. 34-38.

- Bryman, A. (2004), *Social Research Methods*, 2nd ed., Oxford University Press, Oxford.
- Churchill, G.A. (1991), *Marketing Research: Methodological Foundations*, 5th ed., Dryden Press, Orlando, FL.
- Cooper, A. (1999), *What's in a name*, *Admap*, Vol. 34, No 6, pp. 30-32.
- Curtis, P., Politou, D. and Kyriazoglou, J. (2006), *Strategic Controls and the Balanced Scorecard Framework*, *Archives of Economic History*, Vol. XVIII, No 1, pp. 119-140.
- Davies, G. (2003), *Corporate Reputation and Competitiveness*, Routledge, London.
- Davies, G. and Miles, L. (1998), *Reputation management: Theory versus practice*, *Corporate Reputation Review*, Vol. 2, No 1, pp. 16-27.
- DiFonzo, N. and Bordia, P. (2000), *How top professionals handle hearsay: Rumors, their effects, and strategies to manage them*, *Public Relations Review*, Vol. 26, No 2, pp. 173-190.
- Dolphin, R.R. (2004), *Corporate reputation – a value creating strategy*, *Corporate Governance*, Vol. 4, No 3, pp. 77-92.
- Dowling, G.R. (1993), *Developing your image into a corporate asset*, *Long Range Planning*, Vol. 26, No 2, pp. 101-109.
- Dowling, G.R. (1994), *Corporate Reputations: Strategies for Developing the Corporate Brand*, Kogan Page, London.
- Fill, C. (1995), *Marketing Communication: Frameworks, Theories and Applications*, Prentice-Hall, Heel Hempstead.
- Fitzpatrick, K. (2000), *CEO views on corporate social responsibility*, *Corporate Reputation Review*, Vol. 3, No 4, pp. 292-301.
- Fombrun, C. (1996), *Reputation: Realising Value from the Corporate Image*, Harvard Business School, Boston, MA.
- Fombrun, C. and Rindova, V. (1996), *Who's Tops and Who Decides? The Social Construction of Corporate Reputations*, New York University, Stern School of Business, New York, NY.
- Fombrun, C. and Shanley, M. (1990), *What's in a name? Reputation building and corporate strategy*, *Academy of Management Journal*, Vol. 33, No 2, pp. 233-258.

- Gotsi, M. and Wilson, A.M. (2001), *Corporate reputation: Seeking a definition*, Corporate Communications: An International Journal, Vol. 6, No 1, pp. 24-30.
- Gray, E.R. and Balmer, J.M.T., (1998), *Managing corporate image and corporate reputation*, Long Range Planning, Vol. 31, No 5, pp. 695-702.
- Herbig, P. and Milewicz, J. (1993), *The relationship of reputation and credibility to brand success*, Journal of Consumer Marketing, Vol. 10, No 1, pp. 5-10.
- Hosany, S., Ekinci, Y and Uysal, M., (2006), *Destination image and destination personality: An application of branding theories to tourism places*, Journal of Business Research, Vol. 59, No 5, pp. 638-642.
- Howard, S. (1998), *Corporate Image Reputation*, Butterworth-Heinemann, Singapore.
- Hutton, J.G., (1999), *The definition, dimensions, and domain of public relations*, Public Relations Review, Vol. 25, No 2, pp. 199-214.
- Hutton, J.G., Goodman, M.B., Alexander, J.B. and Genest, C.M. (2001), *Reputation management: The new face of corporate public relations?*, Public Relations Review, Vol. 27, pp. 247-261.
- Ind, N. (1992), *Corporate Image*, Kogan Page, London.
- Kotler, P., Bowen, J. and Makens, J. (1998), *Marketing for Hospitality and Tourism*, 2nd ed., Prentice Hall, Upper Saddle River, NJ.
- Lemmink, J., Schuijff, A. and Streukens, S. (2003), *The role of corporate image and company employment image in explaining applications intentions*, Journal of Economic Psychology, Vol. 24, pp. 1-15.
- Markwick, N. and Fill, C. (1995), *Towards a framework for managing corporate identity*, European Journal of Marketing, Vol. 31, No 5/6, pp. 396-409.
- McMillan, G.S. and Joshi, M.P. (1997), *Sustainable competitive advantage and firm performance: The role of intangible resources*, Corporate Reputation Review, Vol. 1 No 1/2, pp. 81-85.
- Middleton, V.T.C. and Clarke, J., (2001), *Marketing in Travel and Tourism*, 3rd ed., Elsevier, Oxford.
- Morgan, N.J., Pritchard, A. and Piggott, R. (2003), *Destination branding and the role of stakeholders: The case of New Zealand*, Journal of Vacation Marketing, Vol. 9, No 3, pp. 285-299.

- Nguyen, N. and Leblanc, G., (2001), *Corporate image and corporate reputation in customers' retention decisions in services*, Journal of Retailing and Consumer Services, Vol. 8, pp. 227-236.
- Nguyen, N., (2006), *The collective impact of service workers and servicescape on the corporate image formation*, International Journal of Hospitality Management, Vol. 25, No 2, pp. 227-244.
- Oh, H., Kim, B.Y. and Shin, J.H. (2004), *Hospitality and tourism marketing: Recent developments in research and future directions*, Hospitality Management, Vol. 23, pp. 425-447.
- Olins, W. (1990), *Corporate Identity: Making Business Strategy Visible Through Design*, Thames & Hudson, London.
- Rose, C. and Thomsen, S., (2004), *The impact of corporate reputation on performance: Some Danish evidence*, European Management Journal, Vol. 22, No 2, pp. 201-210.
- Rossiter, J.R. and Percy, L., (1998), *Advertising Communications and Promotion Management*, 2nd ed., McGraw Hill, New York, NY.
- Ruth, J.A. and York, A., (2004), *Framing information to enhance corporate reputation: The impact of message source, information type, and reference point*, Journal of Business Research, Vol. 57, pp. 14-20.
- Topalian, A. (1984), *Corporate identity: Beyond the visual overstatements*, International Journal of Advertising, Vol. 25, pp. 61-64.
- Van Riel, C.B.M., (1995), *Principles of Corporate Communication*, Prentice-Hall, Hemel Hempstead.
- Van Riel, C.B.M. and Balmer, J.M.T., (1997), *Corporate identity: The concept, its measurements and management*, European Journal of Marketing, Vol. 31, No 5/6, pp. 340-355.

ANALYSIS OF THE COMPETITIVENESS OF TOURISM USING TREES RULES

D. KOKOTOS*

P. CURTIS**

Abstract

The reasons for the underperformance of Ionian Islands tourism in terms revenues in USD and return on equity capital invested on hotels are explored. Based on the classification tree rules, conclusions related to the issue the competitiveness of tourist product of Ionian Islands are drawn. The development of alternative forms of tourism is proposed as a means of improving competitiveness and restoring sustainability in the sector. We present also tree rules concerning the appropriateness of the present strategy given the conditions of internal and external environment of tourism in the region.

JEL classification: L83.

Keywords: classification trees rules, tourism, local economy, competitiveness, economic development..

1. Introduction

The regional development of Ionian Islands is based on tourism, which is the prevalent sector of the local economy and is aimed at closing the gap with the other regions of the Union.

The consistently inferior return to Equity capital achieved by the hotel sector (the main pillar of tourism) on Ionian islands, compared to the one of the whole country of Greece for the period 1993-2004 is examined, in an attempt to explain the developments in the sector's economic performance. Inferior revenue development and lower return on equity indicate that the strategy followed is not sustainable, since the cost of equity is not covered by the return on it (Curtis 2004). Therefore the present strategy of tourism in the region reduces its share in the global tourism and destroys the wealth, since the opportunity cost of capital is greater than its return. The tourism industries in Ionian demonstrate rates of revenue development and profitability that according to Marakon matrix explain the problem reflected in financial statements (Hax and Majuf 1996).

Among other tools used towards that aim, data mining technique was also applied.

* Department of Maritime Studies, University of Piraeus.

** Associate Professor, TEI of Halkida, Department of Accounting.

Data mining is a powerful new technology, which adds value across a broad spectrum of industries. It is defined as the process of extracting valid, previously unknown and ultimately comprehensive information, from large databases and using it to make critical decisions (Hand et al, 2001). In the current and emerging environment of massive data availability and collection, powerful multiprocessing computers and data mining algorithms, data mining is considered as “one of the ten emerging technologies that will change the world” (MIT, 2001). The importance of data mining has been recognized by information intensive industries such as production and logistics, banking, health, insurance, marketing, retail telecommunication and tourism. A decision tree is one of a series of data analysis models/tools employed in data mining, other models being neural networks, rule induction, genetic algorithms, statistical inference, data visualization etc. The classification trees analysis, one of the main techniques used in Data mining can be characterized as a hierarchical, highly flexible set of techniques.

The structure of this paper is as follows: Section 2 presents a short overview of classification tree theory. Section 3 presents the predictive variables of the model and the specification adjustments of the algorithm. Section 4 focuses in main classification tree analysis conclusions. Section 5 discusses the results and strategy for the competitiveness of the Ionian Islands tourism. Section 6 gives a summary of the paper and discusses issues concerning potential applications based on the proposed analysis.

2. The Classification Trees

Classification tree analysis is one of the main techniques used in Data mining. Classification Trees are used to predict membership of cases or objects in the classes of a categorical, usually, dependent variable from their measurements on one or more predictor variables. These trees can be computed for categorical predictors, continuous predictors, or any mix of the two types of predictors when unvaried splits are used.

The classification trees analysis can be characterized as a hierarchical, highly flexible set of techniques. Based on this analysis was made possible to examine the influence of a number of factors (Hand et al, 2001) towards the direction of improving the competitiveness of the sector of tourism in the region. This particular approach of using classification trees rules has not been investigated in depth in previous research efforts and applications.

There are many different algorithms in the literature for expanding classification trees and values for initial parameters have been tested (Kokotos D, Smirlis Y.,

2005). The chosen method of classification tree, using Classification and Regression algorithm (C&RT), was compatible to form of the data and depends on the structure of this data files.

The implementation of a classification tree is achieved through a training process (induction) in which a specific algorithm is applied to a sample data set composed by the predictor variables. This constructs the tree by examining at each node, all possible splits for each predictor variable and uses the goodness of fit measurement criterion to find the best split.

The tree starts with the node at the top of the tree called root node. At every node, the splitting algorithm creates new nodes by selecting a predictor variable so that the resulting nodes to be as far as possible from each other. The splits stop, when the child nodes which have not been split become terminal nodes. The nodes that cannot be split further in other nodes, due to the fact that they contain cases with only one outcome, are called pure leaves.

One important feature of the splitting algorithm refers to the ability of the algorithm to look forward in the tree in order to examine if another combination of splitting could produce better overall classification result.

The splitting phase terminates when a stopping rule is satisfied. Stopping rules may include the maximum number of nodes, the number of variables in a node considered for splitting, a minimum number of cases per node etc. The distance measurement used for the splitting is much depended on the specific splitting algorithm.

After the development of the structure of the tree, pruning is sometimes required, to make the tree more applicable to other similar data sets or to exclude nodes that seem to be inappropriate for the specific data set or the application.

The classification tree is computed from the training sample, and its predictive accuracy is tested by applying it to predict class membership in the test sample. The testing and training samples can be formed by collecting two independent data sets, or if a large learning sample is available, by reserving a randomly selected proportion of the cases, say a third or a half, for use as the test sample.

Misclassification costs (Priors) does correspond to minimizing the proportion of misclassified cases. Priors are taken to be proportional to the class sizes or are taken to be equal for every class.

3. The predictive variables and the specification adjustments of the algorithm

In order to build an explanatory model a preparation phase of this study identified a number of variables. In a preliminary stage of the analysis, a number

of factors used as predictive variables, have been identified. For these factors, a data set has been generated from an existing large dataset (Curtis 2004).

The chosen variables include the dependent and the independent ones. “Competitiveness of tourism in Ionian islands in comparison with one of the other countries” is the depended variable for the analysis and it is defined as a dichotomous variable accepting values “yes” and “no”. In this rest of this section, we present the predictive variables.

- “The development of alternative forms for tourism”. The main values for this variable are: congressional, sea tourism and agro tourism.
- The values, for variable “Protection of the Environment”, are: existence of biological cleaning, connection to sewerage system or nothing from the two for hotels.
- “The quality of services offered in comparison to Italy”. The values for this variable are: lower, higher and the same quality.
- The values for variable “The quality of services offered in comparison to Spain” are: lower, higher and the same quality.
- The values, for variable “The quality of services offered in comparison to Turkey”, are: lower, higher and the same quality.
- “Infrastructure for transportations”. The values for this variable are: Excellent, Very good, Good, Mediocre, Insufficient according to the five-point Likert scale.
- “Infrastructures for main services”. The values for this variable are: Excellent, Very good, Good, Mediocre, Insufficient according to the five-point Likert scale.

Table 1: Specification adjustments of the algorithm

<i>Stopping rules</i>	Maximum tree depth: levels 5 Minimum number for parent node: cases 100 Minimum number for child node: cases 50
<i>Impurity measure</i>	"Gini "
<i>Pruning</i>	Not required
<i>Misclassification costs</i>	Equal for all categories
<i>Validation</i>	Training and testing samples

Comments

We should note that:

We used “Gini” like impurity measure because of categorical dependent variable.

Pruning was not required to exclude nodes that seem to be inappropriate for the specific application.

There was not problem with costs, in this paper, thus the misclassification costs were chosen equal for all categories.

We applied in a sample training set of 66 % of the total number of cases and the rest 34 % were considered as the test data set used for validation.

The final classification tree structure was produced by the C&RT algorithm during the training phase. For the economy of the presentation only the three first levels of the tree was shown (Curtis P and Kokotos D., 2008). Each node was identified by the node number and the percentages of cases included in the node for the classes with value “no” and “yes”. Also was given, for every node presented in the tree, the condition applied for the expansion of the tree.

4. Results of classification trees analysis

As a valuable output of the analysis we consider three points. First, the results from the hierarchy of this classification tree and second the IF-THEN rules. Finally, it is pointed out that in comparison with traditional statistical methods, such as Logistic Regression, the classification trees have higher ability for prediction.

The hierarchical nature of classification trees is one of their most basic features. The hierarchy of this classification tree shows that the first split defined two nodes using “Offered quality of services in comparison Italy” predictor.

In the next split for node with values “Lower, higher” the predictor is “The development alternative forms for tourism”, which classified the cases in two new nodes. One of them has values “Congressional, agro tourism” and the other value “Sea tourism”.

The cases of node with value “Sea tourism” were classified to nodes using as predictor the “Protection of the Environment”.

Also, the cases of node with values “Congressional, agro tourism” classified to nodes using as predictor “Offered quality of services in comparison Italy”.

There is predictors which has not been used anywhere in the tree structure for example, “The quality of services offered in comparison Spain” because their lower weight.

When the tree is wide and contains a large number of nodes is not very

convenient to the analysts and decision makers thus a more suitable presentation of the tree, can be given by describing each node by an IF-THEN rules of the form:

“IF condition..... THEN prediction.....”

The condition part is a composite condition including the AND logical operator. The prediction part is given in terms of a probability value for the condition to be true.

Using this type of classification tree presentation in this study, different types of nodes can be located: those that contain cases in which the “Competitiveness of tourism compared to one of the other countries” with value “Yes” has significant probability to occur, and those in which is almost impossible to occur. The most important nodes for this study are those that have significant probabilities for the depended variable “Competitiveness of tourism compared to one of other countries” with value “Yes”.

This type of nodes, although limited, they reveal certain conditions in which the “Competitiveness of tourism compared to one of other countries” with value “Yes” are a strong possible outcome. This is considered as a valuable output of the analysis.

The classification tree classified the cases [Competitiveness of tourism in Ionian Islands compared to the one of other countries] with value “no” correctly in 99.1 % and cases [Competitiveness of tourism in Ionian Islands compared to the one of other countries] with value “yes” correctly in 87.1 %.

The following examples of selected nodes demonstrate the three types of the nodes of the tree. The symbol “!= “ which appears in the IF conditions is the “not equal” operator.

Rule:

IF (“Offered quality of services compared to Italy” != Same) AND (“The development alternative forms for tourism” = Sea tourism) AND (“Protection of the Environment” != Sewerage) AND (Infrastructures for transports = Excellent) AND (Infrastructures for transports = Very good) AND (Infrastructures for main services = Excellent)

AND (Infrastructures for main services = Very good) AND (Infrastructures for main services = Good)

THEN

Prediction = YES, Probability = 0.8673

Rule:

IF (“Offered quality of services compared to Italy” != Same) AND (“The development alternative forms for tourism” != Sea tourism) AND (“Offered

quality of services compared to Italy” != Same) AND (Infrastructures for transports = Mediocre) AND (Infrastructures for transports = Insufficient) AND (Infrastructures for main services = Mediocre) AND (Infrastructures for main services = Insufficient).

THEN

Prediction = NO, Probability=0.9131

Classification trees are directly compared to other traditional statistical methods, such as Regression, as they can classify cases depended on classes defined by a depended variable. Logistic Regression is similar to other statistical explanatory and classification techniques such as Linear Regression, Ordinal least square and Discriminant analysis but it has less stringent requirements as it assumes no linearity of relationship between the independent variables and the dependent and no normally distributed variables.

Classification trees employ a hierarchy of predictions, with many predictions sometimes being applied to particular cases, to sort the cases into predicted classes. Traditional methods use simultaneous techniques to make one and only one class membership prediction for each and every case.

In comparison with Logistic Regression, the classification trees have higher ability for prediction (Dilon R.W. et al, 1984). Herein, Logistic Regression was used, for the same data set, but the results were not satisfactory, the R square value was extremely low as the depicted in table.

Model Summary

Step	-2Log likelihood	Cox&Snell R Square	Nagelkerke R Square
1	7845.36	0.067	0.134

Classification table ^a

	Observed	Predicted
		Percentage Correct
Step1	No	98.2
	Yes	17.1
	Overall Percentage	90.67

a. The cut value is 0.50

As shown in above table, Logistic Regression classified the cases [Competitiveness of tourism in Ionian Islands compared to the one of other countries] with value “no” correctly 98.2%, while cases [Competitiveness of

tourism in Ionian Islands compared to the one of other countries] with value “yes” led to poorer results in 17,1 %.

5. Existing strategy for the competitiveness of the Ionian Islands tourism

According to classification tree that was constructed, the corresponding rules were formed which contribute to combine many seemingly unrelated at first glance data in order to produce conclusions related to issues under scrutiny that are of interest in determining the competitiveness of Ionian Island tourism product.

The classification trees rules revealed that the operational effectiveness (Porter 1996) and the development of thematic forms of tourism are the decisive factors (elements) to resolve the problems that Ionian tourism is confronted with and are reflected in low spending per incoming tourist from abroad (expressed in US \$) and negative average return on capital for the period 1993-2004(Curtis 2004).

The only viable growth is the profitable one, that is characterized by return to equity capital greater than the cost of capital employed (Hax and Majluf, 1996)

All the above policy prescriptions are in accord with the view of the respondents that the tourist product of the region is reaching the maturity stage of its cycle and slow growth is expected for the future. It is imperative that the product be diversified and upgraded. At the same time the operational effectiveness has to be bolstered so that the net profit margin is adequate to support an acceptable return to equity with respect to capital employed in the sector (Curtis 2004).

The stage of the product cycle that mass tourism for summer vacation is going through in Ionian islands renders prices a critical success factor. To the extent that the tourism product of the region still remains undifferentiated, high price elasticity of demand and the competitive pressures from new destinations (as well as the existing ones) are increasing. Scale utilization, idle capacity utilization, cost control, efficient use of labour, reduction in transportation cost, reduction in seasonality are critical factors of success. None of these factors, is favorable according to opinion of the management staff of the hotels operating in the region.

Even more development of the existing product is not proposed without reservations due to a) the change in the structure of demand and tastes, b) the increasing competition, c) the falling prices, d) the increase in costs, and e) the unbearable (in some cases) dependence on tourist operators. The latter take advantage of the situation asking for lower prices, while at the same time exploit the last minute booking tactics to create additional uncertainty and anxiety in the industry, which can not store its excess production capacity that is lost due to the insufficient demand, and so exert more pressures on prices.

Market penetration and development is proposed initially, but since cost advantage does not exist, the carrying capacity of the islands involved is exhausted and pollution threats on the coasts are probable, product development and diversification in to new segments (and markets), with greater prospects that match resources and capabilities of the region, must be sought. The external environment, industry conditions, strategy and positioning in tourism define the critical factors necessary for the success of the hotel sector in the future which do not secure successful low cost competitive advantage type of strategy since the region does not possess cost advantage any more compare to existing and new destinations in central and east Europe and Aegean sea. The absence of a) economies of scale, b) low personnel cost, c) efficiency in operations and d) adequate capacity utilization, which are the critical success factors necessary for the success of the existing strategy, do not contribute to the adoption of the present strategy, which has to be changed.

6. Conclusions

The return on equity in Ionian's hotel sector is below the average one for the entire country reflecting the inappropriate strategy. Ionian hotels do not achieve adequate profits since the structure of the mass tourism industry is not favorable due to the operation of the "five forces", which create excessive competition in the sector. Based on the data analysis, the existing strategy towards competitiveness and its improvement were examined using the Classification and Regression tree algorithm. The classification tree rules, explains effectively, that underperformance is attributed to the vagueness of the present course of strategy applied to the hotel sector in the region. According to the model product differentiation, coupled with operational effectiveness is the appropriate course of action to restore competitiveness in Ionian tourism. It will allow Ionian tourism to differentiate the product, extend the tourism period each year, decrease seasonality, diffuse tourism development in the region and attract higher income visitors who will spend more per night. At the same time it will decrease the price elasticity of demand and improve the corresponding income one and will contribute to an increase in revenues, asset turnover profit margin and restore a well grounded and lasting viability. This strategy is deemed to be suitable, feasible and acceptable.

The classification trees analysis, one of the main techniques used in Data mining may also be utilized in the context of a potential decision support system and a risk management information system that will record evaluate and process data for restoring competitiveness in Ionian tourism.

REFERENCES

- Ansoff, I., (1979), *Strategic management*, Mc Millan, London.
- Biggs D., de Ville B. and Suen E., (1991), *A method of choosing multiway partitions for classification and decision trees*, Journal of Applied Statistics, 18(1), 49-62.
- Brieman, L., Friedman, J. H., Olshen, R.A., and Stone, C.J, (1993), *Classification and Regression trees*, Belmont, CA.
- Curtis, P., (2004), *Strategy and Competitiveness in tourism towards regional development–The case of Ionian Islands*, Unpublished PhD Thesis, Harokopion University, Athens.
- Curtis P and Kokotos D., (2008), *A decision tree application in tourism based regional economic development*, Tourismos Vol. 3.
- Dillon R.W. & Goldstein M., (1984), *Multivariate Analysis Methods and Applications*, John Wiley, ISBN 0-471-08317-8.
- Grant, R.M., (2002), *Contemporary Strategy Analysis. Concepts, techniques and applications*, 4th ed., Blackwell Business.
- Hax, A and Majluf, N. (1996), *The Strategy concept and process a pragmatic approach*, Prentice Hal.
- Grant, R., M., (2002), *Contemporary Strategy Analysis. Concepts, techniques, applications* 4th ed., Blackwell Business.
- Hand D., Mannila H., Smyth P., (2001), *Principles of Data Mining*, M.I.T Press, Massachusetts.
- Kokotos D., (2003), *A Data mining – Decision tree analysis upon vessel accidents*, Phd Thesis, Department of Maritime Studies, University of Piraeus.
- Kokotos X. D, Smirlis G. Y., (2005), *A classification tree application to predict total ship loss*, Journal of Transportations and Statistics, A Peer-Reviewed Journal, U.S.A Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, pp 31-42, Vol. 8, N 2, ISSN 1094-8848.
- Panagopoulos, An., (2002), *A comparative analysis of the development of tourism in Ionian Islands and the rest of Greece (1900–1999)*, Archives of Economic History, Vol. XIV, No 1, p. 39-54.

- Panagopoulos, An. and Panagopoulos Al., (2005), *A time series method for occupancy forecasting—A case study of West Greece*, Archives of Economic History, Vol. XVII, No1, p. 67–78.
- Porter, M. E., (1996), *What is strategy?* Harvard Business Review Nov-December, pp. 61-78.
- Ripley, B.D., (1994), *Neural networks and related methods for classification* (with discussion), J. R. Statist. Soc. B, 56 409-456.
- Witten H., Frank Ian, (2000), *Data Mining - Practical Machine Learning Tools and Techniques with Java Implementations*, Morgan Kauffmann Publishers, San Francisco.

MOUNTAIN TOURISM AND WINTER RESORTS: A STUDY OF GREEK SKI CENTERS

S. VARVARESSOS*

M. SOTERIADES**

Abstract

The initiation of leisure and sports activities in the second half of the 20th century led to the transformation of a considerable number of mountain spatial units into attractive tourism hosting zones. Determinant factors were landscape quality, local authenticity and quality of tourist services. Sports and recreational activities related to skiing have contributed to the gradual development of tourist flows, while winter resorts have rendered mountain tourism more accessible and popular. This evolution has led to four specific models for winter resorts implemented in the Alpine countries over the past century. The four models serve as a reference framework in our study, which looks at Greek ski centres. As a country hosting mass leisure tourism, Greece has developed the industry by implementing a spontaneous development model centring on the sun; mountain tourism, and winter sports in particular, have never been a priority in the national tourism policy. When compared to the four models devised for 'winter resorts' implemented in the Alps, the twenty-one 'ski centres' operating in Greece are clearly representative of the spontaneous model of tourism development adopted and implemented in the Greek mountains. Simultaneously, such comparison highlights the urgent need to adopt a tourism planning approach and to implement appropriate action plans for mountain tourism as a constituent part of Greek tourism policy at both at the national and regional level.

Hence, this paper focuses on the analysis of Greek ski centres and seeks to contribute to the discussion regarding the development model for mountain tourism / winter resorts.

JEL classification: L83, Q01, O10.

Keywords: mountain tourism, winter resorts, models, ski centers, tourism planning, Greece.

1. Introduction

Mountains are specific geographical zones and have constituted the spatial framework for the conception and implementation of a series of tourist and recreational activities. Mountain tourism development in its contemporary form is due to the diffusion of ski and snowsports as a recreational activity and the construction of winter resorts established in the Alps (Philipona-Romanens 2001; Boyer 2004). Furthermore, winter sports tourism has simultaneously expanded

* Associate Professor, TEI of Athens.

** Associate Professor., TEI of Crete.

with second generation stations and integrated ski resorts (Cottle 1992; Boyer 2004). The latter, being designed along the lines of the French model, are perfectly compatible with economic, commercial and recreational considerations of an integrated – spatial, technological and economic - planning approach. Considering the recreational character of winter sports tourism, its contemporary implementation is encountered in fourth generation resorts, i.e. the Tyrol model. The interest of these polyvalent village resorts focuses on preserving traditional architecture and adopting sustainable tourism principles (Schnell 1981; Zimmermann 1992). It is estimated (Baily 2002) that this type of resort represents a new generation, more mindful of ecology and seeking an equilibrium between tourism specialisation and other activities developed in mountain areas. On the other hand, Greece hosts inbound ‘sea, sun and leisure’ tourism flows, i.e. ‘heliocentric tourism’ (1) and has only attempted to develop and promote mountain tourism during the last quarter of the 20th century. Greece’s heliocentric image, the recreational nature of snowsports, the low rate of local participation in mountain tourism activities, as well as the limited volume of private developers, have led to the construction of twenty-one low performance ‘ski centres’ in the Greek mountains. The concepts of ‘ski centres’ in Greece (2) and ‘winter resorts’ in the Alps (3) differ considerably as regards the recreational, spatial and economic framework, and to the implementation of a mountain tourism planning policy based on the adoption of one or more winter resorts models.

This paper consists of three parts. In the first, leisure activities on mountains and are briefly analysed in conjunction with winter sports trends worldwide. The second section looks at winter resorts, and more specifically the various models developed in the Alps. The third section offers a study of mountain tourism and ski centres in Greece, followed by a comparative study by using the four models implemented as a reference framework. This study of Greek mountain tourism highlights the need to elaborate and implement an adequate planning policy. The adoption and implementation of a winter resorts model should be compatible with the environmental, economic, social, cultural, ecological and technological attributes and particularities of Greek mountain areas. Moreover, the appropriate model should be a constituent part of development policy and tourism planning in the Greek mountains.

2. Recreational and Leisure Activities on Mountains

Nowadays it seems that ski and other snowsports, as leisure activities, are

characterised by standardization due to an imitation effect, in which post-modern values - i.e. identity seeking, individualism and narcissism - have been imposed on Western countries (Varvaressos 2000). Moreover, this imitation effect sharply contributes to an expansion in the numbers of potential skiers, thus rendering winter sports more popular. The evolution of demand for mountain tourism has been dynamically influenced by social and cultural changes occurring at the end of the 20th century. Hence, leisure visits have become highly dependant on a series of factors, such as service quality; environment authenticity; and landscape quality (Amourous 2001; Boyer 2004). These factors, which relate to the expansion of mountain leisure demand, have resulted from public social programmes, a high rate of dissatisfaction with the quality of life in urban centres and the tendency to seek refuge in traditional values. Therefore, tourism development in the mountains has resulted from a correspondence established between socio-cultural expectations and leisure activities, as well as by the mountain environment, aiming at catering for potential visitors. Obviously, variation in skiers' needs and level of satisfaction is to some extent dependent on their culture and nationality, since fashion, national identities and anthropological relations linking people with mountains are not characterised by the same spatial and temporal context. In turn, this helps to account for significant fluctuations in the types and intensity of tourist flows towards mountains, which are influenced by anthropological, social and cultural factors (Amourous 2001; Wozniak 2002; Varvaressos and Soteriades 2003).

On an international level, the location of mountain resorts is not directly related to tourist flows. The growth of tourist flows into mountainous areas has resulted from the expansion of snowsports, and more specifically from their diffusion among the middle classes. Increased mobility due to the expansion of individual transport modes (mainly private cars) as well as an increase in short break holidays (i.e. weekends) have contributed to significant supplementary flows towards mountains (Herbin 1995; Varvaressos 1999; Hudson 2003). Therefore, it seems that access facilities, constituting a prime factor in the winter resorts' planning, are closely bound up with the social, economic and political context (Cottle 1992; Carraud and Servoin 2001). The Alps are the mostly frequented mountain chain worldwide, recording more than 100 million overnight stays per year (Le Garrec and Antczak 2005). In Japan, winter resorts are situated in the Nagano district, at an equal distance from the urban agglomerations of Tokyo and Osaka. In Canada, the most visited winter resorts are located in Québec, not far from the big urban centres (Archambault and Audet 1997). In the USA, the majority of ski resorts are situated in New England, in the rural regions of Appalachia and Wisconsin, whose cultural characteristics are very different from the urban centres (Goeldner 1992;

Hudson 2004a). In Greece, the Parnassus ski centre is located a short distance from Athens, the Greek capital, and hosts tourist flows on short breaks. The intensity rate of tourist flows related to winter sports varies significantly from one region to other, in proportion to the degree of dependency on geographic and socioeconomic characteristics at the international, national and regional level, as well as on the consideration or omission of a planning approach (Baud-Bovy and Lawson 1998). Hence, the rate of participation in winter sports varies from one country to other: it is 40% for Swiss and Austrians; 15% for Canadians; 12% for the French; 6% for Americans; and 2% for the British and Spanish (Le Garrec and Antczak 2005). In Greece, this rate is less than 1%. It is worth stressing that the demand for winter sports is influenced by a plethora of factors, such as the low birth rate in European countries; economic recession and climate changes rendering the hibernal period milder. All these factors can be seen to be pushing 'snow tourism' into a mature stage in resort life cycle. Actually, mountain tourism, being linked to the recreational dimension of winter sports, is likely to be rather introverting rather than extroverting, in regard to aestival tourism (Giotart 1993; Boyer 2004).

3. Winter Resorts and Ski Stations: the Tourism Planning Framework

The planning and design approach taken to winter resorts has resulted from the political, social and spatial context, whereby individual needs and social requirements are met with regard to snowsports (Herbin 1995; Baud-Bovy and Lawson 1998). Spatial planning of winter resorts has been implemented according to a number of models closely linked to the nature and the distinguishing features of winter sports. However, the various models / generations and their spatial distribution have gradually undergone profound modifications so as to better correspond to changes in visitors' needs. Hence, in addition to socioeconomic factors, the adoption of a model has also come to take a host of geologic, climatic and sports-related factors into consideration, such as snow quantity, quality and period, operation of various ski trails, etc. (Rudaz 2002). Geomorphologic and weather conditions, significantly variable from one mountain area to another, have played a considerable role in the particular planning model adopted (Cazes et al. 1993). Within the above outlined context, the continental and somewhat arid climate in Colorado (USA) obliged planners to construct winter resorts at a very high altitude, e.g. 2.400m in Aspen and 2.460m in Vail. In the Cascades Mountains in Washington State, the ocean weather conditions permitted the installation of big

winter stations at lower altitudes – at an average of between 1.000 and 1.300m (Goeldner 1992). In Greece, the average altitude is approximately 1.600m. The winter resorts of Kitzbühel (in the Austrian Tyrol) and Garmisch (in Baviere) lie at 730m, but receive plenty of snow thanks to the continental climate in that region of the Alps (Zimmermann 1992). These examples of stations with different characteristics clearly indicate that there is no unique, ideal set of geomorphologic and climate conditions regarding the spatial choice and operation of a winter resort.

Winter resorts, as an essential component of spatial and socioeconomic planning closely linked to leisure and sporting activities, recorded very high growth rates over the last century (Hudson 2004a; Boyer 2004). In France, there were 154 winter resorts in 1936, 225 in 1956 and over 400 in 2000. More than 700 winter sports stations now operate in North America; 200 in Japan; 400 in Norway; and 21 in Greece. These resorts have been established in mountain areas with different features and are of various types; all of them succeed in meeting potential visitors' expectations to a greater or lesser extent. Where mountain areas succeed in catering for and satisfying a certain number of needs and expectations, expansion of winter resorts is observed, e.g. in the Valley of Tarentaise (French Alps). The most famous winter resorts were constructed between 1961 and 1972, e.g. Arcs, La Plagne, Ménuires, Tignes (France); Anzere in Valais (Switzerland); Pila in Val d' Aoste (Italy); and Borovets (Bulgaria).

In Greece, the Parnassus ski centres, regarded as the country's most important, has operated since 1975. It is worth stressing that winter resort planning varies significantly from the linear planning of wide spacious seafront / balneal zones. Actually, the various development models implemented can be accounted for in terms of geomorphologic and climatic characteristics, as well as the limited space suitable for development (Baud-Bovy and Lawson 1998).

3.1 Organisation of winter resorts

Over the two last centuries, the first stage involved in equipping Alpine winter stations was the construction of accommodation facilities. Local populations provided the bulk of accommodation and supplementary services in unplanned way (Knafou 1994; Boyer 2004; Tissot 2004). Growth in tourist flows and the extension of average stays then led to the emergence of an organized accommodation market. By the 1950s new types of accommodation had been constructed - i.e. hotels, social tourism accommodation, holiday homes – thus rendering winter sports more popular and attractive. By the 1970s mountain areas

had diversified, offering new types of accommodation, e.g. timesharing properties and apartments, as an outcome of three factors, namely: tourists' needs and expectations, emergence of local initiatives and national tourism policy plans (Deslarzes 2003). Obviously, the spatial distribution of accommodation enterprises reflects tourist flows and geographical distribution in mountain areas, which are further defined by two parameters: resort attractiveness and model. The most famous resorts worldwide are located in Aspen, Colorado, Heavenly Valley, California (USA); Chamonix, La Plagne, Megève, Courchevel, Les Arcs, Tignes, L'Alpe d'Huez, Serre Chevalier (French Alps); Davos, Verbier, Zermatt, Saint-Moritz (Swiss Alps); and Saalbach, Sölden, San Anton, Kitzbühel (Austrian Alps). Growth in accommodation supply has also led to standardisation of the mountain tourism product, mainly in the French Alps, as well as to the implementation of different tourism development models in Alpine regions.

The installation of ropeways dates to the beginning of the last century, occurring simultaneously in France, Switzerland, Spain and the USA. Ski lifts appeared in 1932; ski cabins in 1950; and funicular / rope railway in 1980, contributing to diversify in the range of technical equipment and improvement in service quality (Philipona-Romanens 2001; Boyer 2004; Tissot 2004). Today, more than 4.000 ski cabins and rope railways operate in France, which is the world leader. Austria follows with 3.500; the USA has just over 3.200; Italy 3.050; and Switzerland has approximately 1.700 (Duhamel and Sacareau 1998). Two parameters are worth noting: (i) winter sports, as a modern leisure activity, require large investments; the decision to launch such high capital intensity projects depends on the return estimated by developers, as well as on their ability to attract financiers (Tinard 1992); and (ii) the development of mountain resorts arises from the collaboration of three partners, namely local communities, developers and public services – which frequently have contradictory interests and goals. Russell and Thomas (2004) and Franch and Martini (2005) estimate that the contribution of each stakeholder to mountain tourism development is of great importance, especially since the issue is the spatial planning approach and the implementation of the appropriate winter resort model.

3.2 The four winter resort models

As has been already mentioned, the most famous winter resorts were created in the Alps at the end of the 19th century. Two factors played a key role: (i) social differentiation solicited by visitors; and (ii) a political, socioeconomic and cultural context imposed by the hosting communities and the geography and climate of

mountain areas (Tinard 1992; Boyer 2004). The planning, design and organisation of winter resorts led to the emergence of two entirely distinct groups of resorts. The first of these encompassed those stations located in agro-pastoral mountain areas. The second were characterised by a high level of spatial planning, taking visitor motivation, national and local tourism policy action plans and developers' profitability expectations into account (Varvaressos and Soteriades 2004). Planning and designing resorts in the second group involved fulfilling a series of prerequisites, and led to the creation of 'ex-nihilo' installations, i.e. virgin areas developed from scratch. The criteria used were conceived by reference to a series of factors relating to national and local development policy goals, as well as to private developers' requests, such as accessibility; communication; infrastructure; altitude; length and variety of trails; and snowfall. During the last century, the evolution of winter resorts led to the emergence of four identifiable models over time (Cazes et al. 1993; Baud-Bovy and Lawson 1998; Micheletto and Novarina 2002; Varvaressos and Soteriades 2004). The main features of each model are briefly presented in Table 1.

Table 1. The four models of winter sports stations / resorts.

Resort's model	Period	Features	Examples	Weaknesses / Disadvantages
First generation	1870-1930	<p>More or less anarchic, spontaneous development.</p> <p>Valorisation of traditional villages. Stations operating with multiple poles. Stay and entertainment during winter and summer. Altitude at 1,000m</p> <p>Specialised resorts: Recuperation tourism, health / medicinal, spa, summer and winter trekking, alpinism, etc.</p> <p>A hosting environment open and multifunctional in terms of spatial and temporal operation (journade, trekking, skiing, curling and skating).</p>	<p>Switzerland: Saint Moritz; Davos; Zermatt; Kraus Montana; and Grstaad.</p> <p>France: Chamonix, Chambrousse; Saint-Gervais-les-Bains; Saint Gervais; and Laclham.</p> <p>Italy: Cortina d'Ampezzo and Courmayeur.</p>	<p>Spatial or functional deficiencies: insufficient snowing due to low altitude; weakness of skiers' stay close by the ski trails; lack of coordination between various resort functions; uncontrolled exploitation of free and limited zones.</p>
Second generation/ Intermediary resorts	1931-1960	<p>Conception is frequently 'ex-ante' (into virgin areas), without satisfactory planning implementation.</p> <p>Construction of sporting installations at higher altitudes; increase of ski trails so as to ensure sufficient snow. More rational use of mountain areas. More emphasized specialisation: leisure recreational snow sports.</p> <p>Spatial structure: multiple operating poles, increased involvement of private and public partners.</p>	<p>France: Alpes d'Isère; Méribel; Superbagnères; and Super Lionart.</p> <p>Italy: Cervinia and Seszieres.</p>	<p>Weak organisation; unplanned spatial structure; administration tasks wrongly determined; abstract funding procedures. Partial implementation of urban planning; sports facilities uppermost; leisure activities considered problematic due to spatial expansion.</p>

Third generation / Integrated resorts (French model)	1961-1974	<p>Ex-nihilo enclave installation at high altitude (1,500 to 2,000m) aimed at ensuring permanent snow cover.</p> <p>Rational planning dependent on alpine ski activity.</p> <p>Comprehensive spatial, urban and technological planning.</p> <p>Preliminary land control via expropriation for the benefit of local administration authorities.</p> <p>Development planned and implemented by a single developer with a high degree of specialisation.</p> <p>Functional zoning for residences, traffic and leisure activities. Architectural approach privileging big buildings.</p>	<p>Mainly in French Alps: La Plagne; Isola 2000; Le Corbier; Avoriaz; Flaine; Tignes; les Ares; Val Thorens; Le Corbier; les Orres.</p> <p>Also: Angères and Annemasse in Switzerland; Squaw Valley in USA; Portillo in Chile; Sapporo in Japan, among others.</p>	<p>Problematic planning. Numerous criticisms have been addressed, such as environmental impact on sites; very low profitability, inability to retain clientele during summer; planning approach (mainly urban) heavily contested.</p>
Fourth generation / Resorts – multifunctional villages (Tyrolean model)	1975-2000	<p>Controlled planning of traditional mountain zones.</p> <p>Preservation of traditional architecture.</p> <p>Aesthetic landscapes prized and promoted.</p> <p>Balance between human activities and natural environment.</p> <p>Sustainable tourism and multifunctional activities.</p> <p>Alternative tourism activities and leisure activities, beyond skiing, for summer season.</p>	<p>Wisler in Canada; and Ortaleg into Austrian Tyrol.</p>	<p>Structural problems / difficulties:</p> <ul style="list-style-type: none"> low productivity and efficiency; small sized operations; socioeconomic structure; lack of sufficient financial resources; unsatisfactory ski trails; multi-nuclear extension of hosting zone.

The French model's winter resorts fully satisfied the new demands of potential visitors, as well the economic, commercial and leisure considerations of integrated planning (Knafou 1994; Herbin 1995; Duhamel and Sacareau 1998). These resorts differed from those of preceding generations with regard to the following parameters: urbanized spatial planning (building complexes; commercial centres, parking areas); technical equipment installed at high altitude; and clientele's isolation from hosting communities. Having been created in accordance with the above-mentioned technical and operational requirements, integrated resorts, privileging trail skiing and sparsely populated mountain zones, do not cater for the modern clientele's current tastes for human sized resorts. Nowadays, priority is given to medium-altitude areas and to comprehensive planning aiming at harmonious symbiosis and fruitful interaction between the mountain environment and economic activities. These are the reasons that led to the adoption of the most recent model. This consists of a polyvalent village-resort, appropriately incorporating facilities into the natural environment. Design and planning are based on soft tourism development principles and the implementation of multiple activities by local communities (Hudson 1996; Baily 2002). An authenticity image has been built up by dedicating such centres to family skiing and green tourism; this image is appropriate for a winter resort model more mindful of environmental considerations, one which seeks an equilibrium between tourism specialisation and sustainable activities (McGibbon 2000; Donohoe 2004; Williams and Gill 2005). However, structural problems have resulted in the implementation of new intercommunity mechanisms with regard to managerial plans and spatial planning (Tuppen 2000; Bodega et al. 2004). An adaptation to new market requirements was necessary (Weiermair and Auer 1997; Bieger et al. 2004). Some authors, as for example Pechlaner and Tschurtschenthaler (2003); Hudson (2004b); Hudson et al. (2004), suggest that the key to adaptation lies in the improvement of human resources' qualifications. This improvement should lead to the development of new skills for tourist cooperatives as a basis for the strategic transition from institutionalised tourism organisations to flexible and market-oriented destination management companies. According to Zimmermann (1995) and Gaido (1998), Alpine winter resorts have adapted their supply to new demands by developing new product categories, such as tourism product attractions, health, sports, adventure and commercial activities. Furthermore, there is a need to better understand the market; future emphasis should be on the better use of marketing tools (Holden 1997; Weiermair and Auer 1997).

4. Winter Sports and Ski Centres in Greece

Despite the fact that seventy-five percent of Greece is semi-mountainous or mountainous, thus far the country's tourism image has been based on the long coastline (15.000 km) and the plethora of islands (2.000). This heliotropic image is almost inevitably bound up with the linear and unplanned development of the littoral zone (Varvaressos 1999; Briassoulis 2000; Andriotis 2005). Greece's comparative advantages, resulting from its climate and geography factors, have played a significant role in the formation of tourist motivations and the type of tourism development (Buhalis 2001; Soteriades & Arvanitis 2006). The development model implemented in Greece was typified by exceedingly high inbound demand and rather insufficient supply from the 1950s to the 1970s. This gap led to the emergence of the first seaside and seafront tourism concentrations of the linear type (Andriotis 2003a). By contrast, in Greece's rural and mountain zones the role of tourism as a socioeconomic activity seems to be insignificant. The predomination of the heliotropic mass tourism model from 1970 to 2005 has reinforced the implementation of a 'sea & sun' tourism development model of a spontaneous and linear type, incorporating spatiotemporal and urban concentrations (Tsartas 1998). It has been proposed that this model could be altered by channelling domestic and inbound tourist flows towards rural and mountain areas (Varvaressos 1999; Komilis 2001); as a market segment, it has also been argued that mountain tourism could reduce overall risk and high dependency on tour operators (Andriotis 2003b). Mountains have never been incorporated into national and regional development plans due to the country's prevailing tourism model. Agricultural properties located in upland areas are small-sized, low productivity units; the manufacturing sector faces serious procurement difficulties; and the tertiary sector has not thus far been seen as a development priority in these areas. Indeed, the unplanned development of mountainous areas has resulted in natural and human resources going to waste, rendering existing gaps more intense (Chiotis and Coccossis 1992; Franch and Martini 2005).

4.1 Winter sports in Greece

Snowsports were unknown in Greece for over three quarters of the last century, since the country's tourism product was associated with the heliotropic image, and mountain tourism mainly concerned central and north Europe. The Mount Parnassus ski centre, which is the most famous Greek one, was constructed in 1975, when installations and ski lifts were opened at Fterolaka. The construction

of further ski lifts and related facilities at Kelaria was completed by 1981, while seven years later a ski lift linking the two locations began operation. Greece's predominant tourism image, the lack of adequate spatial plans for mountain areas and the general political and socioeconomic context help to explain why at least initially, winter sports did not develop as a result of demand from the wealthier classes. The search of metaphysic and the need of self-accomplishment led to the appearance of the first mountaineers and consequently, the establishment of the first mountaineering clubs. These elementary bodies contributed to the construction of the first ski lifts in a very limited number of Greek mountain areas, in order to satisfy basic conditions. However, it seems that skiing itself did not markedly contribute to the increased participation of local communities, private developers and public organisations in mountain development. In Greece, these tourism development stakeholders have not been able to keep track of and assimilate the planning models developed and implemented in Alpine countries over the last century, even if belatedly. The increase in skier volume over the last twenty-five years has resulted on the one hand from the proliferation of skiing areas, and on the other from an increase in skiing among the middle class, in imitation of upper class trends. There are thus five main features of winter sports tourism in Greece: (i) ski recreational practice has serious weaknesses and constitutes a privilege of the upper class; (ii) snow sports are a high cost leisure and recreational activity; (iii) the majority of visits are of short length; (iv) skiers are in the main young persons attracted by the sporting rather than the recreational side of the activity; and (v) the resorts cater mainly for the domestic market. These features help to account for spatial planning as implemented in Greek mountain areas. Winter sports in Greece have contributed to the creation of tourism flows departing from urban centres towards the mountains. Such tourism strengthens a domestic redistribution of income from Athens and other major urban centres to the benefit of mountain communities where ski centres are located. The lack of reliable statistical data and poor implementation of measurement tools at regional and local level render any precise estimate of the economic impact of mountain tourism almost impossible (Varvaressos 2000). The speed and the way in which local communities have responded to new economic opportunities appear to be equally influenced by social and cultural factors. Mountain tourism has a conception and approach different from seaside / balneal tourism, as for the planning implementation, due to specific geographic, economic, social and environmental conditions. Since the 1970s, the predominance of two winter resort models (the French and Tyrolean) in Europe and other continents has not had any impact on Greek reality, which persists in promoting the concept of 'ski centre' at

both at the spatial level and type of planning implemented. The two different analytic concepts of 'ski centre' and 'winter sports resort' clearly point both to existing differences regarding the structures of spatial planning and their management, and to the degree of infiltration and incorporation into local communities and economies (Varvaressos and Soteriades 2003). The term 'winter sports resort' denotes a situation in which zones more extensive than the skiing domains generally compounding a Greek ski centre are taken into account in the planning approach. The explicative term 'ski centre' incorporates spatial, structural and managerial weaknesses characterising the sporting and recreational activity of skiing all over the country.

4.2 Greek ski centres

Ski centres in Greece generally constitute businesses with such high operating expenses that private investors cannot take the financial risk involved. Investors and managers are not industrial groups or financial organisations, real estate developers or management companies, as is the case in France. These functions are assumed by 'Greek Tourist Real Estate' (GTRE), a state company responsible for the privatization and the management of real-estate and enterprises belonging to the Greek National Tourism Organisation (GNTO); the 'General Secretariat for Sports' (GSS); the Alpinism Clubs, in collaboration with GSS; as well as local administration organisations (Varvaressos 1999; Vasiliades and Masmanides 2004). In Greece, twenty-one ski centres operate at present, as shown in Figure 1. In total these stations have 89 ski trails of a length of 90 km; 67 ski lifts and cabins; and a capacity of 47,265 skiers per hour. Apart from two ski centres – Parnassus Mountain and Seli - none conform to international standards, and they very dependent on local and regional market. Table 2 briefly outlines the main features of existing Greek ski centres.

Figure 1. Ski centres in Greece*



Source: Greek National Tourism Organisation (GNTO), 2006.

(*) The numbers appearing on the map correspond to the numbers in Table 2.

Table 2. Greek ski centres: Main features.

Ski centre	District	Altitude (in meters)	Ski trails	Trails' length (in meters)	Ski cabins, lifts, cable cars and rope railways	Capacity (Skiers per hour)
1. Parnassus	Boeotia	1,750 - 1,950	24	17,300	17	6,000
2. Tymfristatos	Evyrotania	1,800	2	2,500	3	2,500
3. Dirfis	Euboea	1,350	2	1,600	1	650
4. Olympus	Larissa	1,800	2	1,750	5	N/A
5. Pelion	Magnesia	1,500	3	2,470	4	2,200
6. Ptooioli	Trikala	1,600	2	2,150	1	700
7. Kissavos	Larissa	1,400	1	1,250	1	N/A
8. Metsovo	Ioannina	1,350	1	1,000	1	1,000
9. Seli	Imathia	1,500	16	22,000	7	8,000
10. Nisoussa	Imathia	1,420 - 2,005	4	5,700	4	2,000
11. Pissoderi	Florina	1,650	3	6,000	3	6,000
12. Vorras	Pella	2,480	2	1,000	2	1,200
13. Vitsi	Kastoria	1,680	3	3,400	1	9,000
14. Vassilitsa	Grevena	1,750	2	2,600	2	1,350
15. Falakro	Drama	1,720	1	400	2	1,200
16. Lanias	Serres	1,600	3	4,000	2	400
17. Pagaio	Kavala	1,750	3	600	1	N/A
18. Chelmos	Achaia	1,650 - 2,100	8	10,000	5	5,000
19. Mairalo	Arcadia	1,600	4	3,580	3	700
20. Lefka Ori	Chania	1,450	2	400	1	280
21. Antalofos	Xanthi	1,600	1	300	1	N/A

Source: Greek National Tourism Organisation (GNTO), 2006.

Greek ski centres seem to be very inferior, at both at the structural and functional level, to those of other countries having the same climatic conditions and similar socioeconomic structures, e.g. Bulgaria. Concerning the spatial level, there are only two ski centres – i.e. Seli and Tymfristos – where accommodation units operate close to ski lifts. With reference to skier volume, Parnassus ski centre tops the table, satisfying crucial conditions such as the short distance from Athens, the Greek capital, which represents nearly 50 per cent of the domestic snow sports market; accommodation is located at the mountain towns and villages of Mt. Parnassus (Arachova, Delphos and Livadi); access and transport modes do not present problems. Other centres less important than Parnassus are Seli, Chelmos, Naoussa and Pelion. The equipment and facilities in the majority of centres are rudimentary and destined to cater for only basic needs related to snowsports (Christopoulou and Papadopoulos 2000; Vasiliades and Masmanides 2004). A series of factors could be used to classify these centres, such as type of planning implemented; expanse of skiing domain; mechanical equipment; operating company / management; local geographic and weather characteristics; general infrastructure; tourist superstructure; related facilities; site evaluation; volume of skiers; and market / clientele. Using these criteria, Greek ski centres could be classified into two categories: national (Parnassus, Seli, Naoussa, and Voras); and regional / local (Lailias, Pelion, Chelmos, etc.).

5. Comparative Study of Greek Ski Centres and Alpine Winter Resorts

Comparative study of the four generations of Alpine winter resorts with Greek ski centres reveals significant differences concerning crucial parameters, namely: socioeconomic and political context; recreational and spatial framework in which resorts appeared, developed and have gradually been transformed; expectations; natural landscape; imaginary and traditions; and clientele. Greece lacked such classes, who would have been capable of operating the first multi-polar and purely recreational mountain resorts in areas with an agro-pastoral structure at an altitude of less than 1.000m. In fact, for political and socioeconomic reasons, Greece is largely devoid of old villages and towns boasting traditional architecture of the type that could constitute attractions for high-revenue tourists during the summer period (Varvaressos and Soteriades 2003). Juxtaposing snowsports during hibernal period could establish the multi-polarity of sites. Second generation resorts arose so as to cater for an increasing demand for winter sports, rather than as a result of an ideological and socioeconomic context that dominated the creation of first

generation counterparts. Consequently, there were three principal characteristics of second generation resorts; namely: sufficient snow at high altitudes; operation of ski trails in virgin mountain areas; and specialisation in the field of snowsports. As for this type of resort, it is worth noting that there are no mountain sites, at either the spatial or urban level. Greek ski centres are similar to second-generation stations as regards their exclusive emphasis on sports. However, it could be observed that action plans aiming at establishing the poly-nuclear and multi-polar structure of a second generation's station in mountain villages were entirely absent. On that score, the Parnassus ski centre could constitute a typical example. Planning of snowsports domain has been implemented following close upon an assessment of characteristics proper to the selected site, such as snow expanse; quality and range of ski trails offering a competitive advantage. Visitors' needs for accommodation and entertainment activities are catered for in agro-pastoral villages that have never been taken into account in action plans concerning stations of intermediate type. The site itself forms a part of Parnassus Mountain at spatial and structural level, and represents a poly-nuclear second generation type station (with ski facilities at Kelaria, Fterolaka, and Gerondovrachos) and multi-polar (Arachova, Livadi, Delphos, Agoriani, Amfiklia). Over the past fifteen years, Arachova, the biggest town on Mt. Parnassus and simultaneously its principal attraction for stays and entertainment, is in what could be termed an intensive bipolar relationship with Livadi, situated half way between Arachova and Kelaria, where the rope railway taking visitors to ski trails is located. Hence, the bulk of accommodation operations have been established at Arachova, while new buildings (mountain villas; apartments; restaurants; cafés, etc.) have been constructed '*ex-nihilo*' at Livadi, in a spontaneous way, without being incorporated into a mountain planning project that should take its features and comparative advantages into consideration. Within the framework of relief spatial planning on the mountain, planners could consider the creation of other '*ex-nihilo*' winter sports stations of two models: integrated station or resort-polyvalent village. It is worth stressing that the ski centres, which have emerged in Greece over the last thirty years, do not correspond to any of the new third generation specialised resorts (French and Tyrolean models). Most ski centres in Greece correspond more to those of the second generation. Comparative study of winter resorts in the Alps and Greece indicates two groups of clearly distinct factors that account for the current situation as being an outcome of the existing recreational context and technical, spatial and socioeconomic imperatives (Boyer 2004; Varvaressos and Soteriades 2004), namely: (i) the diffusion of snowsports as a leisure and recreational activity, and the development of four models of winter

resorts in the Alps have been the outcome of ski activity's popularisation due to geographic and climatic factors in Austria, Switzerland and Scandinavian countries; and the resultant of holidays' extension in France, Italy and Germany; and (ii) the popularisation of winter sports entailed the activation and participation of a bundle of dynamic technological, spatial, urban and socioeconomic factors, within the framework of mountain site planning, i.e. third and fourth generation resorts. The unilateral development of ski centres in Greece could be explained in terms the above-mentioned factors. The elaboration and implementation of new plans concerning the twenty-one ski centres in Greece could converge to the adoption of the adequate model, taking into consideration, on the one hand, the mountain's climatic, geographic and socioeconomic features; and on the other, the prevailing tourism development model in Greece (Buhalis 2001; Andriotis 2005).

6. Conclusions and Recommendations

Mountain areas in developed countries represent significant tourism destinations. Tourism demand markets as well as the type of culture, constituting basic elements of socioeconomic environment, have played a considerable role in the development of this phenomenon. A series of tourist motivations and the elaboration and implementation of various planning approaches to mountain sites first led to the increase of potential skiers, and subsequently to the popularisation of snowsports. Evidently, this phenomenon has grown gradually with the diffusion of skiing as a sportive and recreational activity; and the development of various winter resorts. The integrated third generation resorts (French model) oriented to sports and recreational skiing are those that contributed to the increasing popularisation of mountain tourism and permitted a spectacular growth of accommodation stock, in spite of criticisms levelled at this type of resort, such as 'ski factories' or 'rough tourism model'. Fourth generation resorts – polyvalent villages (Tyrolean model), rather than being doomed to cater solely to the recreational and aestival needs of a potential clientele, represent a 'soft' model of tourism development. Although these two resort models developed during the second half of 20th century in the Alps, the development of mountain tourism in Greece presents many weaknesses, as has been analysed. In terms of planning – or lack of it - Greek ski centres correspond to second generation winter stations. This study has outlined the main features of the Greek ski centres as regards planning and organisation. By no means exhaustive, it has attempted to cover several issues and aspects that should be considered by tourism policy makers and planners in the

field of mountain tourism and winter resorts. Based on accumulated experience in Europe, the following recommendations could be put forward to Greek policy makers and planners in order to effectively formulate and implement appropriate action plans. Firstly, it seems possible to adopt and apply a systems approach to Greece's mountain tourism spatial planning and management, as suggested by Sharpley (2005); and to appropriately use concepts such as 'winter sports tourism'; 'mountain sites'; and 'winter resorts models'. The model of 'resorts – polyvalent villages' correspond rather to intercommunity expectations and the model of 'ex-nihilo integrated resorts' could contribute to the popularisation of snowsports tourism. Evidently, this task could be performed within a framework that should take into account the particular characteristics of mountain areas and introduce mechanisms and tools that would help define the background and the basis of a polyvalent policy for the whole country at national and regional level. Planning should consider the relative importance of local control and national policy in optimising winter tourism's contribution to mountain development. There is an imperative to combine local inputs and initiatives with national policy, as an effective framework for the management of sustainable and profitable mountain tourism. In other words, an adequate planning framework should be inspired by host community 'need or product-led' strategies, as opposed to 'market-led' strategies (WTO, 1997) that aim for economic growth only, seeking to both protect natural environments and create satisfactory visitor experiences. In this regard, Gherissi-Labben and Mungall (2004) suggest that cooperation among tourism stakeholders in a single winter destination, as well as between different destinations, could be essential in developing a diversified offer of entertainment activities able to satisfy visitors. Finally, a winter resort should be operated as a destination in order to carefully conceive and implement appropriate, destination-specific action plans aiming at optimise outputs for all stakeholders (Flagestad and Hope 2001; Gill and Williams 2005; Franch and Martini 2005).

Acknowledgements

We are grateful to René Baretje-Keller, President of the International Centre for Research and Studies (CIRET) Aix-en-Provence, France; and Emeritus Member of the International Academy for the Study of Tourism, for his suggestions regarding the present paper. CIRET's bibliographic database (<http://www.ciret-tourism.com>) has been an abundant source of scientific literature enriching our study.

NOTES

1. The term 'heliotropism' literally means 'be attracted by sun'. It is used to designate the Western populations' mobility towards southern regions of their respective countries or to characterise the arrival of North Europeans in Southern countries, mainly in the Mediterranean basin, and North Americans towards Florida (Duhamel and Sacareau 1998).
2. The term 'ski centre' is considered as too restrictive and unilateral at spatial and functional levels. It indicates a skiing domain in which snowsports are performed, once spatial planning (ski lifts, equipment) and general infrastructure (roads, etc.) have been established (Varvaressos and Soteriades 2004).
3. The term 'winter resort' is likely to be wider and more complex than 'ski centre', since in addition to the skiing domain, a mountain resort extends to accommodation, catering facilities, leisure and entertainment services, sports equipment shops, general shops, parking areas, etc. Therefore, a 'winter resort' usually represents a tourist area of multinuclear / multifunctional type. It encompasses the social, economic and environmental impacts on mountain areas as a result of winter sports tourism development.

REFERENCES

- Amourous, C., 2001. L'implantation du ski Alpin dans les Alpes françaises: la tradition étayage de la modernité. *Revue de Géographie Alpine*, 88 (4), pp. 9-20.
- Andriotis, K., 2003a. Coastal resorts morphology: the Cretan experience. *Tourism Recreation Research*, 28 (1), pp. 67-76.
- Andriotis, K., 2003b. Dependency on tour operators. Problems faced by the Cretan tourism businesses and the views of their owners/managers. *International Journal of Hospitality and Tourism Administration*, 4 (3), pp. 23-48.
- Andriotis, K., 2005. *Tourism Development and Planning*. Athens: Stamoulis Editions, [in Greek].

- Archambault, M. and Audet, S. 1997. _ la recherche des skieurs alpins: la situation dans les Cantons de L'Est. *Revue Téoros*, 16 (1), pp. 28-31.
- Bailly, A., 2002. Pour un développement durable des stations de sports d'hiver. *Revue de Géographie Alpine*, 90 (4), pp. 117-120.
- Baud-Bovy, M. and Lawson, F., 1998. *Tourism and Recreation. Handbook of Planning and Design*. 2nd ed. London: Architectural Press.
- Bieger, T., Beritelli, P. and Weinert, R., 2004. Do cooperation really pay? Contribution based on strategy process theory for the case of small and medium sized ski area companies. In P. Keller and T. Bieger, eds. *The future of small and medium sized enterprises in tourism*. 54th Congress 2004, Petra, Jordan. St. Gallen: AIEST, Vol. 46, pp. 151-62.
- Bodega, D., Cioccarelli, G. and Denicolai, S., 2004. New inter-organizational forms: evolution of relationship structures in mountain tourism. *Tourism Review*, 59 (3), pp. 13-19.
- Boyer, M., 2004. Les Alpes et le tourisme. In *Tourisme et changements culturels - Histoire des Alpes*. Lugano (Switzerland): Association Internationale pour l'Histoire des Alpes, 2004/9, pp. 19-30.
- Briassoulis, E., 2000. Planning of tourism development: typical approaches. In P. Tsartas, ed. *Tourism development; multidisciplinary approaches*. Athens: Exantas, pp. 123-48, [in Greek].
- Buhalis, D., 2001. Tourism in Greece: strategic analysis and challenges. *Current Issues in Tourism*, 4 (5), pp. 440-80.
- Christopoulou, O. and Papadopoulos, I., 2000. Role and evolution of winter tourism demand in the development of greek mountain areas: the case of Pertouli ski center. In *Proceedings of the International Scientific Conference 'Tourism on islands and specific destinations*. December 14-16, 2000, Chios Island, Greece: University of the Aegean.
- Carraud, M. and Servoin, F., 2001. *Le Tourisme de Montagne ? L'heure Européenne*. Grenoble: Presses Universitaires de Grenoble.
- Cazes, G., Lanquar, R., and Raynouard, Y., 1993. *L'aménagement Touristique*. Paris: Presses Universitaires de France, Collection 'Que sais-je?'.
- Chiotis, G. and Coccossis, H., 1992. Tourist development and environmental protection in Greece. In H. Briassoulis and J. van der Straeten, eds. *Tourism and the environment: regional, economic and policy issues*. Dordrecht: Kluwer Academic Publishers, pp. 133-45.

- Cottle, J., 1992. Evolution of resort design. In A. Gill and R. Hartmann, eds. Mountain resort development. Proceedings of the Vail Conference, April 18-21 1991. Burnaby, British Columbia (Canada): Simon Fraser University, Centre for Tourism Policy and Research, pp. 183-86.
- Deslarzes, B., 2003. Verbier, 1930-1960; Le décollage d'une station hivernale. In L. Tissot, ed. Construction d'une industrie touristique aux 19^{ème} et 20^{ème} siècles. Perspectives internationales. Neuchâtel (Suisse): Editions Alphil, pp. 171-85.
- Donohoe, H., 2004. Green snow: sustainability and the ski industry. In Measuring the tourism experience: when experience rules, what is the metric of success? Travel and Tourism Research Association 35th Annual Conference Proceedings, June 20-23, 2004, Montréal, Canada. Boise ID (U.S.A.): Travel and Tourism Research Association.
- Duhamel, P., and Sacareau, I., 1998. *Le Tourisme dans le Monde*. Paris: Armand Colin.
- Flagestad, A., and Hope, C.A., 2001. Strategic success in winter sports destinations: a sustainable value creation perspective. *Tourism Management*, 22 (5), pp. 445-61.
- Franch, M., and Martini, U., 2005. The community model and sustainability in tourist destinations: the case of the Dolomites. *Tourism Review International*, 9 (1), pp. 33-46.
- Gaido, L., 1998. Les stations de neige de l'avenir. *Revue de Tourisme*, 53 (2), pp. 29-37.
- Gherissi-Labben, T., and Mungall, A., 2004. Competitiveness of Swiss alpine destinations in summer season: a client satisfaction approach. *Tourism Today*, 4, pp. 21-36.
- Gill, A.M., and Williams, P.W., 2005. Corporate-community relations in the tourism sector : a stakeholder perspective. In *Rural change and sustainability: agriculture, the environment and communities*. Burnaby, British Columbia (Canada): Simon Fraser University, Department of Geography, pp.1-12.
- Goeldner, C.R., 1992. Skiing trends in North America. In A. Gill and R. Hartmann, eds. Mountain resort development. Proceedings of the Vail Conference, April 18-21 1991. Burnaby, British Columbia (Canada): Simon Fraser University, Centre for Tourism Policy and Research, pp. 7-20

- Herbin, J., (1995), *Mass tourism and problems of tourism planning in french mountains*. In G.J. Ashworth and A.G.J. Dietvorst, eds. *Tourism and spatial transformations: implications for policy and planning*. Wallingford: C.A.B. International, pp. 93-105
- Holden, A., (1997), *An understanding of skiers motivations, a key to sustainable management in mountainous areas*. In R. Bushell, ed. *Tourism research: building a better industry*. Proceedings from the Australian Tourism and Hospitality Research Conference, Sydney 6-9 july 1997 Canberra: Bureau of Tourism Research, pp. 523-33.
- Hudson, S., (1996), *The 'greening' of ski resorts: a necessity for sustainable tourism, or a marketing opportunity for skiing communities?*. *Journal of Vacation Marketing*, 2 (2), pp. 176-85.
- Hudson, S., (2003), *Winter sport tourism*. In S. Hudson, ed. *Sport and adventure tourism*. Binghamton, NY: The Haworth Hospitality Press, pp. 89-123.
- Hudson, S., (2004a.), *Winter sport tourism in North America*. B.W. Ritchie and D. Adair, eds. *Sport tourism. Interrelationships, impacts and issues*. Channel View Publications, Collection Aspects of Tourism, N°14, pp. 77-100.
- Hudson, S., (2004b.), *Winter sports destinations: dealing with seasonality*. In *Measuring the tourism experience: when experience rules, what is the metric of success ?* Travel and Tourism Research Association 35th Annual Conference Proceedings, june 20-23, 2004. Montréal, Canada. Boise ID (USA): Travel and Tourism Research Association.
- Hudson, S., Brent Ritchie, J.R., and Timur, S., (2004), *Measuring destination competitiveness: an empirical study of canadian ski resorts*. *Tourism and Hospitality Planning & Development*, 1 (1), pp. 79-94.
- Inskip, E., (1991), *Tourism Planning: An Integrated Sustainable Development Approach*. New York: Van Nostrand Reinhold.
- Knafou, R., (1994), *Les Alpes*. Paris: Presses Universitaires de France, Collection 'Que sais-je ?'.
- Komilis, P., (2001), *Ecotourism: An Alternative Solution to Sustainable Tourism Development*. Athens: Propombos.

- Lagos, D. and Curtis, P., (2004), *An Endogenous total quality strategy to tourism development*, European Research Studies, Vol. VII, Issue (3-4), pp. 17-28.
- Le Garrec, M.A. and Antczak, M., (2005), *Le Tourisme en France*. Collection Références. Paris: I.N.S.E.E.
- McGibbon, J., (2000), *Family business: commercial hospitality in the domestic realm in an international ski resort in the tirolean alps*. In M. Robinson, N. Evans, P. Long, R. Sharpley and J. Swarbrooke, eds. *Reflections on international tourism. Expressions of culture, identity and meaning in tourism*. Sunderland (UK): Business Education Publishers Ltd, pp. 167-81.
- Micheletto, M. and Novarina, G., (2002), *La montagne vue par les urbanistes (les années 1930-1940)*. *Revue de Géographie Alpine*, 90 (4), pp. 33-47.
- Panagopoulos, An., (1999), *An Development of Greek Tourism during the period (1988–1997)*, *Archives of Economic History*, Volume XII, No1–2, p. 217–236, (2001), *Greek economic history society's papers of Spetses*, Congress, October 2–3.
- Panagopoulos, An.–Panagopoulos Al. and Konstantinidis, S., (2005), *A seasonal forecasting model of the tourist sector. The case of Central Macedonia*, *Διεθνές Συνέδριο Τουριστικής Ανάπτυξης και Σχεδιασμού, Τμήμα Τουριστικών Επιχειρήσεων, ΤΕΙ Πάτρας*.
- Philipona-Romanens, A., (2001), *Les débuts du tourisme hivernal*. *Revue d'Histoire Régionale*, N° 3, pp. 65-70.
- Pechlaner, H. and Tschurtschenthaler, P., (2003), *Tourism policy, tourism organisations and change management in Alpine regions and destinations: a European perspective*. *Current Issues in Tourism*, 6 (6), pp.508-39.
- Rudaz, C., (2002), *Réflexions sur l' identité d'une station de sports d'hiver en montagne: Crans-Montana (Valais, Suisse)*. *Revue de Géographie Alpine*, 90 (4), pp. 101-07.
- Russell, R. and Thomas, P., (2004), *The changing face of entrepreneurship in mountain resorts*. In *Tourism, State of the Art II Conference. Proceedings, 27-30 june 2004, Glasgow*. Glasgow: University of Strathclyde, The Scottish Hotel School, pp. 1-24.

- Schnell, P., (1981), *Tourism as an agent of structural change: a case study in Serfaus-Tyrol (Austria)*. In *Consommation d'espace par le tourisme et sa préservation*. Actes du Colloque d'Aix-en-Provence, 6-11 Septembre 1981. Aix-en-Provence: Centre des Hautes Etudes Touristiques, Collection Etudes et Mémoires, 55, pp. 368-82.
- Sharpley, R., (2005), *Tourism and the environment*. In L. Pender and R. Sharpley, eds. *The management of tourism*, London: SAGE Publications, pp. 259-274.
- Soteriades, M. and Arvanitis, S., (2006), Expenditure patterns by travel party size: British and German tourists on Crete, Greece. *Anatolia: An International Journal of Tourism and Hospitality Research*, 17 (2), pp. 169-187.
- Tinard, A., (1992), *Le Tourisme: Economie et Management*. Paris: McGraw-Hill.
- Tissot, L., (2004), *A travers les Alpes*. Le Montreux-Oberland Bernois ou la construction d' un système touristique, 1900-1970. In *Tourisme et changements culturels -Histoire des Alpes*. Lugano (Switzerland): Association Internationale pour l'Histoire des Alpes, pp. 227-44.
- Tsartas, P., (1998), *La Grèce: du Tourisme de Masse au Tourisme Alternatif*. Paris: L' Harmattan.
- Tuppen, J., (2000), *The restructuring of winter sports resorts in the French Alps: problems, processes and policies*. *International Journal of Tourism Research*, 2, pp. 327-44.
- Varvaressos, S., (1999), *Tourism Development and Administrative Decentralisation*. Athens: Propombos, [in Greek].
- Varvaressos, S., (2000), *Tourism: Economic Approaches*. 2nd ed. Athens: Propombos, [in Greek].
- Varvaressos, S., and Soteriades, M., (2003), *Tourism into mountain chains: a spatial and temporal analysis*. *Tourist Scientific Review*, 1, pp. 9-23, [in Greek].
- Varvaressos, S., and Soteriades, M., (2004), *Tourism development based on winter sports in the Alps: a comparative analysis*. *Geographies*, 6, pp. 22-39, [in Greek].

- Vassiliades, H., and Masmanides, T., (2004), *The perceptions of managing organisations of the Greek ski centres concerning their potential, weaknesses, opportunities and threats*. In D. Papadimitriou, ed. Proceedings of the 5th Hellenic Conference of Sports Management Patras, 10-12 December 2004. Athens: Propombos, pp. 20-25, [in Greek].
- Weiermair, K., and Auer, W., (1997), *Structural changes of Alpine tourism and resultant adaptation problems of tourism enterprises*. Journal of International Hospitality, Leisure & Tourism Management, 1 (4), pp. 79-91.
- Williams, P.W., and Gill, A., (2005), *Addressing carrying capacity issues in tourism destinations through growth management*. In W. Theobald, ed. Global tourism. 3rd ed. Oxford: Butterworth-Heinemann, pp. 194-212.
- WTO, (1997), *National and Regional Tourism Planning; Methodologies and Case studies*. London: World Tourism Organisation & International Thomson Business Press.
- Wozniak, M., (2002), *Les stations de ski: Quelles représentations des clientèles pour quel cadre bâti?*. Revue de Géographie Alpine, 90 (4), pp. 17-31.
- Zimmermann, F., (1992) *Issues, problems and future trends in the Austrian Alps: the changes within traditional tourism*. In A. Gill and R. Hartmann, eds. Mountain resort development. Proceedings of the Vail Conference, April 18-21 1991. Burnaby, British Columbia (Canada): Simon Fraser University, Centre for Tourism Policy and Research, pp. 160-70.
- Zimmermann, F., (1995), *The Alpine region: regional restructuring opportunities and constraints in a fragile environment*. In A. Montanari and A. M. Williams, eds. European tourism: regions, spaces and restructuring. London: John Wiley & Sons, pp. 19-40.

A REFERENCE MODEL FOR INFORMATION SYSTEM DESIGN AND DEVELOPMENT

J. PAPOUTSIS*

V. PANAGOU**

A. ZAFIROPOULOU***

Abstract

Nowadays Information Systems comprise a milestone for organizations in the rapidly evolving environment of the digital economy. The success of an organization, whether focused in the private or public sector, is tightly related with the successful design and development of such a system. An integrated framework for system analysis, design and development is necessary to overcome the complexity of modern business needs. Towards this objective, a reference model is proposed in this paper so as to include all the critical dimensions that have to be kept during the analysis, design and development phases.

JEL classification: O32, O33.

Keywords: information systems, reference model for system design and development.

1. Introduction

The total quality of an information system highly depends on the quality of its lifecycle phases. This occurs as a consequence of the fact that during the implementation of a system its backbone is formed that is determinative of its future evolution. Also the subsisting operational apprehension and management philosophy are reflected on an information system. Moreover, the duration of the information life cycle, i.e. the lead-time from data gathering to information distribution, must be kept as little as possible so as to follow the pace of developments, while accessibility to this information must be improved [Kotsilieris03].

Although several studies are concerned about the impact of the development phase on the final information system quality [Basili94], [Paulk93] the complexity

* Professor, Technological Educational Institute of Kalamata.

** Professor, Technological Educational Institute of Kalamata.

*** Associate Professor, Technological Educational Institute of Patra.

of nowadays systems can only be assessed by looking through the prism of a model that also considers business strategy and social factors as evaluation criteria. So much as we believe that the influence of technology is not negligible, we lay support to the claim that the conjunction of seemingly disparate objectives proves to be crucial for the system's overall quality.

During a system development, the following substantial choices are made:

- The philosophy of facing conventional tasks that are automated (are transformed in system procedures)
- The scope and capabilities of the system
- The possibility of future adaptive interventions of system modules or its evolution as a whole.
- The basic checks that will be performed during the system operation.
- The moulds and the functional and technical specifications of the system.

Nowadays, Information Systems comprise a rigid development platform for organizations in the rapidly evolving environment of the digital economy. The success of an organization, whether focused on the private or public sector, is tightly related with the successful design and development of such a system. Its completeness should mainly reside on three milestones which are:

1. Objectives and advisability determination
2. Information processing and flow
3. Technological imperative and behavior of the system.

Each one of these aims at engrafting the system with the appropriate features so as to reach the best result by applying the appropriate methodology, especially during the initial design phase of an Information System. The following sections are dedicated on presenting those milestones along with their corresponding analysis methodologies.

2. A three-dimensional framework for system analysis, functional design and development

An integrated framework for system analysis, design and development is necessary so as to overcome the complexity of modern business needs. Towards this objective, the three conceptual dimensions, mentioned above, are thoroughly studied in the paragraphs below.

2.1 Objectives and advisability determination

A system's initial design starts with the verification and definition of its objectives along with the priorities that have to be set. This phase is based on the enterprise's operational plan. The implementation approach of a company's strategy can be based on several methods. The most important of these methods are: *top-down* design, *bottom-up* design and design through *critical success factors* [Oz00].

Top-down (Figure 1) implies the advancement starting from the executive management requirements and specifications that are substantiated into a functional system which meets the needs of the end-users. In the contrary, bottom-up (Figure 2) analysis and design are initiated from the low level users and attempt to fulfill the superior management goals and objectives. The Critical Success Factors (Figure 3) method denotes the decomposition of an objective into a set of goals considered to be critical for the success of an organization. It is mainly based on the assumption that the aggregate of each business unit optimum is the best for the organization itself.

Figure 1. *Top-Down design approach.*

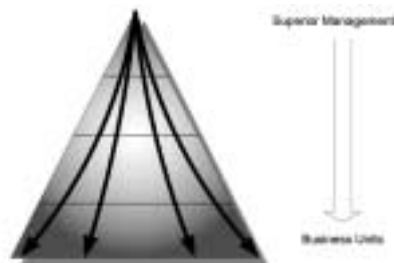


Figure 2. *Bottom-Up design approach.*

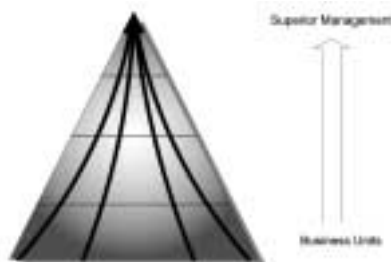
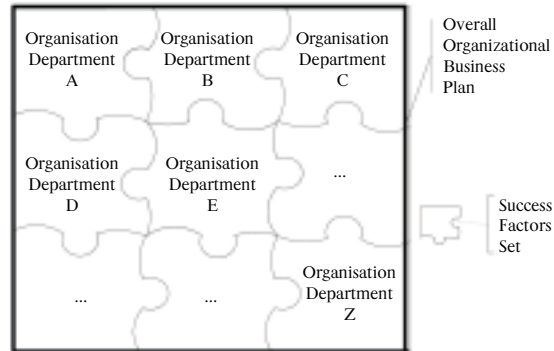


Figure 3. *Design through critical success factors.*



High-level management plans are represented by the top side of top – down approach. Strategic management is totally based on top – down approach targeting on quantifying the attributes of functional requirements. In the contrary, the bottom side of bottom – up approach depicts information system development based on existing data and modules. Operational management is mainly based on bottom-up approach focusing on transforming raw data to qualitative properties of a system.

Critical success factors' approach appears to be a merging point of the advantages of the aforementioned design schemes. Aiming at long-term success of a system, a balance is maintained so as large-scale organizations of the public or private sector perform strategic and operational management together. Through this composition, an organization may continuously adapt to the business changing environment achieving desirable results towards success.

2.2 Information processing and flow

This design dimension mainly refers to the technological solution that will be applied on system planning. In this case, information systems are presented and developed according to one of the following methods:

2.2.1 Individual Applications

It concerns information systems that are amenable to high independence (i.e. independent files, inputs, outputs etc.). In such a case the development of the system does not pose the design of an integrated Information System as a prerequisite, but focuses on specific problems.

2.2.2 Database orientation

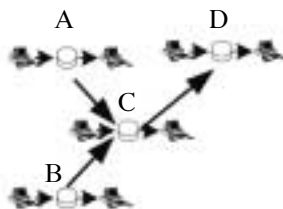
In such a case all the applications are tightly connected towards the target of a centrally controlled Information System [Coronel00]. The development of such a system has to fulfill the criteria of an Integrated System. Usually, such a design philosophy is based on Data Base Management Systems DBMSs (i.e. ERPs and CRMs are representative cases of information systems built upon DBMSs).

2.2.3 Workflow orientation

This method is used during the development of applications where the objective is the accomplishment of business processes or decision support. Systems of this kind are developed individually so as to be flexible and communicate indirectly. The information collection process is carried exactly at the data source. As a consequence, data entry errors are eliminated along with the sequential use of erroneous input to systems.

The main superiority of this method is the ability to interconnect several systems in order to form a new procedure or system by combining the inputs of systems equipped with fundamental functionality. As an example, systems A and B of the following figure could represent a laboratory and a pharmacy that both contain a subtotal of clinical information about patients that are represented by system C. System D could be an Accounting Information System, where part of the patients' bills are maintained. In the same way, this model could be extended to any direction so as to include any other relevant system.

Figure 4. Workflow orientation method.



2.3 Technological imperative and behavior of the system

This dimension of a system under development is twofold. The first approach defines the operational and technical characteristics aiming at the minimization of unfavorable influences on the users and the technological integrity of the system. The second approach imprints the desired policy on the system. More specifically:

- **Social – Technical approach**

During the development life cycle of a system it should be clear that people create a system that will be used by people. Consequently, the human element is determinative for:

- o The technical and operational integrity of the system.
- o The labor life quality of the system users
- o The alignment of business processes with technology.

The latter point can be the most crucial one during the design and development of an IS. This directive demands that legacy business processes of an organization must fit within an information system. By applying this design policy the executive management of an organization has to be informed that such a system will change the power relations. Middle management levels may come by power unexpectedly and gain access to crucial business information.

- **Political approach**

The system designers have to keep in mind that the new system will influence the organization as a whole, focusing their attention on possible internal conflicts that may occur. Also, special attention has to be paid on changes concerning the decision – making procedures due to workflow transformations.

A common fact is the fear faced by high-level management of not losing control and power whilst employees are afraid for their jobs. In case that a Information System causes rearrangement of the decision – making centers, psychological support of the employees that are affected has to be anticipated. Simple users may feel visible and directly controlled by their superiors.

3. The reference model

The completeness of an information system highly depends on the analysis and design phases of its life cycle. Several research studies focus on the objectives of the system under development [Crnkovic02], emphasizing on choosing an appropriate design methodology among the abovementioned (top-down, bottom-up, CSFs). Others, [Allen02], prefer to highlight the social – technical and political impact or the necessity for investment insecurity [Verdon04].

Howbeit, nobody has considered the thoroughness of an information system as a combination of these three design and analysis goals. In a rapidly evolving business and social environment as the one we live in, no one can claim that they may apply the information strategy of an organization ignoring the progress in the information technology field. No matter what analysis approach somebody has

selected, he cannot disregard the fact that web-applications emerge, playing a critical role in electronic – business.

The reference model proposed in this paper could be considered as a path towards the most appropriate solution according to the criteria and the constraints posed by the decision making management level. As depicted in the following figure, a detailed system analysis is conducted within the space defined by the three major axes presented above.

Figure 5. *The three - dimensional analysis model of an information system (IS).*



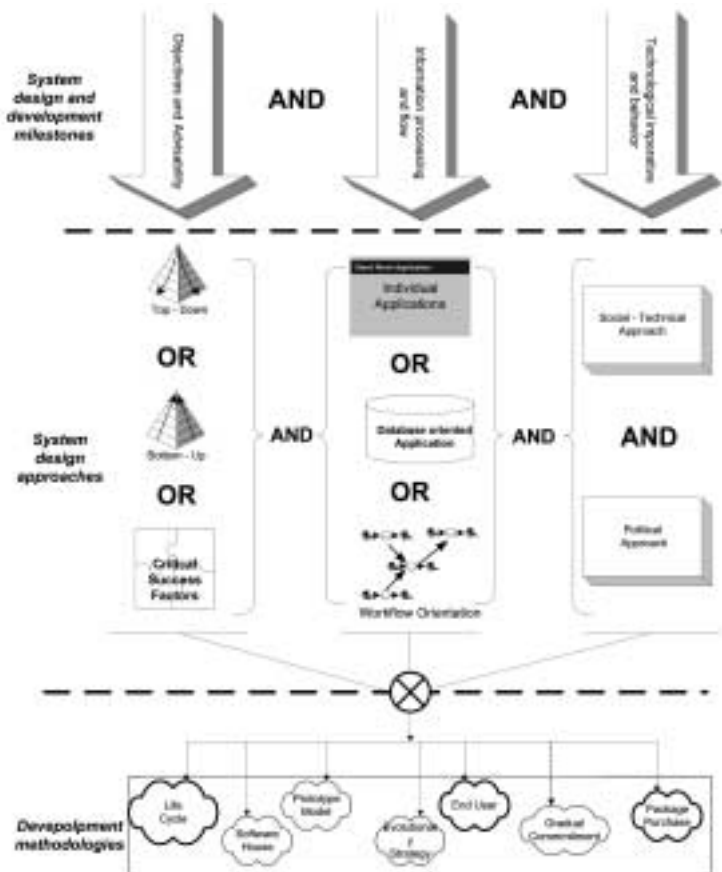
If system analysis is performed on one - or two dimensions it will lack important information that will undoubtedly influence its overall behavior during productive usage by simple users.

A complete system study has to take into account the interaction between those three dimensions, guiding the design engineer towards the appropriate selections about the most suitable development methodology. For example, a complex web-based information system that will provide access to customers through the Internet in order to conclude purchases cannot base its analysis on one or two dimensions. Apart from the internal procedures that must be fulfilled (covering all the hierarchical levels of an organization), it has to be taken in mind that customers will interact with this system.

Also, appropriate development techniques have to be adopted, able to enforce the IS adaptability so as to fulfill the needs arising in a continuously changing business environment. This model is more than crucial in Social – Government Information Systems which provide support in a G2C, G2B and G2G environment as well as in Interorganizational systems. Finally a development methodology has

to be chosen for the implementation of the reference model depicted in Figure 6. The most popular development methodologies are the: life cycle, end user, and package purchase, assignment to software house while other more rarely used techniques are the: prototype model usage, evolutionary strategy, gradual commitment.

Figure 6. A Reference model for system design and development.

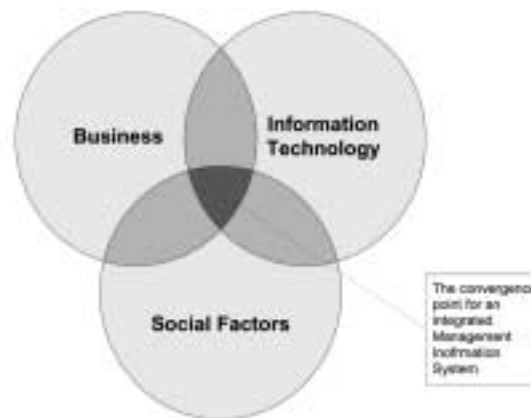


Other aspects that have to be taken into account are:

- the raised cost in information system development that can be kept as low as possible by employing open source and web-based solutions
- and innovative technological tools (mainly reusable software modules [Gaedke00], [Schwabe01] implemented in high level object oriented languages such as Java, C++ etc).

Consequently, the mingling of management information system implementation and business process redesign should be considered as a business philosophy with manifold effects. It causes the mixture of managerial ideology and information technology with several controversial social factors towards a convergence point that is the perfect equivalent of an Integrated Information System (Figure 7).

Figure 7. *The convergence of analysis, design and development factors.*



It is obvious that there is the ability to advance towards an information system not only by equally mixing the three milestones but according to the desired philosophy (i.e. of the IS) and the target user group, several conciliations can be acceptable. In that case, an analyst, designer or developer may be permitted to move around the convergence point (dark grey) instead of the center.

4. Conclusions

Nowadays the increasing complexity of information systems stems from the increased need for complex business logic, scalability, security, guaranteed performance, quality of service and customization needs. Additionally, corporations are subject or need to periodically adapt their processes so as to fully exploit the potential of new technologies and business opportunities.

The proposed reference model for information system analysis, design and development aims to the fulfillment of the abovementioned goals. The employment of this model allows new software technologies to be applied on a system, letting it be adaptable to current business trends and social reactions.

Additionally it steps up the scope of the system as concurrent three - dimensional analysis, design and development overbears compared to the one-dimensional one that ignores significant business and social factors. It was depicted that the mixture of the directives presented above is not quantified. The extent of the deviation from equivalent consideration of each factor is an open research issue.

REFERENCES

- Allen D., Kern T., Havenhand M., *ERP Critical Success Factors: an exploration of the contextual factors in public sector institutions*, Proceedings of the 35th Hawaii International Conference on System Sciences, vol. 8, p. 227. [Allen02]
- V. R. Basili et al., (1994), Goal question metric paradigm. In Encyclopedia of Software Engineering, John Wiley & Sons. [Basili94]
- Rob Coronel, (2000), *Database Systems: Design, Implementation and Management*, Course Technology, Thomson Learning, Fourth Edition. [Coronel00]
- Crnkovic I., (2002), *Component – Based Software Engineering: Building Systems from software Components*, In Proceedings of 6th Computer Software and Application Conference (COMPSAC), IEEE. [Crnkovic02]
- Martin Gaedke, Guntram Gräf, (2000), *Development and Evolution of Web-Applications using the WebComposition Process Model*, International Workshop on Web Engineering at the 9th International World-Wide Web Conference (WWW9), Amsterdam, The Netherlands, May 15. [Gaedke00]
- Kotsilieris T., Anagnostopoulos J., Kalogeropoulos S., Michalas A., Loumos V. & Kayafas E., (2003), *An SNMP Enabled System for Enhanced Monitoring of E-Commerce Statistical Indicators*, AIA 2003, IAESTED International Conference on Applied Informatics, February 10-13, Innsbruck, Austria, p.p. 446– 449. [Kotsilieris03]
- Effy Oz, (2000), *Management Information Systems*, Course Technology, Thomson Learning, Second Edition. [Oz00]

- M. C. Paulk et al., (1993), *Capability Maturity Model for software 1.1.*, Technical Report SEI-93-TR-024, SEI, Pittsburgh, Feb. [Paulk93]
- Daniel Schwabe, Gustavo Rossi, Luiselena Esmeraldo, Fernando Lyardet, (2001), *Engineering Web Applications for Reuse*, IEEE MultiMedia, vol. 8, no.1, pp. 20-31. [Schwabe01]
- Verdon D., McGraw G., (2004), *Risk Analysis in Software design*, IEEE Security and Privacy, vol. 2, no. 5, pp. 79–84. [Verdon04]

TELEWORKING: TRENDS AND IMPLICATIONS

I. KOUTSONIKOS*

I. MITROPOULOS**

Abstract

Teleworking seems to become the new "face" of work in the new millennium. The main reason that establishes teleworking necessary is its technological profile, which is analogous to the rapid technological change of the living style. The positive effects of teleworking on crucial aspects of today's living, such as social integration, environmental protection and economical growth, reinforce its position in the modern life.

Teleworking is also a social and an organisational issue. On the social level, teleworking should be viewed as the means by which people achieve greater flexibility in their working arrangements, and are given access to employment that they were previously denied. On the organisational level, teleworking enables a fundamental change in the way the business is managed.

The aim of this article is to present the teleworking concept and the multifarious aspects involved in this new form of work organisation, as well as to analyse the current situation of teleworking in Europe and more specifically in Hellas.

JEL classification: J21, J61.

Keywords: Telework, Employment, Information and Communication Technologies, Flexibility, Environment, Work relations.

1. Introduction to Teleworking

Teleworking includes a wide variety of situations. From those employed full-time to part-time, this new type of work-organisation also concerns qualified and non-qualified workers. Teleworking brings work to the worker instead of the worker to the work! As a result, these workers are accomplishing their duties in a separate and different environment, instead of in a traditional office-setting workplace.

A clear definition of teleworking is very important to start with. It seems obvious for many professionals that activities, which need a lot of teamwork, are not favourable applications for teleworking. But if we really take into account the definition of teleworking and the context in which this new work practice is

* Associate Professor, TEI of Patras.

** Professor, TEI of Patras.

developing itself, it seems that we must adopt another point of view. In fact, most of the computers' tools developed and used in many areas are giving more and more solutions for networking and team working.

Teleworking or telecommuting is a flexible way of organising work without the need of the physical presence of the worker at his work place during important parts of his working hours. Teleworking occurs when Information and Communications Technologies (ICTs) are applied to enable work to be done at a distance from the place where the work results are expected or where the work would conventionally have been done. The professional activity of teleworking implies the frequent use of electronic information processing techniques and the extensive use of telecommunication equipment (e.g. telephone, answering machine, fax, networked computers and other advanced telecom services such as ISDN, voice mail, audio and video conferencing, call diversion, mobile telephony, etc.).

Therefore, teleworking is defined as a concept of work-organisation consisting of:

- Distance working, a work which is fulfilled outside the usual workplace where the result of the work is expected (enterprise),
- The use of the computer and telecommunication tools, and
- Without the possibility of permanent control of the work process by the one giving the instructions (client or boss).

Teleworking constitutes a new method of working. It appears to be perfectly in accordance with the new style of life. The long distances, the everyday pressure, the fast pace of living, and the new social aspects of life demand a modern and more flexible working style. This working style is going to be adopted from every one who really wants to work but does not succeed due to various circumstances. People may start teleworking when there is a compelling reason such as wanting more time at home with a new baby, or wanting to retain work after relocating with a partner. Teleworking can also become a precious solution for these people who faced redundancy or early retirement, by giving them the opportunity to develop a new career based on their professional skills. But even people with more "normal" life can appreciate teleworking as the means for better social and family life.

Therefore the dynamic of teleworking does not only intervene in the human factor and way of life but also in the nature and the management of the work itself.

2. Types of teleworking

In general, three main types of teleworking may be considered, based on the location where work is conducted: home, telematic centres, and mobile. These

types are presented following, further split according to the nature of the work, while mixed forms between any of them may also be adopted.

2.1 Home-based teleworking

The definition of home-based teleworking encompasses all kinds of working at the home of the teleworker. We can differentiate between:

a. Teleworking exclusively at home

In this model, the teleworker works exclusively from his or her home. The teleworker does not usually have direct contact with colleagues and supervisors. This type of teleworking has proven successful in cases where the teleworker is not mobile (e.g. handicapped) or where there are employees in peripheral towns.

b. Alternating teleworking

With this type of teleworking, the employee has a workplace within the company or administration as well as an office that has been set up in his or her home. The employee then divides his or her work time between the company or administration and home, thereby maintaining personal contact with supervisors and colleagues. Generally speaking, not more than three days per week are spent away from the office. In addition, in order to keep up the social contacts, not more than two consecutive workdays are used as teleworking days at home.

This type of teleworking can be successful for persons who have to spend a part of their working time at home (for example persons who have to care for children or the elderly).

2.2 Mobile teleworking

Mobile teleworking refers to work that is carried out at any location with the assistance of mobile telecommunication technology.

The developments in the area of Information and Communication Technology have made online transfer and connection to companies possible. Information on results, important dates and other data can be easily exchanged on a regular basis.

Occupational groups for this type of teleworking include journalists, consultants, commercial agents or technicians for a certain service.

2.3 Tele-centres

Teleworking can also be practiced by delegating an entire office to another location and setting up teleworking positions. Examples of tele-centres are satellite offices and neighbourhood offices.

a. Satellite office

A satellite office refers to office space that belongs to a company, which however is not located at the central office. Satellite offices are generally offices located near the place of residence of the employees in order that commuting may be reduced.

b. Neighbourhood office

A neighbourhood office is also located near the place of residence of the employees as in the case of satellite offices. However, these offices are shared by several companies. This type of teleworking has proven successful for self-employed.

2.4 Tele-service centres

Tele-service centres are companies that offer tele-services to other companies, i.e. graphics for presentations, translations, etc. The work can be transferred from one company to another via information and telecommunication means, e.g. via e-mail. It can be a good alternative to create employment in peripheral towns.

2.5 On - site teleworking

Software developers and system specialists often carry out a specific project "on-site" directly with the clients for a defined period of time. At the same time these teleworkers stay in contact with the home office through the use of electronic information technologies.

2.6 Virtual companies

Virtual companies are made up of individuals coming from different small companies or who are self-employed and will work together on a specific project for a defined length of time. Such companies can be found on the Internet.

3. Features of teleworking

We have already mentioned some of the characteristics, which distinguish teleworking from traditional ways of working. For example, a teleworker is not obliged to commute on a daily basis for working (location flexibility), which saves time and permits time management according to the teleworkers' need (time flexibility), while it offers also environmental benefits. In addition, for conducting their work, teleworkers need to use Information and Communication Technologies, in order to get information and transfer the results of their work to their company or clients. These main characteristics have consequences to several other aspects of working and life such as work relations, arrangement of personal and family life, opportunities for regional development, and so on.

Following, the core characteristics of teleworking are presented and discussed in detail.

3.1 Location independence

Some people find it difficult to perform their jobs due to unfavourable circumstances. Teleworking gives a powerful answer to these problems, by relaxing the traditional constraints regarding the physical location where the work takes place. The "teleworking location" is determined as the most convenient place to work (home, teleworking centres, etc.), which is a location suitable for creative and productive work. Thus work in the Information Society is in reality becoming "what work is done" and "how work is done", instead of "where work is done".

The traditional work location is replaced by home working, working in telecentres, working in telecottages, partially working in company's premises, and various mixed forms. Location independence is not only related with the employees. The whole working system interacts lively. Independent contractors, self-employed freelances, employers, partners, customers, suppliers etc. are also influenced by the location independence.

On the other hand the independence of the location causes some problems. The most important of them originate from the work environment. The more serious drawbacks of the independent location of teleworking are:

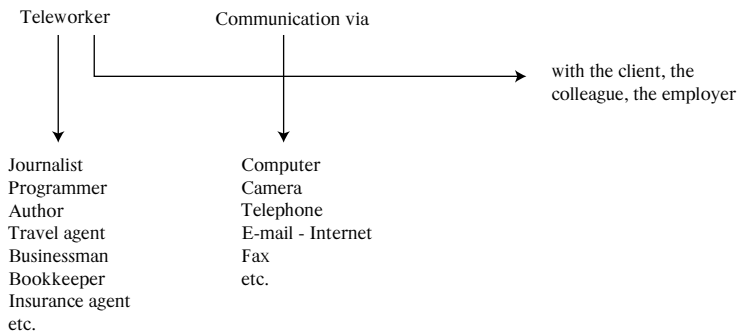
- Lack of social contact (isolation),
- The difficulty to discuss in a professional level with colleagues,
- The lack of face to face communication with the superiors,
- The risk of not being informed about critical aspects,

- The danger of not renewing knowledge and skills,
- The danger of wasting time when working at home,
- Possible lack of personal "working space",
- Possible "workaholism",
- Bad quality and pace of work in case of low self-motivation or weak self-discipline.

3.2 Use of Information and Communications Technologies

Teleworking is defined in many different ways, regarding the location where work takes place, the legal status of the teleworker, the relations between employees and employers, etc. The common element across all aspects of teleworking is "the use of computers and telecommunications to change the accepted geography of work". Work becomes fully networked, covering physical interaction, as well as interaction and communication over the telecommunications network.

The diagram below shows accurately the function of Information and Communication Technologies in teleworking.



The use of Information and Communication Technologies during the teleworking process aids the teleworker to work through a far distant location. Furthermore, it involves him or her to fully comprehend the function and the implementation of new technologies, which appear to be irreplaceable nowadays. On the other hand, professional isolation, which is one of the most important disadvantages of teleworking, can be reduced by teleworkers who adopt strategies like networking, for instance by being active in professional organisations or attending conferences.

3.3 Time flexibility

The fast pace of life and the eight-hour basis of everyday work multiplied by five or six days per week often create problems to many people. These problems can be characterised as family problems, personal problems or social ones. The more important these problems become the worse their implications are. The impact of these problems can affect even the psychosomatic aspect of the human nature.

Teleworking offers time flexibility. Time flexibility permits teleworkers to adapt the working time to their needs, regarding family commitments or personal and social life. Teleworkers may also adjust the working time to their style of life, e.g. working in the afternoon or very early in the morning or during the weekends.

The crucial point here is that the time of teleworking has to be accurately managed. Overworking is often an undesirable effect of working at home. Time management in teleworking is also an important skill in cases that people become absorbed from family or social commitments and are ineffective with their final work product. Therefore time management is a necessary skill for everyone performing teleworking.

3.4 Organisational transformation of work and work relations

Work becomes more dynamic and flexible in response to rapidly changing market situations. Crucial changes in the nature of the work and in work relations between all parties involved, as well as in skills needed and responsibilities undertaken by the teleworkers are more and more observable in the Information Society.

The modern system of working seems to influence the work relations. The hierarchical structure becomes more flat, keeping mainly two levels of workers, managers and employers. The key word for the innovative work relations is trust. The modern employer can be replaced by the client, the manager, or even the partner. On the other hand the multiple role of the employee is a fact. The teleworker needs to have skills not only for accomplishing the work undertaken, but also to manage effectively his/her time and be more co-operative and efficient in communicating with colleagues, managers and employers.

Changes in the nature of work result in the need for training all parties involved in teleworking, in order to provide the skills and knowledge needed to work effectively under the new conditions.

- Managers have to be trained in the management of teleworking.
- Potential or new teleworkers have to be trained in using Information and Communication Technologies, as well as in job-specific skills.

- Colleagues or office-based personnel have to be provided with training in the skills required in a networked organisation.

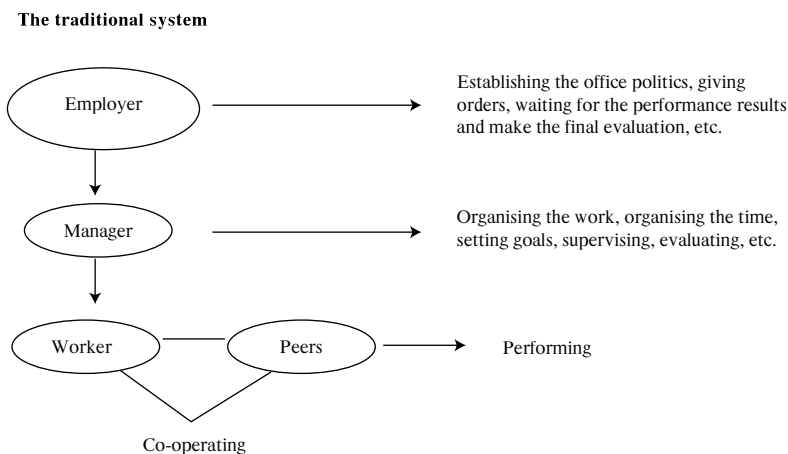
Keeping in mind that teleworking means working from a distance, the face-to-face training is now obsolete. Instead of face-to-face training there is a need for adopting new ways of learning, which do not depend on the presence of colleagues in the office, but in using co-operative methods of learning and new technologies for communication and training.

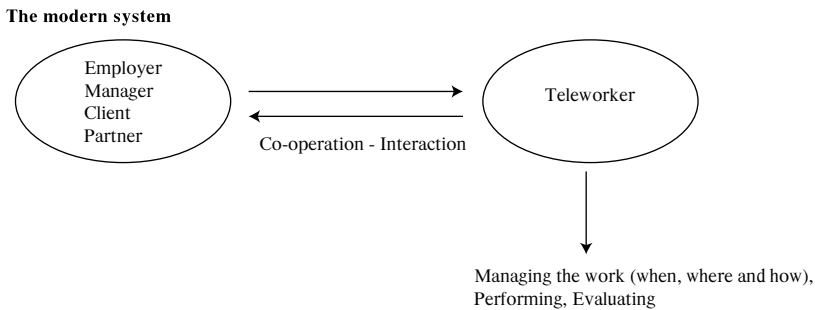
Additionally to the time flexibility and the location independence, teleworking introduces also other changes in organisation of work:

- Teleworking is rather paid not by the time of employment (which is difficult to estimate), but by the piece of work.
- Work takes place in smaller and decentralised organisational units.
- Delegation and horizontal communication practices are more frequent.
- The manager is responsible for the teleworker and his/her performance.
- Teams are set up for the duration of a task or a project.

3.5 More powerful role of teleworkers

The schemes below try to present the difference between the traditional role of the worker and the modern role of the teleworker.





By comparing the above schemes, someone could realise that teleworkers appear to dominate upon their work. The teleworker does not remain just a simple worker but at the same time provides himself or herself with management skills and abilities. The employer, who in the modern way of working is also a manager, a client and a partner, is not located over the "head" of the worker. Instead, both parts co-operate through a flat communication based system. This fact gives the opportunity to the teleworker to become manager of his/her work and get involved in a more active role by acquiring all-round competencies such as use of new technologies, common sense, organisational, work management, planning, human relationship and team working skills.

3.6 Integration of work with personal and family life

The different family situations, which are described below, can fully explain the fact that integration of work with personal and family life is nowadays of a big importance:

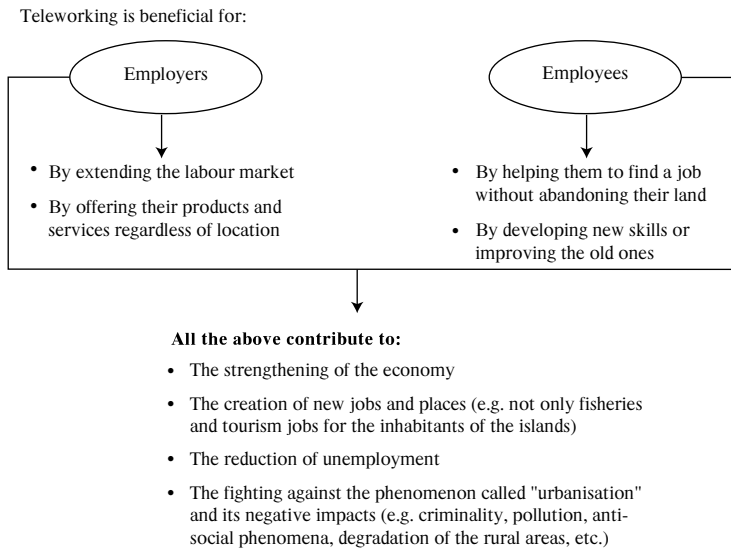
- Few people today are able to rely on the extended family.
- The single-parent households are growing dramatically.
- The expensive and luxury life is strongly related with the two-earner households.
- To combine paid work with caring for a sick adult is also desirable.

As one can see, the modern way of life demands a modern way of working. However, in this modern way of working, the danger of teleworker's vulnerability to interruption or destruction is always visible unless he or she is provided with an accurate system of managing work and time.

3.7 Extension of the employment market

Nowadays the negative effects of urbanisation constitute a world wide spread

problem. Teleworking can become a serious solution to this phenomenon. It can help employers to extend their labour markets and employees to broaden their field of options. The figure below presents the favourable effects of teleworking in this area.



3.8 Environmental benefits

Among the strongest drivers for the introduction of teleworking in many countries have been the expected environmental benefits. Among the benefits of teleworking concerning the environment, the most important are presented below.

Teleworking remains a solution for:

- Traffic congestion
- Environmental pollution
- Oversized cities
- The phenomenon of decentralisation
- The quality of life
- The heavy mass transit systems
- The revival of the province

3.9 Integration of disadvantaged groups into the labour market

Some groups of people are often excluded from the labour market due to their characteristics, which are sometimes hereditary and other times acquired. Although the groups below may differ from each other, concerning the reasons of exclusion they face, the result is always the same: No job is available for these groups.

Disadvantaged groups	Reasons for exclusion
• People with mental or physical disabilities	Because of their difficulty to be fully accepted in the working environment.
• People with strong family commitments (e.g. parents of young children and people having protected family members)	Because of their inability to leave their commitments unaccomplished.
• People living in inaccessible and remote places	Because of their difficulty to physically access the work places.

Teleworking establishes a useful pattern of work for such cases because:

- It increases employment opportunities for several groups of people and combats against social exclusion.
- It transfers new technologies in the community that would otherwise be limited in offices.
- These groups enter the typical labour market and experience its advantages and its problems.
- The employment integration of these groups is also related to wider choices in the location of work, by offering additional support, e.g. in the form of child care facilities, respite care, day centres and good public transport.

4. Target groups and applications in teleworking

It seems very important at this stage to remain that teleworking is not a specific job, but a particular work organisation. That means that target groups have to be mainly considered through this definition. If you are old or young, man or woman, it is not so important regarding your training plan. The first important aspect is to know if your own job and your specific qualification can enable you to telework. For example, I cannot telework if I am a carpenter, because my main activity is

not based on Information and Communication Technologies (ICTs). The second important question is probably to know which type of teleworking you are going to do, in terms of work organisation. The core skills needed to telework as an employee in a big company are different from those that are useful for working as freelance or in a telecottage.

4.1 Teleworking target groups

In the aim of favouring the development of teleworking, it seems very important not only to consider teleworking target groups on the single point of view of "workers". We actually think that employers could have training needs as well, even if they are not going themselves to telework, but to exercise a good influence on the development of teleworking within their company.

Unemployed

Unemployed people form a target group that is very important relating to European social aims, and considering that teleworking could be a good strategy for professional integration. According to this point of view, the usual groups taken into account in social policies are:

- ◆ Young people,
- ◆ Women,
- ◆ Disabled people, and
- ◆ Disadvantaged people (long-term unemployed, homeless, migrants, refugees, etc.).

The innovative picture of teleworking and ICTs could give motivation to many young people to move on to professional integration. But young people with low qualification will not easily find solutions with teleworking.

Teleworking is considered like a very good opportunity for women who wish to combine family life and work. Traditional feminine jobs are also some of the main applications for teleworking (data entry, telephone services, audio typing, customer information, etc.).

For different reasons, teleworking is considered as a very good opportunity for disabled people:

- ⇒ It can enable many of them to make a positive contribution to the country's economy and to the community, and can enhance the contribution made by those who are already active economically or socially.
- ⇒ Some teleworking services can be used by disabled people to enrich their life and reduce their dependence on public or charitable support.

⇒ Teleworking products and services for disabled people could be developed as a profitable market.

Employers

If the future training is also focusing on employers, it seems that two different categories have to be taken in account:

- ◆ Managers of Small and Medium-sized Enterprises (SMEs), who could telework themselves or look for new skills to set up a flexible organisation in their company.
- ◆ The managerial staff in the big companies, who have to set up adapted organisation to integrate teleworking.

Employees

This category concerns:

- ◆ People working in small or big companies, who have a job that is adaptable to teleworking, and who are interested to become teleworkers, and
- ◆ Unemployed whose plan is to get an employee situation, in which teleworking skills could give an added value.

Self-employed - freelances

These are either freelances, who wish to develop a teleworking organisation, or unemployed who plan to set up their own activity, including teleworking.

Local authorities

This category includes members of local councils and project managers as well, who could be interested in teleworking as a strategy for local development.

4.2 Work fields in teleworking

Teleworking can be introduced in many work areas, in office-type work (secretarial, accounting, etc.), in work where creating new concepts or activities is the main goal, and many others.

A non-exhaustive list of examples of work fields which integrate teleworking:

- ✓ Office / secretarial
- ✓ Client contacts, phone secretary
- ✓ Training & marketing
- ✓ Data, research, advice

- ✓ Computing & networking
- ✓ Graphics & publishing
- ✓ Training
- ✓ Supervision
- ✓ Various careers dealing with new telecommunication technologies

In the aim of including new applications, there is a possibility to classify them by categories, in relation to the information process:

- ⇒ **Production of information:** research, documentary making, consulting, information brokerage, multimedia design, etc.
- ⇒ **Data processing:** data capture, programming, scanning, etc.
- ⇒ **Distribution of information:** library, training, administration, customer information, accountancy, translation, etc.
- ⇒ **Operating and maintenance of information system:** software support, data conversion, etc.

In addition, there are specific job characteristics that are well suited to teleworking. Some of them are following enlisted:

- Low face-to-face communication requirements,
- Teamwork is not required,
- Clearly defined objectives,
- Clearly defined tasks,
- Measurable output, and
- Low degree of supervision and feedback required.

4.3 Skills needed for teleworking

A teleworker is a person who carries out his/her work outside a traditional work environment and who transmits it essentially by the means of the new communication technologies. It would be useful to list some of the skills that the teleworker needs to have in order to lay claim upon the job. Besides the skills that are required for the specific job, the teleworker has to obtain some additional skills. The most important are described below.

A teleworker needs to have:

- ⇒ Computational skills,
- ⇒ Managerial skills,

- ⇒ Maturity,
- ⇒ Ability to work independently,
- ⇒ Self discipline,
- ⇒ Verbal and written communication skills,
- ⇒ High decision making ability, and
- ⇒ Organisation skills.

The above additional skills can be categorised in four general types, which need to be evaluated for each individual (4 categories analysed in an exploratory study on teleworking and handicap by the University of Liege - accessible via the Internet at <http://www.difnet.org/ulg>).

a. Operational Skills

The skills, which are directly related to the tasks to be completed, for example in accounting or for secretarial work; operational skills concern the required knowledge in a specific field of work.

b. Technical Skills

The use of technology in the work context (data file transferring, Internet, electronic communication, use of diverse software, networking).

c. Organisational Skills

Skills needed to be able to accomplish a task (self-organisation, planning, problem solving, decision-making related to work, priority setting, ability to work on one's own without monitoring).

d. Personal Profile

Motivation, curiosity, willing to learn, interpersonal communication skills, self-esteem.

In evaluating a person's level of motivation, it is also important to take into consideration each aspect of the candidate. For example, a handicapped teleworker could be very motivated towards this sort of work, because of the limit of his/her choices for employment. In a situation such as this, the person's high motivation level and the help and support of a tele-centre could serve as compensation for missing skills at the beginning of a teleworking career.

5. Teleworking: Past and present

The first telecommuter on record was a bank president in Boston (1887), who arranged to have a phone line strung from his office to his home in Somerville, Massachusetts. However, no one called it telecommuting back then. From 1963 till nowadays many telecommuting programmes have been launched.

Since 1887 until today, teleworking seems to constantly remain a reliable working style. By passing through a lot of forms and stages, teleworking is established as the wave of the future. However, what makes teleworking popular is its international profile. Going back to teleworking roots, someone would see that, although telecommuting was invented in United States of America, a row of other countries volunteered in continuing and accomplishing teleworking as a working method. This international contribution changes the experimental nature of teleworking into a professional one. Consequently, teleworking in some decades from now is believed to become as popular as the office-based work.

5.1 The status of teleworking in Europe

Since the early 1990's teleworking has been a part of the policy of the European Community. The application of communication technology plays an important role in the regional development and integration of Europe. The liberalisation of telecommunications in the new European Information Society is being accompanied by significant socio-economic changes, particularly in the labour market.

In the second half of the 1990's, teleworking reached critical mass in Europe. The tremendous growth of new telecommunications technologies, including satellites, fibre optics and wireless networks, which has created an infrastructure to which European citizens have access, are the factors that have converged to bring the conditions for this.

In the meanwhile, the reduced costs and improved infrastructure of telecommunications, the rise in computing power and computer reduction cost, the proliferation of mobile phones and palmtop and laptop computers, together all these factors have combined to create the conditions in which teleworking can flourish. The spread of teleworking is therefore linked in a very tangible way to the general development of the Information Society, contributing indirectly both to employability and to technological literacy.

Europe remains among the fundamentalists of teleworking by concentrating more than 10 millions active teleworkers. It must be reminded that telecottages are

supposed to be Scandinavian "products" (over 100 telecottages were located in Scandinavia by 1993 and 23 self-sufficient tele-centres were located in Sweden in 1993), invented in the early 80's.

Despite the improvement of telecommunications technology, not all the European countries have the same level of development. Also within countries there are significant differences between rural and non-rural areas. This lack in telecommunications technology is a potential barrier for teleworking. Sweden, Finland, Denmark (knew by quality and extent of their telecommunications network), France and Germany have made major efforts to ensure that rural areas are well served.

The following charts (Figure 1 and Figure 2, Eurostat) explain quite well the relation between the penetration of the Information and Communication Technologies and the development of teleworking. This explains also why teleworking in Hellas is less developed compared to other - technologically more advanced - European countries, but at the same time more developed compared to most of the countries that recently joined the European Union.

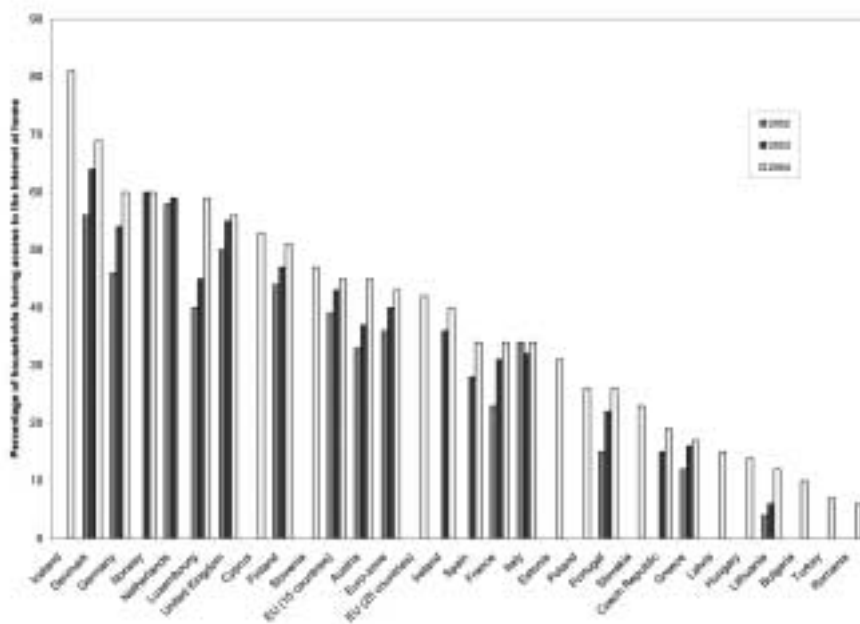


Figure 1. Percentage of households having access to the Internet at home.

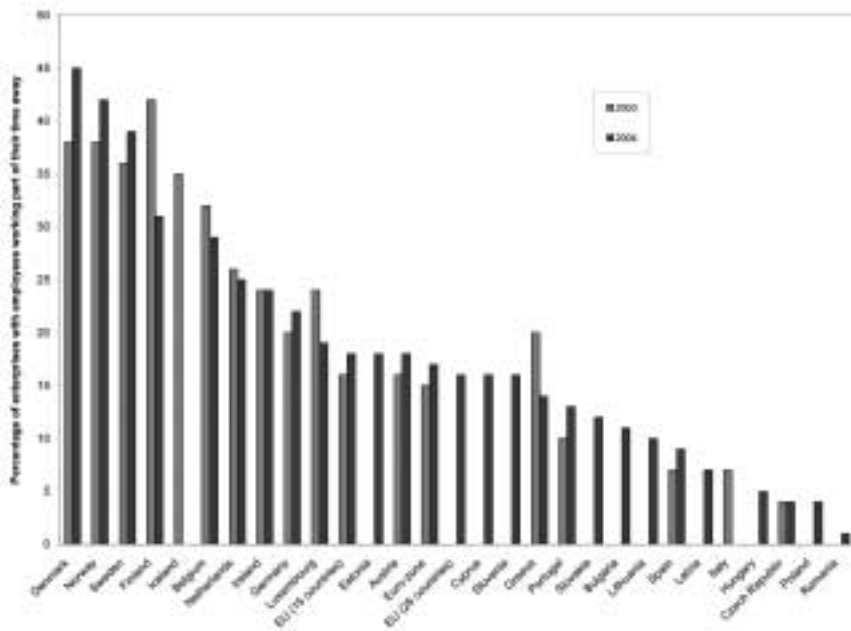


Figure 2. Percentage of enterprises with employees working part of their time away from enterprise premises and accessing enterprise's IT systems from there.

5.2 Development of teleworking in Hellas

Recently (April 2004), a research was conducted for the Hellenic Ministry of Employment regarding teleworking, with the aim to analyse the current situation of teleworking in Hellas and investigate the intentions of the Hellenic enterprises regarding the adoption of teleworking.

The target population of this research consisted of 58 enterprises of the economic sectors of Information Technology, Consulting, Telecommunications, Publishing, Financial services, and Education. Almost all these enterprises make extensive use of Internet and e-mail (89% and 93% respectively), while most of them have an Intranet (65%) and their own web site (56%).

According to this research, the greater difficulties for the introduction of the Information and Communication Technologies in the Hellenic enterprises seem to be the changes needed for the organization of the work (for half of the enterprises),

the required education for the employees (for a quarter of the enterprises) and the modification of the working environment (for a quarter of the enterprises). One third of the enterprises meet no difficulties for the introduction of the Information and Communication Technologies in the Hellenic enterprises.

Another research, conducted by SIBIS project (Statistical Indicators Benchmarking the Information Society, <http://www.sibis-eu.org>), shows that Hellas has among the EU-15 countries one of the lower percentages of enterprises giving the majority of their office staff access to selected ICTs (see Figure 3), which also influences the development of teleworking in Hellas comparing with the other EU countries (see Figures 4 and 5).

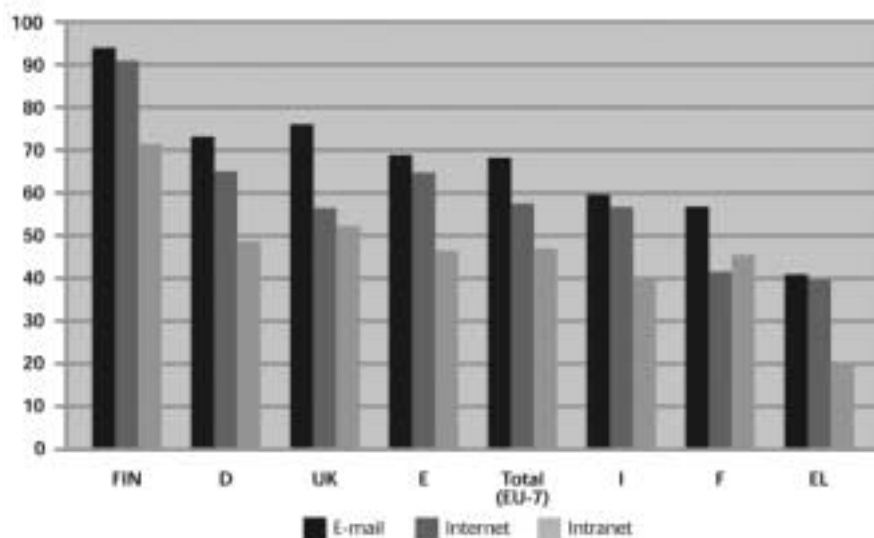


Figure 3. Access to ICTs at the workplace: Share of establishments giving the majority of their office staff access to selected ICTs.

The commitment with which Finnish companies let their employees use e-mail and surf the net can be assumed to be one reason for the success of the country in the European information economy.

In Figures 4 and 5, the percentage of teleworkers within the European Union countries is presented, based on the SIBIS project research.

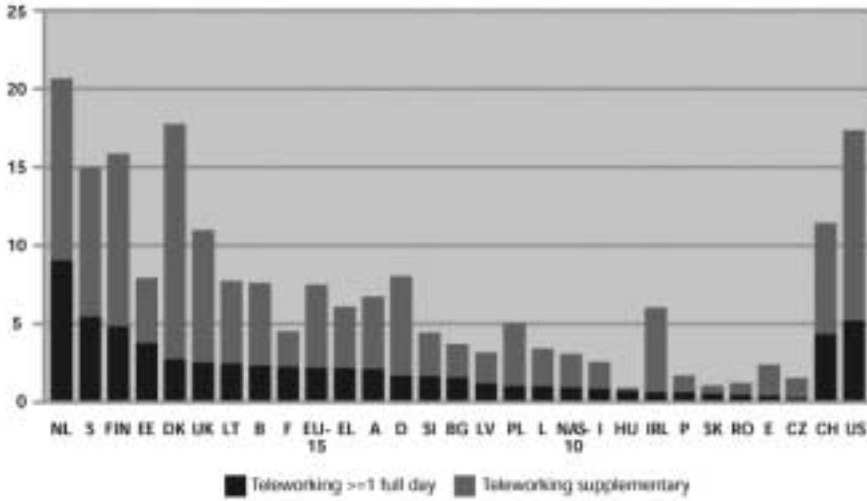


Figure 4. Home-based teleworking: Share of employed population who spend at least one full working day per week / who spend less time teleworking from home.

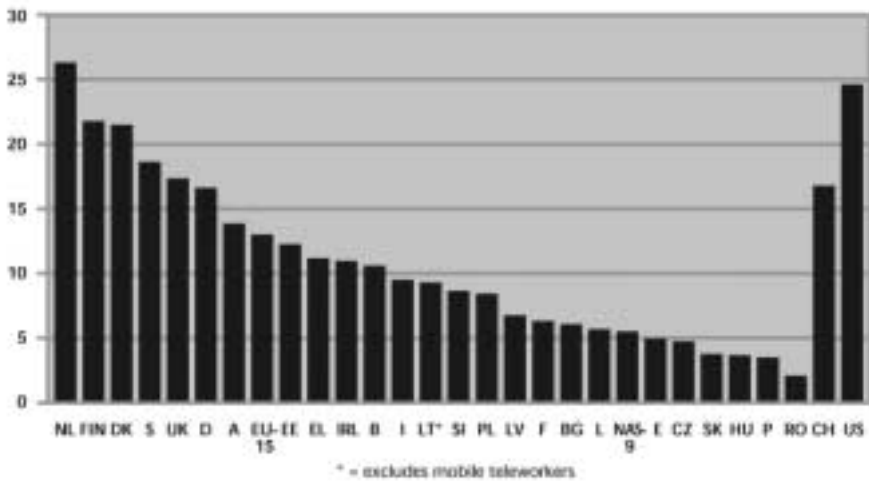


Figure 5. Total teleworkers: Share of employed population who are teleworking (as home-based, mobile or SOHO-based self-employed teleworkers).

According to these charts, 7% of the EU-15 working population are teleworking from home presently, at least part of their working time, while taking into account all types of telework together (home-based and mobile telework as well as self-employed teleworkers in SOHOs), 13% of the working population in the EU can be classified as teleworkers.

6. Advantages and disadvantages of teleworking

Flexible working is becoming an increasing reality in the work situation. Political change and economic as well as social factors are dictating a move away from more conventional modes of employment. The implementation of the Social Chapter of the Maastricht Treaty, the increasing (and unsolvable) urban traffic congestion, the shift from manufacturing to technology economies, the environmental threats and the 'location-free' options available to many employees are creating increasing opportunities for teleworking. This in turn raises challenges for employers, unions and the employee to ensure that the shift to more flexi-work modes does not bring exploitation, social isolation and poor support.

Thus, the **advantages** of teleworking can be summarised as follows:

✓ For the teleworker:

- Save time by cutting back on trips from and to the workplace,
- More flexibility in work organisation,
- Better quality of life,
- Less stress which comes along with large cities,
- Development skills to work on his/her own, autonomy, building of initiative and networking.

✓ For the employer:

- Less investments in office facilities,
- According to studies, one can increase productivity by 20-30% by teleworking (less interruptions, more concentration).

✓ A plus for national and regional development:

- Teleworking can bring life to areas which are decreasing in population,
- Less travelling is safer for the natural and the social environments.

Teleworking is combined with the redefinition of time or workplace, the procedures regarding control of production, the relation between time at work and free time and this between labour's working activities and personal or family ones as well.

Teleworking is simply a type of organisation, a way to carry out work, but there are several ways in which it can be applied: The teleworker still depends and is directed by a superior authority, but benefits from the flexibility and independence that teleworking gives in carrying out specific tasks. Also, independent teleworkers create their own work by offering teleworking-services.

On the other hand, teleworking has negative implications to teleworkers, especially when they have not the necessary time management skills. The main **disadvantages** of teleworking are:

- This new type of work organisation is still not very widely spread and known,
- Possible loss of social contact / isolation of the teleworker.

7. Future prospects

An important basis for European Union policies on growth and employment is the belief that a rapid transition to an Information Society through fast employment of advanced communications, infrastructures and services will generate competitive advantages for business, greater flexibility in employment and more jobs and new sustainable economic growth. The increasing take up of advanced communication services in the European economy can, under the right conditions, strongly contribute to job creation and to improvements in the quality of work.

Teleworking has been responsible for the creation of new job opportunities, increasing productivity and flexibility, easier recruitment and wider markets. From this point of view, teleworking can be looked as an economic development engine, being responsible for the creation of many work places. Paradoxically, employers wishing to reduce their costs are the general tendency to engage employees with non-permanent contracts because the costs are lower and they can easily dispense them.

There are clearly many technologies, which are applicable to teleworking and which are available for implementation today. One factor which weighs on which technologies to implement is the factor of the unknown: where are tomorrow's requirements and what will teleworking information technology requirements look like in one to five or five to ten years? While it is difficult to anticipate

revolutionary changes in Information Technology, positioning today's teleworking solutions for easy, low-cost migration to a future solution is not out of the question.

The general pace of Information Technology evolution has been relatively fast, but standards provide a window into the future. Standards indicate the general direction of technology to meet the requirements of the user community at-large. Accepted standards provide the basis for low-risk, interoperable solutions; and standards-based solutions provide the best leverage to move to new and better technologies in the future without throwing away past technology investments. Today, the TCP/IP protocol and its associated suite of Internet protocols provide the foundation for data communications via both private networks and the Internet. Newer standards, such as ISDN, have rapidly gained acceptance due to a community of interest ready to build and use products conforming to these standards.

In future, we expect individual types of teleworking to become something of a bouquet. Highly qualified and flexible workers can choose from according to their personal and (especially) business needs. "Work where you want, when you want" is the buzz phrase here. For example, a highly qualified employee might divide his/her working time between stretches he or she spends at the office (to communicate face-to-face with other staff members), on the road (to stay in touch with customers and business partners) and in his or her home (to do some "proper work"). On the other hand, in many occupations teleworking will be introduced to improve control over often low-skilled labour. Here, one cannot expect increasing flexibility of employees regarding place and time of work. To test these hypotheses, the survey design has to allow for individuals applying different kinds of teleworking.

Teleworking gives us a feeling of how the work of many of us will look like in the future. It will have become part of our working lives and most of the knowledge workers will have adopted it in one form or another. We will then no longer use the term teleworking but will be back to what it really is: just a new form of "work" and nothing more. The term "teleworking" has helped us to discuss the emerging changes of- and in- work but now becomes superfluous.

Today, we are beginning to realise the benefits of the single currency and Europe has regained leadership in crucial areas of technology development. Yet substantial structural change is now widely accepted as vital. Structural change means change in the way governments and businesses operate and in the way we work.

These changes are most urgently needed to boost productivity and increase non-inflationary growth. But they will be also necessary if we are to successfully

manage the transition to a stable but older population, and to greater environmental and social sustainability in a global Information Society.

REFERENCES

- E-businessforum (<http://www.e-businessforum.gr>).
- Eurobarometer 59, Public Opinion in the European Union, Spring 2003, National Report Greece.
- European Agreement on Guidelines on Telework in Commerce*, April 2001.
- Eurostat, European Union's statistical information services* (<http://epp.eurostat.cec.eu.int>).
- eWORK 2002, Status Report on New Ways to Work in the Knowledge Economy, September 2002.
- Framework Agreement on Telework*, Brussels, July 2002.
- Ivica Milicevic and Karsten Gareis, Disparities in ICT Take-up and Usage Between EU Regions, 2003.
- Karsten Gareis, Tobias Hüsing, Sonja Müller, (2003), *Multi-locational Work and the Region, eChallenges*, Bologna, 22-24 October 2003, Project BISER (Benchmarking the Information Society: E-Europe Indicators for European Regions).
- New Forms of Work Organization: the obstacles to wider diffusion, Final Report, European Commission DG Employment and Social Affairs.
- Peter Totterdill, (2002), *Developing new forms of work organisation: the role of the main actors*, The Work Institute, October.
- Telework (2001), *Report of the 8th European Assembly on New Ways to Work*, September, Finlandia Hall, Helsinki, Finland (<http://www.telework2001.fi>).
- Ursula Huws, (2000), *Equality and Telework in Europe*, November.

HUMAN CAPITAL, EDUCATION AND THE FUTURE-AN HISTORICAL REVIEW OF THEORIES OF HUMAN CAPITAL AND THEIR CONTINUED RELEVANCE TO THE ECONOMICS OF EDUCATION

M. IOAKIMIDIS*

Abstract

Modern conceptions of human capital theory, emerging from the middle part of the twentieth century, were and continue to be an important contribution to the development of contemporary economics. In the course of the twentieth century, the economics of education emerged as a discrete field in economics. In recent years, the Internet and other technologies have begun to change how education is and can be provided.

Any economist considering this issue must also consider whether the work of the fathers of the human capital theory is still relevant today. In the opinion of this author, they are as relevant as ever; this article represents a call not to throw out the old when embracing the new. In arriving at this conclusion, it is also important to explore the positions of the various scholars who may loosely be termed “human capital sceptics”.

JEL classification: I29, J24, N30.

Keywords: economics of education, early educational economists, human capital.

1. Introduction: Human capital, education and the future

As we will discuss below, the provision of education increases a population’s wealth in terms of human capital. By association, education also improves social welfare and results in reduced rates of crime, increased health, reduced infant mortality, etc. (Krueger and Lindhal, 2001, p. 1119; Moretti, 1998, p. 4; Becker 1993). We know this today, because of the work carried out by earlier generations of economists, referenced throughout this text. However, so much about how human capital is generated is now changing so quickly that we risk overlooking important findings that are still relevant. Human capital is more important than

* Adjunct Lecturer, University of Athens, Department of Economics.

ever before, as technology frees increasing numbers of workers and prospective workers from the need to engage in backbreaking menial work, to do “brain work” instead. Countries without natural or mineral resources, equipped with human capital, become real players in the global marketplaces, with innumerable positive repercussions for society in general, and for the individuals who comprise it.

This continued relevance makes revisiting the major findings of earlier scholars in this field more than worthwhile.

1.1 The educational environment

Education, and especially higher education, has entered new and exciting realms such as the provision of higher education completely or in full via new forms of technology, including the Internet. Education offered thusly is often provided to students very remote from the institution offering the course. Because of the complexities associated with these sea changes in the provision of education, a thorough understanding of the multifarious issues associated with human capital is more important than ever (Rumble (ed.), 2004, various). This is especially true when one considers the vast implications that new ways of providing higher education have for peripheral and developing areas and sections of society (Barro, 1996). Taking a broad historical view, we can identify the emergence of these new technologies as analogous to the invention of printing five hundred years ago or, more recently, the mechanisation of industry that began in the eighteenth century. The potential of our own revolutionary technologies to maintain and generate human capital among a more diverse spectrum of society would seem to be considerable.

Understanding what these changes will mean for individuals, societies and economies requires a detailed understanding of the nature of human capital and an historical perspective of the same. With respect to the latter, it is worth revisiting the key elements of the findings of our economic forebears. Why? Well, to borrow a phrase from George Santayana, those who cannot learn from history are doomed to repeat it (Santayana, 1905, p. 284). Those societies that did not cope adequately with the changes brought about in the past are still paying for their oversight. Fortunately, as our own revolution unfolds around us, we do not have to make the same mistake.

2. Looking at Human Capital

Human capital may be described in brief as the capabilities with which the human individual is born, as well as sum of skills and knowledge acquired by the individual by one means or another, which then facilitate his performance in the workplace;

for a farmer, an acquired ability to spot and treat the common diseases of farmyard animals is human capital, while the human capital a secretary brings to the office includes his ability to type and organise files. Similarly, intellectual vigour and physical strength are both human capital; they are both potentially useful. Human capital is innate, it can be acquired and it can be enhanced; it is the sum of what the human individual can usefully do.

Nascent interpretations of human capital first emerge in economic thought in the eighteenth century with Smith's "An Inquiry into the Nature and Causes of the Wealth of Nations" (Smith, 1982, orig. 1776), although as Kiker (1966) points out, William Petty had, as early as 1691, described labor as "the father of wealth" (p. 482). Smith examined such topics as self-interest, the division of labour, markets, and wider implications of the "laissez-faire" economy. Pointing out the fact that education and learning created human capital, Smith stated:

"The difference of talents in different men is, in reality, much less than we have been aware of...The difference...between a philosopher and a common street porter, for example, seems to arise not so much from nature as from habit, custom and education" (Smith, in Tu, 1969, p. 692).

Many (i.e. West, 1977, Griswold, 1999, Fitzgibbons, 1995) consider Smith to have been the first true economist. Because of his social-historical environment, his emphasis was on in-work training, rather than formal schooling *per se*; training in the workplace was then the most common way in which individuals of his day acquired marketable skills. In the 1700s, learning by apprenticeship was the usual route taken by any young man who wished to become a skilled worker of one kind or another. Despite the fact that Adam Smith (noted in Chiswick, 2003, p. 2; West, 1969, 1977, 1990) noted the importance to the economy of the transmission of skills to the workforce, the term "human capital" would not be used for many years to come. In the early nineteenth century, Malthus (1806, in Tu, 1969) argued that governments should provide for the education of the "lower classes" and also noted a negative association between levels of education and crime (p. 695). Nor should we overlook Friedrich List, whose work *The National System of Political Economy* (1840) proposed economic protection for young industries and nations. List argued that governments were responsible for fostering a nation's "productive powers", after which free trade would take place.

In the course of the nineteenth century, growing interest in philanthropy and in educating the working classes gave rise to explorations by scholars including John Stuart Mill, J.B. Say, Alfred Marshall and David Ricardo. Marshall foreshadowed later thoughts on issues of human capital when he said, "The difference between the value of the labour of the educated man and that of the uneducated is, as a rule,

many times greater than the difference between the costs of their education...” (in Bowman, 1990, p. 253.) Nor is the modern notion of human capital completely dissimilar to Marx’s idea of labor power (1867). According to this interpretation, workers sell labor-power in exchange for income. Possessing the ability to work was not enough to acquire a wage, and labor-power could not be exchanged between individuals, being effectively a fixed asset.

3. Human Capital Theory in the Twentieth Century and the Economics of Education

The history of the formal economic study of education dates from the middle years of the twentieth century and beyond, and crystallised as a discrete field of investigation thanks in large part to the efforts of Mincer (1958; 1974) and Becker (1964). (Ho and Jorgensen, 1999, p. 5) In fact, the term “human capital” was first used in Mincer’s first contributions to the analyses of earnings and earning distribution, which were developed in his doctoral dissertation in 1957 and subsequently in an article in the *Journal of Political Economy* in 1958. His theories derived from his pioneering doctoral dissertation, *Investment in Human Capital and Personal Income Distribution*, which provided a model for studying the impact of training on personal income. Crucially, he determined that development of the human capital earnings function is that: “absolute differences in the length of training result in percentage differences in annual earnings” (p. 301).

Mincer’s studies were followed in 1962 by further interest in the subject of human capital, when:

...the Journal of Political Economy published a supplement edited by T.W. Schultz entitled Investment in Human Beings. [including] chapters on various aspects of human capital: Gary Becker on human capital theory, Larry Sjaasted on migration, Selma Mushkin on health, George Stigler on information on labor markets (job search), Burton Weisbrod on the non-pecuniary benefits of education, Edward Denison on education and economic growth, and Jacob Mincer on labor market experience (Chiswick, 2003).

For the first time, the economists who were subsequently recognised as the true genitors of the modern economics of human capital presented their work in the same context, formalising it as a school of thought. Schultz had already established himself as an important contributor to the field when, in 1961, he published an article called *Investment in Human Beings in the American Economic Review*. Shultz argued that economic growth in western countries resulted from investment

in human capital in the form of education and training. Schultz' vision was of an economy in which the means of production could fall into the grasp of the workforce through the provision of education. He also argued that investment in education should not be seen as a cost, as the returns vastly outweighed initial cost. Schultz argued that maximising the potential for human capital should be at the core of policy and fiscal planning, individually and at corporate and state level.

Schultz proceeded to receive the Nobel Prize of Economics in 1979 in recognition of his contributions to the field of economics -an award that also served to validate the general field of human capital theory. Some critics have suggested that Schultz' analysis is overly simplistic, but much of what he has to say remains valid and should be borne in mind by policy makers exploring new ways of providing education, and of funding the same. Especially with the introduction of new ways of providing education and generating human capital, such as Internet enabled courses, investment in education for much larger numbers of any given population becomes more feasible.

Similarly, Jacob Mincer's contribution to the field continues to be of relevance today. Mincer's influence on contemporary and subsequent scholars in the field, including Gary Becker, has frequently been acknowledged. Mincer's work is referenced directly and indirectly many times in, for example, T.W. Schultz's edited volume *Investment in Human Capital* (1961) and in Gary Becker's *Human Capital* (1964). In Becker's view of human capital, the latter is not unlike physical means of production insofar as it can be invested in, and insofar as the individual's rate of return is partly dependent on the amount of human capital in his possession.

Mincer's key contribution, the human capital earnings function, remains at the core of the economics of education. In 1974, Mincer's *Schooling, Experience and Earnings* was published, representing a further synthesis of the great strides that had been made in explorations of schooling and human capital since his early work (Bjorklund and Kjellstrom, 2002).

Jacob Mincer elaborated on his thesis of human capital, identifying the "earnings function" and the concept of "overtaking". The term "the human capital earnings function" was coined (Mincer, 1974, p.2). It has remained a cornerstone of human capital theory ever since. In brief, Mincer determined that:

...if the only cost of attending school an additional year is the opportunity cost of students' time, and if the proportional increase in earnings caused by this additional schooling is constant over the lifetime, then the log of earnings would be linearly related to individuals' years of schooling, and the slope of this relationship could be interpreted as the rate of return to investment in schooling (Krueger and Lindahl, 2001, p. 1103).

Mincer expanded his basic model to incorporate a quadratic term in work experience, to allow the consideration of returns to on-the-job training. The familiar Mincerian wage equation has been a staple of the economics of education ever since:

$$\ln W_j = \beta_0 + \beta_1 S_j + \beta_2 X_j + \beta_3 X_j^2 + i \quad (1)$$

Where $\ln W_j$ is the natural log of the wage for individual j , S_j is years of formal schooling, X_j is experience, X_j^2 is experience squared, and i is a disturbance term.

Studying Mincer's model, we can see that, the coefficient on schooling, β_1 , is equal to the discount rate, because decisions about education are arrived at by equating two present value earnings streams: one with a higher level of schooling and one with a lower level. In its simplest form, Mincer's model proposes that years spent in education are the key determining factor of future earnings (rather than types and origin of qualification granted). Data on years of schooling can thus be used to estimate a comparable return to education in countries with very different educational systems. Again, the introduction of new means of providing education in very diverse social and economic environments make Mincer's work more relevant than ever.

Serious scholarship associated with the formalised study of the economics of education was introduced to Europe, and especially the United Kingdom, by Mark Blaug from the 1960s onwards. Since that time, the school of the economics of education has flourished on both sides of the Atlantic. It is exemplified in the work of Greek economist Psacharopoulos, discussed in more detail below.

Contemporaries of Mincer, including Fabricant, Abramovitz, Kendrick and Solow determined that much of the economic growth that they witnessed could not be attributed to conventional labour and capital measures and proposed that the differences they saw might be attributable to actual changes in the quality of the labour force. In his seminal 1961 paper, *Investment in Human Capital*, Schultz (p. 572) suggests that there had long been opposition to the application of capital theory to humanity because such a notion would be degrading. He boldly proposes that investment in human capital be treated much as investment in any other form of capital, and states that improvements in health conditions, for example, would enhance human capital, as they would enhance workers' ability to produce (Schultz, 1961). Although this hypothesis had some detractors (such as Shaffer, 1961), it has been widely accepted today.

As we have discussed, the term "human capital" refers to the skills that people bring to the workplace, to the nation or economic unit in which they live, and to their own personal earning capacities. (Hartog, 1999) As such, human capital is properly seen as a resource, just like any other. However, the requirements of modern industry, services and society are not the same as those of years gone by, and new types of

human capital are called for; new skills, new knowledge and new ways of applying these in the workplace. Latterly, our increasingly industrialised era calls for even more specialised skills; skills that are generally transmitted in the context of institutes of higher education (Alexander, 1997; Barro and Lee, 1993; Barro, 1996, Hartog, 1999; Jorgenson and Fraumeni, 1992; Krueger and Lindahl, 2001; Psacharopoulos 1987). Traditionally, these skills have been transmitted in various ways, including in the context of on-the-job training as well as at schools and universities. Ensuring the transmission of skills to new workers entering the labour force helps economies to flourish and grow. In fact, economic growth depends to a large extent on the constant creation of new human capital and knowledge. (Schultz, 1961; Barro 1996, Hartog, 1999; Psacharopoulos, 1995) As a more extreme example, the collapse of the Mayan empire in Mesoamerica in around 1200 AD can be attributed to that advanced society's failure to properly address this issue (Diamond, 2004).

In all economies, output is based on capital. The hardest element of capital to quantify, and the most difficult to examine in economic terms, is human capital (Hartog, 2000, p.7). All economies produce two basic types of output. One is characterised by its physical properties—agricultural and industrial products, etc. - and is relatively easy to quantify. The second is no less important- in fact, in an information -driven age, it is arguably even more important- but is infinitely more difficult to examine in economic terms: human capital. Human capital is, of course, also an input in the production function; indeed, it is a fundamental of production. In other words, the output of, for example, universities, creates what is the key input in many, if not most, industries and services. To ensure the constant provision of sufficient human capital as a crucial input, we also need to ensure that the human capital with which individuals are born is enhanced and increased.

Griliches (1997 p. 330) highlights the fact that Ben Porath (1967) contributed significantly to the importance of investment in education, saying: “In his model, an individual produces additions to his own human capital with his own time and market resources.” Porath stressed the importance of ongoing education, saying: “Subsequent to the completion of the full-time formal schooling phase, part-time investment may continue in the form of ongoing training”.

Subsequently, many scholars have stressed that the importance of human capital in the form of university graduates with the above-enumerated skills is crucial to economic growth (Becker, 1993). Education is crucially related to the generation of products, goods and services (Alexander, 1997), and we may assert that as the knowledge economy continues to dominate more traditional forms of output, this will continue to be the case. Education and training are the most important investments in human capital, as Becker elucidated clearly in his work of 1993 (Becker, 1993); it is incumbent upon policy makers to continue to invest in

education and training and to explore new ways of doing so, and of reaching greater numbers of workers and potential workers. The simple fact is that while nations and individuals can become wealthy and prosperous without mineral and other natural resources, they can never do so without human capital-and human capital is acquired, enhanced and maintained through education. Moreover, although the inputs are considerable, the “raw material” -human beings- is available in abundance and in developed and developing nations alike.

4. Human Capital and Education in the Technological Age

Today, as institutions of higher learning and society take on board new ways of providing and receiving education, an understanding of the nature of human capital, how and why it is created, and what the repercussions are is as important as ever. In many countries today, literally the only route to “white collar” work is via the university and at least a basic degree. Clearly, then, education plays a crucial role in the generation of human capital, which in general terms we consider to be the provision of individuals with the acquisition of knowledge, the means to store and retain information, the acquisition of skills, facets and methods, the ability to abstract sense and meaning, interpret and understand reality (Saljo, 1979, p. 76). In order to understand and analyse the changes currently taking place in the provision of education it is important to see ourselves, not as inhabiting a unique zone, but as part of the continuum of thought that began in the eighteenth century with Adam Smith, and proceeded apace throughout the twentieth century, when the economics of education coalesced as a discrete field. With the advent of the Internet and other new forms of technology, the provision of education (and thus the potential to enhance and create human capital in new ways) entered a new and exciting phase and it is important to understand all of the ramifications of this.

But before we turn to look at the continuing role of human capital theory in our modern context, let us turn for a moment to the views of scholars who may be grouped together as “dissenters”-those who do not believe that education in fact plays an important role in the generation of human capital, and who by inference suggest that Mincer and Becker, et al quite simply got it wrong.

5. Dissenting Voices

In 1961, Shaffer wrote of Schutlz’ ideas about the correlation between education and income: “...if consumption expenditure could be separated from investment in

man and if it were possible to compute that part of man's income that results from a given investment-in-man expenditure, it would in most instances still be ill-advised...to utilize the information thus obtained as the exclusive or even the primary basis for policy formation, private or public". He also points out that, at the time of writing, "the present value of a lifetime income differential of nearly \$106,000 between a high school and a college graduate amounts to a mere \$3,305 when figured after taxes and when discounted at 8 per cent". Shaffer cites various reports as stating that intelligence has a greater influence on income than education or other factors, and describes Mincer's outlook as "oversimplified." (p. 1029) Shaffer also posits the higher "maintenance costs" involved in holding a professional position that calls for higher levels of education, citing among other factors the need for more frequently laundered clothing, and suggests that these additional costs should be factored into considerations of benefits arising from education.

Some dissenters such as Groot and Hartog, among others, (in Soldatos, 1999, p. 433) have proposed the hypothesis that education does not enhance the individual as human capital per se, but simply provides a "screening" process, whereby more talented individuals can be identified, allowing prospective employers to learn about the pre-existing capabilities of prospective employees. At the most extreme end, we find the contentious volume *The Bell Curve* (Hernstein, 1994) with its highly controversial application of the (already controversial in itself) application of Intelligence Quotient (IQ) tests. Hernstein suggests that high "IQ" is innate, related to racial origins and largely unaffected by education. If the screening hypothesis were true, there would be no correlation between years spent studying and an increased output and endeavours to encourage socially and geographically marginal elements of populations to enrol in educational courses provided using new technologies would be largely pointless.

Concern about this issue is not new: even as long ago as the 1960s, Becker himself dealt with the issue of selectivity bias, considering whether what is attributed to higher education is actually due to innate skills and abilities. Becker determined that only a small percentage (12%) of the rate of return was attributable to natural ability, in Breneman, (2001, p. 56) vindicating the view that education is an important way of generating human capital *regardless of the innate aptitudes of the individual and his socioeconomic background*. However, the argument is not closed, and many economists continue to revisit this topic despite the fact that decades of work by scholars in the field of educational economics have generally pointed towards the fact that providing education increases human capital for society and the individual alike.

Among the proponents of the screening hypothesis, the argument is stated with

varying degrees of extremism, with the most extreme position represented by Arrow (1973, pp.193-216), who assumes no correlation at all between productivity and education. It should be noted that proponents of the screening hypothesis have, by and large, generalised from the experience of a small number of developed countries, such as the United States. Generally, they ignore the experience of developing countries almost completely, and draw their conclusions from cultural groups among which a certain basic level of education can be assumed for all working individuals above a certain age (Patrinos, 1996, p.171). This glaring discrepancy cannot but lessen the impact of their argument, which makes their conclusions not just counterintuitive, but also contrary to the weight of many well-researched studies.

In 1974, Layard and Psacharopoulos (p. 968) identified two “takes” on the screening hypothesis, saying that there was:

...one where different qualities of labour are perfect substitutes in production, and the second where their productivity depends on what job they are in. In the first case, all education is socially valueless, since the productive contribution of the individual is not affected by what job he does and there is thus no return to improving employers' information about individual abilities. As a result, everybody would be better off if the more able would agree not to seek education in an attempt to signal their ability to employers. In the second case, education has social value up to a point by improving the allocation of people between jobs, but depending on its cost, there may well be overinvestment such that no screening would be better for everyone than the amount provided at competitive equilibrium.

Layard and Psacharopoulos go on refute both takes on the screening hypothesis when they state that

“...three pieces of evidence suggest that screening is not a major part of the explanation [why graduates earn more than non-graduates]. First, rates of return to dropouts are as high as to those who complete a course...Second, standardized educational differentials rise with age, while a reasonable version of the screening hypothesis would lead one to expect a fall. Third, if screening is the main function of education, it could probably be done more cheaply by testing and other means, and agencies would have developed to reap the very large profits that could be made by doing this. Pending further work, we conclude that the theory of human capital is not after all in ruins” (1974, p. 995).

Furthermore, various studies have been carried out in more recent years, including some among genetically identical individuals (monozygote twins) which clearly demonstrate that while one's genetic inheritance is certainly an important

factor in determining one's path in life, education is another (Ashenfelter and Rouse, 1998, p.1). Ashenfelter studied the educational and family backgrounds, etc. of 700 pairs of genetically identical twins, all of whom are in employment and based in the United States of America. Each twin was asked, out of earshot of their sibling, about their own and their sibling's educational background and wage-earning situation. The authors determined that there was a strong positive correlation to education which applied to both naturally able and less able individuals. Returns to education were relatively higher in the case of the less naturally able. Up to a (considerable) point, therefore, higher levels of education can compensate for natural differences in ability, indicating that the "founding fathers" of the economics of education were right all along, and suggesting that policy makers should look seriously at new technologies that will make more education accessible to more people.

While many economists agree that investment in education is a positive investment in human capital, there are yet more dissenting voices, even among some modern economists. In *Training and Work, Myths about Human Capital*, Bouchard (1998) maintains that investing in education is not necessarily a positive investment in future human capital, as it is not possible to predict which skills will be required by a future market. For example, educators during the 1970s were, in the main, unaware of the imminent explosion of computer technology, and thus most students were not instructed in the field. Nonetheless, in its role in helping to create individuals with the capacity to think laterally and to acquire new skills throughout their working lives, education always enhances human capital.

While there may be a degree of truth to the screening hypothesis-the fact that there are significantly larger returns to education carried out in return for a higher diploma rather than, for example, years spent in secondary education (Patrinos, 1996, 171)-it ignores the fact of the skills and knowledge (both specific and lateral) acquired by the individual during the educational process. It also ignores less easy to quantify but no less important properties such as increased self-confidence and decision-making skills. All of the above translate to a more productive approach to work as well as secondary benefits of higher education such as the contacts generally described as "networking", etc., and indicate that there is every reason to facilitate as many people as possible to pursue higher education through any and all emerging means.

In short, Mincer and Becker and their colleagues were largely correct in their conclusions, which should be seen as the foundation for any examination of human capital today. While innate ability is surely a key factor contributing to the success or otherwise of the individual, education increases the quotient of human capital even of individuals of lower innate ability.

6. In with the Old, in with the New

Educational economists are in a challenging field at the current time, in great part because the provision of education is changing in very many ways, very quickly, with the possibility that much will be changed about how human capital is generated, and what the associated costs and results will be.

What we may consider to be the “modern” period of research and investigation into the field of the study of the economics of education emerged in the 1980s and 90s, including already-cited Psacharopoulos, in whose work we can hear the echoes of earlier scholars, as when he says that, “...the concept of human capital, treating education and training as a form of investment, [produces] future benefits in the form of higher income for both educated individuals and for society as a whole” (Psacharopoulos, 1987, p. 1).

Educational economists from the 1980s and 90s differed from their predecessors in various respects, among which the fact that in being able to build upon work that had been done before, it became possible to apply human capital theory to new fields “on the ground,” including the issues affecting developing and peripheral areas in our and other societies.

At the time of writing, new ways of creating more human capital promise to reach more prospective students than ever before. The challenge facing universities today is to provide a steady supply of human capital for the lowest cost possible. This is true of all universities everywhere, but is especially important in areas where many potential students are excluded from third level education for economic, social or geographical reasons and resounds greatly with institutions embarking on the revolutionary new means of providing higher education completely or in part via the Internet. “Historic” views of human capital are surprising relevant in these new environments, even as Internet and other technologies signal the possibility of creating human capital in the form of graduates in areas where this was never before possible. The economics of education has been firmly established as a distinct field of study for more than a generation, and the importance of human capital to economies is recognised in the field of economics in general as, as Hartog puts it, “all actions taken to increase future welfare” (Hartog, 2000, p. 8) As de Fraja and Romano (2002, p. 205) point out:

While the empirical study of human capital continues, economic research into the numerous aspects of the determination and the consequences of education has recently ballooned. Profound dissatisfaction with the current state of the education system in many countries, and new policies proposed and sometimes enacted in industrialised nations have no doubt motivated economists’ increased scrutiny of

education. Moreover, in comparison with other areas of public economics, education was, up to a few years ago, relatively neglected. Whatever the causes, economists are increasingly analysing this topic and promoting the perspective on education that it is a market.

The economics of education continues to flourish on both sides of the Atlantic, even as the provision of education is in an exciting but challenging transitional stage. (Barone, 2001; Bartolic-Zlomislic, Bates, 2000; Psacharopoulos, 1995) In the developed world and much of the developing world, the numbers of students attending higher courses of study has grown and continues to grow at a rapid rate, with universities in many countries struggling to provide places to all of the students seeking them.

Meanwhile, the unprecedented growth in new technologies, many of which have important potential for use as tools in the transmission of education, presents institutions with a new range of opportunities for which few, if any, are adequately prepared, especially in terms of making educated economic decisions. (Bassi, 2001; Laurillard, 1996)

To further complicate matters, we should point out that these technologies are continuing to develop at a mind-boggling rate, such that no sooner has one come to terms with one technology than it is superseded by another, superior one! But even as technicians and computer scientists continue their upward momentum, the theories that grew around the notion of human capital a full four decades ago and more continue to be of relevance.

7. Conclusion

The scholarship of human capital and the economics of education is more important than ever before, along with an understanding of the history of economic thought relating to education, and our place in it. We are experiencing rapid, unprecedented developments in the means of providing education. Outcomes are often undetermined both socially and economically.

In order to form intelligent decisions, all policy makers, administrators of educational establishments, scholars of educational economics and students should have an understanding of what human capital is, how it has been conceived through the ages with what outcomes, how it leads to economic growth and what its relevance will be for all our futures. To do so, it is important to understand the origins and development of the concept.

Astronomer Carl Sagan has been quoted as saying “You have to know the past to understand the present”. This is also true in economics.

REFERENCES

- Alexander, T. J. (1997) *Human Capital Investment, Building the Knowledge Economy*, Policy Options, 18 (6) 5-8.
- Arrow, K. (1973) *Higher Education as a Filter*, Journal of Public Economics 2;193-216. III
- Ashenfelter, O. and Rouse, C. (1998) *Income, Schooling, and Ability: Evidence from a New Sample of Identical Twins*, Quarterly Journal of Economics, Vol. 113, No. 1 pp. 253-284
- Barone, C., (2001). *Conditions for Transformation*, Infrastructure is Not the Issue. Educause Review, 26, 41-7.
- Barro, R. and Lee, L. (1993) *International Comparisons of Educational Attainment*, Journal of Monetary Economics, Vol. 32, no. 3, 363-394.
- Barro, R. (1996), *Determinants of Economic Growth, a Cross-Country Empirical Study*, NBER Working Paper Series, 5698, Prepared for the Lionel Robbins Lectures, delivered at the London School of Economics.
- Bartolic-Zlomislic, S. Bates A.W., (2000), *Assessing the Costs and Benefits of Tele-learning*, referenced in Funding Learning: The Economics of E-learning, Marchmont Observatory at <http://iet.open.ac.uk/icdl/marchmontFTP/economicsbriefmay2000.doc>
- Bassi, L., (2001), *Having your Cake and Eating it Too*, Available at: <http://www.linezine.com/5.2/articles/lbaehycaeit.htm>
- Becker, G. S., (1964), *Human Capital*, New York, National Bureau of Economic Research.
- Becker, G., (1993), Human Capital: A Theoretical and Empirical Analysis, With Special References to Education, University of Chicago Press, Chicago.
- Bjorklund, A. Kjellstrom, C., (2002), *Estimating the return to investments in education: how useful is the standard Mincer equation?*, Economics of Education Review, 21, 195-210.
- Blaug, M., (1970), *Economics of Education*, A Lane.
- Bouchard, P., (1998), *Training and Work: Myths about Human Capital*, in Scott

- S.,M., Spencer, B. and Thomas, A. (Eds.), *Learning for Life: Canadian Readings in Adult Education*. Thompson Educational Publishing Inc., Toronto
- Bowman, R.S. (1990), *Smith, Mill, and Marshall on Human Capital Formation*, *History of Political Economy*, 22(2): 239-259.
- Breneman, D., (2001), *The Outputs of Higher Education*, Ford Policy Forum. Available online at: <http://www.educause.edu/ir/library/pdf/ffp0112s.pdf>.
- Chiswick, B. Jacob Mincer, (2003), *Experience and the Distribution of Earnings*, *Institute for the Study of Labour*, Available at: <ftp://repec.iza.org/RePEc/discussionpaperdp847.pdf>
- De Fraja, Gianni and Romano, Richard E, (2002), *The Economics of Education: Editors Introduction*, *Bulletin of Economic Research*, Blackwell Publishing, vol. 54(3), pages 205-08, July.
- Diamond, J., (2004), *Collapse: How Societies Choose to Fail or Succeed*, Viking Press.
- Fitzgibbons, A., (1995), *Adam Smith's System of Liberty, Wealth and Virtue*, *Independent Review*, Vol. 1, No. 3.
- Griliches, Z., (1997), *Education, Human Capital, and Growth: A Personal Perspective*, *Journal of Labour Economics*, 15(1): 330.
- Griswold, Charles L., (1999), *Adam Smith and the Virtues of Enlightenment*, Cambridge University Press.
- Hartog, J., (1999), *Behind the Veil of Human Capital*, *OECD Observer*, no. 215.
- Hartog, J., (2000), *Over-education and earnings: where are we, where should we go?*, *Economics of Education Review*, vol. 19, p. 131-147.
- Hernstein, R., (1994), *The Bell Curve*, Free Press.
- Ho, M. and Jorgenson, D.W., (1999), *Education Policies to Stimulate Growth*. *Harvard University*. Available at: www.ksg.harvard.edu/cbg/ptep/human.pdf
- Jorgenson, D.W. and Fraumeni, M., (1992), *Investment in Education and US Economic Growth*, *Scandinavian Journal of Economics*, 94.
- Kiker, B.F. (1966), *The Historical Root of the Concept of Human Capital*, *Journal of Political Economy*, University of Chicago Press, 74 (5).

- Krueger, A. B. and Lindahl, M., (2001), *Education for Growth: Why and for Whom?*, Journal of Economic Literature, Vol XXXIX pp. 1101–1136.
- Laurillard, D., (1996), *How Should UK Higher Education make Best Use of New Technology?* ALT-C, Glasgow.
- Layard, R. and Psacharopoulos, G., (1974), *The Screening Hypothesis and the Returns to Education*, The Journal of Political Economy, Vol. 82, No. 5, 985-98.
- List, F., (1999), *The National System of Political Economy* (orig. 1840, tr. 1904), Dry Bones Press.
- Marx, K. *Das Kapital*, Volume 1., (1999, orig. 1867), Gateway Edition.
- Mincer, J. (1958) *Investment in Human Capital and Personal Income Distribution*, Journal of Political Economy 66, 281-302.
- Mincer, J., (1974), *Schooling, Experience and Earnings*, Proquest Info and Learning.
- Moretti, E., (1998), *Social Returns to Education and Human Capital Externalities: Evidence from Cities*, Journal of Economic Literature. Available at: www.webmanager.cl/prontus_cea/cea_2002/asocfile/ASCOFILE1200030327127022.pdf.
- Patrinos, H. A., (1996), *Non-Linearities in the Returns to Education: Sheepskin Effects or Threshold Levels of Human Capital?*, Applied Economics Letters, 171-3.
- Psacharopoulos, G., (1987), *Economics of education*, research and studies Oxford: Pergamon Press.
- Psacharopoulos, G., (1995), *The Profitability of Investment in Education*, Human Capital Development and Operations Working Paper.
- Rumble, G., (2004), *Papers and Debates on the Economics and Costs of Distance and Online Learning*, Oldenburg. Carl von Ossietzky University, Oldenburg, Germany
- Saljo, J., (1979), *Learning in the learner's perspective*, Some Common-Sense conceptions, Reports from the Institute of Education, University of Gothenburg, 76.
- Santayana, G., (1905), *Life of Reason*, Reason in Common Sense, Scribner's.

- Schultz, T.W., (1961), *Investment in Human Capital*, The American Economic Review 1(2), 1-17.
- Shaffer, H.G., (1961), *Investment in Human Capital: Comment*. The American Economic Review, Vol. 51, No. 5. pp.1026-1035.
- Smith, A., (1982, orig. 1776), *An Inquiry into the Nature and Causes of the Wealth of Nations: Volumes 1 and 2*. Edited by W.B. Todd, R.H. Campbell and A.S. Skinner, Liberty Fund, Inc.
- Soldatos, G.T., (1999), *Economics of Education and Work Incentives*, Labour, Vol. 13 (2), 433-443.
- Tu, P.N.V., (1969), *The Classical Economists and Education*, Kyklos 22(4): 691-718.
- West, E.G., (1969), *Adam Smith; Architect of Freedom* (New Rochelle, NY: Arlington House, 1969).
- West, E.G., (1977), *Adam Smith: the Man and His Works*, Liberty Fund Inc.
- West, E. G., (1990), *Adam Smith and Modern Economics: From Market Behaviour to Public Choice*, Edward Elgar Pub.

EVALUATION OF QUALITY IN THE ACADEMIC PROCESS OF GREEK HIGHER TOURISM EDUCATION SUMMARY

D. STAVRAKIS*

D. KARAGEORGOU**

Abstract

In order to reinforce the competitiveness of the tourism branch, it is estimated that tourism education can play an essential role.

The present publication aims at detecting and indicating the reasons which necessitate the redefinition of the image, as well as the role that H.T.E. Departments are required to play, so as to converge in the fulfillment of the goal, which is to upgrade and reform the syllabus through evaluation-accreditation of the quality of the academic procedures. To broaden the mind through wide knowledge and development of compositional ability. To educate in accordance with the pre-required techniques of specialization in tourism management and in other areas which involve not only a global humanistic tradition, but also the specific cultural identity of each country. To reinforce the transparency of educational systems and their comparability on an international level. To propagate the best applications. To develop common policies and programs.

Modern times are characterized by innovations in knowledge, specialization and rapid technological development, which form a competitive environment where the quality of tourism education is a fundamental requirement towards utilizing and generating of human resources, necessary now and in the future. This requires intensified effort along with improvement of the performance of all involved, so as to meet the demands of our times and the challenges of globalization.

JEL classification: I2, H52.

Keywords: Higher Tourism Education, evaluation, quality, accreditation.

1. Introduction

The human factor plays a determinant role in the formation of the tourism product (Varvaressos, 1997: 165) and constitutes a vital component which affects its quality. As a result, its role in the tourist industry becomes very important for the following reasons: "Tourism is first of all a branch where the productive procedure is intense and there is no prospect of altering its character, since

* Scientific Associate of Tourism Business Department in Lamia Higher Technological Institution.

** Political Science and civic management, M.Sc. in Tourism Business Administration.

technological developments do not seem able to replace human resources as the capital of tourist services” (Logothetis, 1996: 8).

Concerning higher tourism education which aims at “producing” human resources by investing in knowledge and experience, it seems imperative to completely reassess its role from the perspective of modernization and enrichment of the knowledge disposal methods, the induction of students in research, the development of business-thinking and the discovery of new ways and means of extending the learning process, targeting at developing special skills and making higher-level studies flexible when it comes to the problem areas of tourism.

The purpose of the present study is to be found in the following issues:

- A. Application of the philosophy of quality in all mechanisms of the Higher Tourism Education system, so as to lead the educational procedure to constant improvement and effective integration (evaluation, self-evaluation, accreditation).
- B. Case-study. Presentation of the evaluation/accreditation system used in the U.S.A. for the evaluation and accreditation of the performance of educational work and techniques. Program to assess the potential of a Postgraduate Program on Hotel and Business Management.
- C. Statement of requirements/aspects which will lead to the planning of a policy on qualitative upgrading of tourism education and its effective adaptation to the constantly shifting conditions of the tourist market.

2. The Goals and the procedure of the formation of a strategy in Higher Tourism Education

In order to form a competitive strategy in Higher Tourism Education, it is necessary to clarify the fundamental data and conditions required for the solution of current problems. A most important objective is to determine the following (Louis, Smith, 1999):

- The goals to be achieved with this strategy. It is underlined that without them “there is lack of motivation (desirable situations), opportunities are missed and decisions which can lead to a desirable outcome cannot be made” (Saitis, 2000: 74).
- The means through which these goals will be attained. This parameter presupposes the presentation of alternative proposals following thorough study of the data available. It should be noted that each one of the alternative proposals has different consequences, costs and requirements (Ciochos, Papanikolaou, 1988: 24-26).

- The kind of competitive advantage which H.T.E. Departments possess in order to explore the potential of developing channels of communication and cooperation with other educational institutions (Papoulias, 2002: 75-76).

Awareness of the environment in which the Departments function and operate requires the prediction of any factors which may affect the achievement of the goals. H.T.E. Departments should do the following:

Systematic self-analysis so as to define:

- The guiding philosophy which determines the choices and behavior of administrative executives and teaching staff (vision- objective- basic principles-major contribution) (Zeugaridis, Stamatiadis, 1977: 61).
- The role of leadership under such conditions, which depends on the type and the extent of the desired changes. Inspired leadership develops the mission, the vision and the principles of the educational institution and sets an example towards the development of an “Excellence” culture (Tsiotras, 2002: 141).
- Comparative advantages, internal strengths and weaknesses of H.T.E. Departments concerning organization, staff, technological resources and other particular features which facilitate or constrain their function.

Systematic analysis of the external environment of the H.T.E. Departments so as to define the following (Bourantas, 1999: 34-35):

- The expectations and the needs of the market which the H.T.E. Departments seek to satisfy through the academic programs they produce and the services they offer.
- Opportunities and threats in the external environment of the H.T.E. Departments. Countries which invest in education (subsidies, funds available, financial support by the E.U.) achieve a better structured and functioning educational system as well as advanced levels in research, leading to the favourable increase in individual and national income (Tsoukalis, 2006).

3. Total Quality in Higher Tourism Education academic process

Quality services can be used as a competitive asset in favor of the educational institution which provides them. Nevertheless, services differ from products as to the way they are produced. Quality control of the product takes place before it comes out on the market in order to satisfy customer needs in advance (Logothetis, 1992: 278). On the contrary, the quality of services does not become apparent until it has been confirmed by mechanisms of the business market (Kandampully, Mok, Sparks, 2001: 116-117).

“The essence of the functional definition of quality concentrates on the fact that the expectations of the customers which are to be satisfied have been fully understood by those who have undertaken the task of satisfying them” (Gower, 1994: 18). Therefore, the aim of the educational institution ought to be the creation of such a mechanism which will minimize or even eliminate – if feasible – the cost of redressing defective services, given the fact that continuous improvement of the production process will prove that absence of error is in fact a reasonable prospect (Logothetis, 1992: 16, 17).

“Therefore, quality is an entity of interacting parameters. It is indeed an entity of data which creates the general picture. The consumer subconsciously selects any product, influenced by a fundamental, essential factor, a feature of the product or the service. Only when the final selection is based on the total of the features of the product can we talk about total quality.” (Adriaensens, Ingham, Vankerkem, 1993: 172-173).

Which were the reasons, though, which shaped the new environment of the educational process of the H.T.E. Departments and the redefinition of their role?

- Constant decrease of state funding
- Loss of contact with the academic environment and inability to assess the data.
- Search for the concerning the quality of knowledge in relation to the value of degrees and professional development.
- Loss of contact with the real needs of the market.

Quality of the educational process in H.T.E. Departments can apply to two levels:

3.1. To the level of tutorship and the techniques and tools of quality to the students

An H.T.E. Department is considered to be a system which sets goals such as the creation, protection and continuous development of the student’s skills and attitudes. In order to achieve these goals the organization utilizes teaching staff, funds, equipment and processes like teaching, learning and research. According to Skerritt (1997: 114-118) five reasons for the educational process are summarized in the acronym CRASP: 1) Critical attitude. Professors should be experts at approaching their personal opinion critically. 2) Research into teaching. Active research unites theory with practice. 3) Accountability. Reports and publications as a result of the liberation of research could be a part of the increasing accountability for the effectiveness of teaching schemes. 4) Self-evaluation. The

academic staff participating in the educational process can be active researchers with an increased sense of self-criticism. 5) Professionalism as teachers. Professional academic staff ought to aim at the highest possible quality of in-depth learning and teaching.

According to Bloom's model (1956), the taxonomy of learning is focused on the following areas: 1) Knowledge which requires remembering/recalling the appropriate information. 2) Comprehension, conception and interpretation of the essence of the material and estimation of future trends. 3) Application, the ability to use material such as rules, methods, concepts, laws, theories. 4) Analysis, the breaking down of the material into its components so that its organizational structure can be understood. 5) Synthesis, bringing the component parts together towards the formation of new patterns and structures. 6) Evaluation. The outcome of learning is a composition of all the above categories plus conscious assessments based on clear-cut and defined criteria.

Therefore, the rendering of knowledge is a fundamental component of educational organizations which seek to improve the quality of their services (Crosby, 1980: 190-192). The need for documented and integrated knowledge ought to be formed according to future developments, so that it can meet the quality features of advances in the fields of research and pedagogic.

3.2 To the level of the educational process, towards constant development of the learning procedure

Assessment is considered to be a means of improvement of the services rendered by academic staff and recognition of the need for improvement. The approach to quality in education which is depicted through Deming's 14 points is called "profound knowledge system" (Blanas, 2003: 40) and is based on the following aspects (James, 2003):

1. Creation of a stable environment which aims at developing long-term competitiveness.
2. Acceptance of the new philosophy for change orientated towards quality work.
3. Cessation of the reliance on standardized tactics for the evaluation of quality.
4. Focus on the procedure of learning and the development of long-term trust and faith relationships (Besterfield, 2003: 28).
5. Constant and continuous improvement of the educational procedure which will produce specialized personnel, able to meet the demands of the job-market.

6. Administration should recognize the challenges, acknowledge the responsibilities and lead the way to change. While planning educational programs, leaders ought to take this formula into consideration (James, 1996: 201): Training effectiveness = f [(Quality of subject matter)x (Probability of use)].
7. Administrative executives of all levels should focus on effective leadership of employees so as to ensure better performance.
8. Elimination of fear, fostering an environment of trust and innovation.
9. Removal of obstacles and enhancement of any team efforts with the intention of achieving the targets and goals of the educational procedure.
10. Cooperation and team work in every aspect of the educational process.
11. Examination of the impact of teaching models in relation to the level of learning performance and inspired leadership towards continuous improvement.
12. Abolition of obstacles which impede the development of the staff and the encouragement of the students towards constant education and self-improvement.
13. Introduction of a robust syllabus and self-evaluation of all participants in the educational process.
14. The planning and the enforcement of measures towards the completion of the reformation should be based on the following parameters: 1. Commitment of teachers-students to a common direction and consent of the parties involved in the materialization of the new philosophy. 2. Teachers-students express their discontent with outdated procedures and intensify their effort towards change. 3. Human resources of the educational institution should notify the public of the forthcoming changes and urge them to directly support and get involved in the reformation process. 4. The participants in the educational procedure lay the foundation for the improvement of their performance through distinguished roles and intensive work (James, 1996: 216).

4. Evaluation of quality in Higher Tourism Education

The basic principles of Total Quality are directly related to the educational reform and according to Mehrotra, (2006) they are defined as the “four pillars of Total Quality Management” in the academic field and are pinpointed on the following points:

1. Synergistic relationships. The product of the cooperation between teacher and student is the development of the students' capabilities, interests and character through their bidirectional communication. The approach and definition of the terms "customer", "product" in the educational procedure are thought to be rather difficult especially concerning their interpretation during the in-depth knowledge process (Ray, 1996: 276-283). In a sense, the student is the teacher's "client" and the recipient of the educational services which aim at the student's progress and improvement. Respectively, the teacher and the educational institution are the "suppliers" of effective learning tools. The resulting "product" is the student's continuous improvement and personal development (knowledge, experience, human resources, skills), while the demands on the part of the "consumer" are defined by whoever is to absorb the "product" of the educational procedure, either it be the next educational institution, or enterprises or society in general. (Tsiotras, 2002: 391).
2. Continuous Improvement and Self Evaluation on an individual and collective level. Total quality is a profitable approach, advantageous for everyone. According to Deming (1984), one should first evaluate oneself in order to define abilities and individual preferences.
3. A system of ongoing process. According to the new philosophy, continuous improvement of the learning process replaces the outdated "teach and test" model.
4. Leadership. Teachers who focus on principle-centered teaching should offer the leadership, the guidance, the frame and the tools required for the constant improvement of the learning process. It has been proved in practice that the quality of a H.E.T. Department concentrates on the following points:
 - Redefinition of the Department's role, purpose and responsibilities.
 - Planning of further education targeted at the leading abilities of the teaching staff of all levels.
 - Development and improvement of the staff according to their notions.
 - Use of research or practice-based findings to define policy/strategy.
 - Design of initiatives guided by the utilization of suggestions made by various agencies and organizations.

Evaluation and ensurance of quality in the educational process is a multi-aspect issue. It should be noted that any reference to evaluation and certification mechanisms focuses on the importance and the role of quality and, especially, of the systems that ensure and evaluate it. The differentiation between ensurance of quality and certification is apparent. The salient concept is that ensurance of

quality is required for certification, which is based on a minimum level of standards of educational quality provided by the institution which is to be certified. Furthermore, it is utilized when a new syllabus or a new institution is founded, or when the quality of those already in operation is confirmed. (Hamalainen, Satu, Wahlen, 2001: 5-8).

The standards of accreditation encourage institutional independence, responsible self-guidance regarding decision-making or determination of the syllabus and academic standards.

It is a fact that “nothing is self-evident in evaluation” (Tsaousis, 1993: 98). The term “evaluation” states the assessment of a person’s or an object’s value in comparison to another, different from the one under evaluation. In the academic field, evaluation refers to the assessment of the ability of a trainee to perform, of an educator to convey knowledge, and of a system or procedure to achieve a goal (Bush & Bell, 2002: 300). The concept of evaluation is directly related to the concepts of effectiveness and efficiency. It is also related to the cost-benefit or rate of return analysis relationship and allows for comparisons between the components which are under evaluation. “This method is based on the number of graduates who will maximize the rate of a country’s economic development” (Psachopoulos, Kazamias, 1985: 243). Thus, evaluation is related to an attempt to form quantity indicators which will make assessment and comparison as foolproof as possible.

Evaluation (**self-evaluation, non-academic evaluation**) can be voluntary or imposed, constant or periodical. It may aim at the improvement of the education available or "the assessment of efficiency and effectiveness with a view to continuing, increasing, decreasing or even interrupting funding of the educational agencies or their programs, the absorption of graduates in the job market, the academic or professional recognition of their studies and credentials the collaboration between relevant H.T.E. Departments in education and research, the assignment of educational and research work” (Tsaousis, 1993: 101).

5. Models of Total Quality Assessment in Higher Tourism Education

5.1 Self-evaluation

The identification of the present situation and the detection of areas in need of improvement are effected through self-evaluation.

In particular, a self-evaluation report should refer to the following fundamental points (Rigatou 2002, 2006, www.evc.edu, www.Miramarcollage.net):

- 1. Mission and Effectiveness of the institution.** Definition of the institution's main mission and its educational purposes, the number of students, the syllabus, quality management, syllabus evaluation by the students, the employers and external associates and, finally, the processes of the evaluation of teaching, provision of evidence supporting the effectiveness of the teaching procedures to the students.
- 2. Learning/education of students and Services**
 - A. Syllabus.** Availability of high-quality syllabus in essential, recognized and popular fields, resulting in credentials which ensure both transition in higher studies and establishment in one's line of work.
 - B. Services.** The services rendered to the students and the extent to which the institution meets their needs aim at rewarding responsibility ultimately targeting the development of the students' personality, as well as their complete incorporation in the world of business and society.
- 3. Resources**
 - A. Human resources.** Employment of capable and qualified personnel to support the syllabus and services rendered. The personnel are regularly evaluated and have the opportunity for further education. Different ethnic, social or educational backgrounds as well as equality diversity among the students are encouraged.
 - B. Natural resources (facilities, equipment, environment).** The standards of the syllabus and its contribution to the effectiveness of the institution are evaluated. As all services, they are to be tested and enhanced.
 - C. Technological resources.** Availability of state-of-the-art equipment and guaranteed technical support in case of malfunction.
 - D. Financial resources.** Maintenance and support of the functioning of the institution. Proper allocation ensures the enhancement of all services and resources of the institution.
- 4. Leadership and Management.**
 - A. Decision-making and related procedures.** Distinct and effective leadership as a driving force which sets values and goals for constant improvement. Leaders ought to create an environment which encourages innovation and excellence.
 - B. Board and administrative organization.** Evaluation of their responsibilities for the establishment of policies in order to ensure quality and integrity, effectiveness of the syllabus and services as well as financial stability.

5.2 Evaluation by a third, independent accrediting agency, generally accepted for the validity of accreditation provided. Non-academic evaluation

While the self-evaluation process gives Higher Tourism Education the opportunity to assess its present situation, comparison with the competitors enables it to mark its boundaries in the field of tourist education in relation to respective departments which provide a similar syllabus (Dervitsiotis, 2001: 429).

The benchmarking technique is not only a procedure of copying the processes and practices of other H.T.E. Departments which achieve an excellent performance, but also a systematic effort to learn and adjust the best processes in total harmony with the Department's internal environment (Besterfield, 2003: 207-211).

Higher Tourism Education Departments can estimate and evaluate their performance using certain indicators which are related to the recipients of the educational product (students, other interested parties) and are connected with the educational and support services, as well as with the Department's financial state.

Evaluation by an independent accrediting agency consists of a number of criteria, in accordance with which the Department "is graded" depending on its function and recorded performance. This approach could be based on a group of principles and ideas, as laid down (Stefanatos, 2000: 120-125):

- 1. Leadership.** Supervisors' behavior concerning the guidance of the H.T.E. Departments towards Total Quality through recognition and appreciation of individual and team efforts and successes is evaluated.
- 2. Management of educational and administrative staff.** The success of a H.T.E. Department depends on the knowledge, skills, creativity and motivation of the employees.
- 3. Procedures of learning and continuous improvement.** Learning means adaptability to the constantly changing educational needs. Improvement means seeking and diminishing of problem areas in need of investigation. Improvement and learning are considered to be transitional processes from general orientation to specialized qualifications.
- 4. Student-centered education.** The educators' responsibility lies, above all, on the effective recruitment of students and on the formulation of motives which will drive students to work with diligence (Barron, Maxwell, 1993) and integrate business experience with academic knowledge (Burton, 1988).
- 5. Long-term outlook.** In order to achieve quality in Tourist Education, there should be a long-term commitment and orientation of every party involved towards the fulfillment of the strategic goals.
- 6. Development of collaborations. H.T.E.** Departments should foster

collaboration with other educational institutions of similar academic objectives, with enterprises and with the general public so as to achieve their goals.

7. **Customer satisfaction.** The achievements of the department regarding satisfaction of the market are evaluated. The use of methods of measurement is a necessity in order to estimate the extent to which the institution has satisfied the needs of the market.
8. **Social implications.** It includes the notion concerning the approach of the H.T.E. Department to the quality of life, the environment, and the conservation of natural resources.
9. **Anticipated results.** The achievement of goals is evaluated, as well as the H.T.E. Departments' organic relationship with the tertiary section (service section), the integration of qualified personnel in the academic procedures, coherence of syllabus and business orientation, specialization.

“Evaluation based on the forementioned criteria is a painstaking and time consuming process. “It is worth mentioning that the group of evaluators never refers to the weaknesses of the organization with the term “weaknesses”, but they use the phrase “areas which can be improved”. Thus, they emphasize on the tendency towards continuous improvement which all organizations should cultivate” (Spanos, 1997: 47).

6. Evaluation for the Management Development Program: A Competency-based Model for preparing Hospitality Leaders. Case Study, Cornell University. (Brownell, Chung, 2001)

The present publication focuses on how education which relies on the Management Development Model (MDM) - which is in fact a practical approach emphasizing on the outcome of learning - has enriched and improved traditional postgraduate programs on Hotel studies. MDM was first introduced to education during the '50s as a reaction to the teacher-centered model of teaching. Interest in this new approach spread rapidly and in the '90s, efforts to incorporate it into Business administration postgraduate programs were intensified.

In particular, out of all the traditional skills that constitute the core of MDM, only three were deemed worthy to be taught in hotel studies programs: **business correspondence, oral communication and acquisition of managerial skills.** The case study is concentrated on the Cornell University postgraduate program “Management of hotel units”.

6.1 Detailed presentation of the evaluation of syllabus

Evaluation begins with the completion of a self-evaluation questionnaire prior to the commencement of the instructional program. Students are observed by faculty members and professionals of a relevant field in order to establish the extent to which they possess the three basic skills.

During the first semester a third phase of evaluation is to take place through interviews, the results of which are used for the induction of students into practical training which is set between the two semesters. Finally, the dissertation at the end of the second semester provides more opportunities for feed-back and evaluation of a student's progress.

According to Faculty Members Evaluation with the system UCSB (University of California Santa Barbara) <http://www.oic.id.ucsb.edu/Services/ESCI/index.html>:

Questionnaires are distributed by the professors and the evaluation tool (ESCI= Evaluation System for Courses and Instruction) has a distinct form consisting of a questionnaire containing a list of questions concerning the students' opinion on the content of the curriculum, the methodology, the workload, the grading, the teaching pace, the teacher's communicative ability etc. For comparison purposes, teachers are also informed of the answers given to the same questions by students of previous years, the answers of each student who attended lessons in the Department and the answers of the total number of students.

Students are constantly assessed, but simultaneously they themselves evaluate their teachers in a way which ensures that all their needs are fully met.

The main advantages of the Management Development Model (MDM) can be summarized as follows:

- The educator acts as the students' consultant and teaching takes the form of a synergistic effort.
- Clear and objective goals allow educators to evaluate the effectiveness of their teaching and search for means of improvement.
- Students perceive their progress and their abilities in order to achieve their goals.
- Employers can evaluate the competence of their future employees.
- Involvement of the students in the evaluation process intensifies their effort for intensive work.

Besides the above mentioned advantages, evaluation of syllabus also presents certain drawbacks, which are laid out as follows:

- The risk to have the attention of the evaluators concentrated on a biased selection of answers in whichever questionnaire is visible. The question which

concerns the academic community and the students themselves is who actually evaluates.

- The excessively vast number of evaluators can provide asylum for the irresponsible, yet by no means can they diminish the importance of evaluation.
- Such evaluations should be taken into consideration in depth of time and to a duration of at least five to ten years.
- Evaluation should coexist with the active presence of the teacher-evaluator as an academic citizen who ought to be an active member of the academic community as well as the local societies by participating in committees, lectures and conferences.
- Evaluation is of no consequence unless the evaluated are not committed to following the recommendations of the evaluators.

Therefore, the Management Development Model is effective only in a context where theory meets practice. Both the goals and the means used for its realization are clear and the whole process is characterized by transparency. The outcome is constant feed-back, improvement and satisfaction of the students. Thus, education obtains a horizontal dimension which means that collaboration between all parties involved is increased, while at the same time the concept of the teacher as the sole holder of knowledge tends to be rejected.

6.2 Total evaluation. Jurisdictions and responsibilities of the faculty members of the educational unit

The evaluation of institutions is a holistic process and the evaluated should express an overall view on all issues, such as vocational establishment of the graduates, relationships with business agencies etc.

Therefore, the results of the evaluation can be focused on the following parameters (Becket, 2005: 319) (2006, [www. Flinders.edu.au/teach/t4l/assess/ trg.doc](http://www.Flinters.edu.au/teach/t4l/assess/trg.doc)):

Learning: Ensured feed-back aiming at the enhancement of learning. Motivation of the students through detection of their strengths and weaknesses. Development of self-evaluation abilities/skills. Ensured outline of the student's cognitive material.

Certification: Rejection or development, student classification so that the student can move onto practical exercise. Anticipation of success in the selection of a series of courses and ensured success in future employment.

Ensured quality: Constant improvement of the learning process. Evaluation of the strengths and weaknesses of the syllabus. Goals, environment and recognition by other institutions and the job market. Testing of standards throughout the year.

A competitive member of the academic staff should possess skills in various fields, scientific background and experience. Faculty members should excel in three sectors, teaching, scholarship and professional activity, service rendering :

Teaching responsibilities occupy the greatest part of faculty duties. Quality and effective teaching pre-requires cultivated intellect, integrity, creative pedagogical techniques.

Scholarship is the foundation of teaching and professional activity. Besides research and production of scientific work, it is essential for faculty members to participate in organizations which stimulate and propagate knowledge, in scientific committees, in conferences, in seminars, in charity and voluntary activities. All the above are regarded as crucial criteria for promotion.

Finally, teaching staff is obliged to provide university services to students, members of the college and the administration.

6.3 Process and types of accreditation. Current situation in the U.S.A

Many educational and social agencies approve of and support the method of accreditation and its importance (2006,<http://accreditation-guide.com>, www.online-education.net, www.beckfield.edu, www.e-collegedegree.com, www.tourismcollege.com, www.ed.gov/admins/finaid/accred/accreditation.html):

On the part of educational institutions, accreditation assures potential students or organizations wishing to subsidize the college or the students that the institution in question is an officially recognized higher education institution with an approved syllabus of higher academic standards.

On the part of students and the rest of the society, the selection of an accredited college or university ensures quality of studies, plays a determinant role in the student's financial aid and it positively affects the student's vocational establishment.

Accrediting agencies are private, non-profitable, state or national organizations. Accreditation as a process does not apply only to educational institutions, but also to the accrediting organizations.

There two basic types of accreditation, Institutional and Specialized or Programmatic.

Specialized accreditation usually applies to departments within an institution (not the institution as a whole) or educational programs which belong to an educational institution or other organization.

Institutional accreditation, on the other hand, applies to an institution as a whole. It examines whether the institution fulfills the quality standards without evaluating

the Departments of the institution separately. That type of accreditation can be broken down in two more categories, national accreditation, which does not guarantee the transfer of credits in case a student wishes to continue studying in an institution of another state, and regional accreditation which ensures transfer of credits in any university (2006, www.ed.gov, www.online-education.net).

6.4 Accrediting agencies – Pre-requisites of evaluation/certification

Increased demand for a wider national organization in recent years has led to the replacement of CORPA (Commission on Recognition of Postsecondary Accreditation) by the Council on Higher Education Accreditation (CHEA-www.chea.org), which is the only non-governmental agency responsible for the certification of accrediting agencies in the U.S.A.

In order to control non-governmental agencies, the U.S. Secretary of Education is required by statute to publish a list of all nationally recognized and reliable accrediting organizations annually. This is achieved by the Accrediting Agency Evaluation Unit whose main jurisdictions are: the constant review of accrediting criteria, policies and procedures, the control of the process through which an accrediting agency obtains recognition, the provision of consultative services and in general, the representation and enforcement of the U.S. Secretary policy.

According to ACCJC (accrediting commission or community and junior colleges) and WASC (western association of schools and colleges), (2006, www.evc.edu, www.miramarcollege.net), any educational institution wishing to be accredited should ensure that its natural and human resources can support effective student learning, that improvement and quality are constantly targeted and that it maintains a constant self-evaluation process through an open dialogue which engages all of its members.

“Accreditation supports the educational system and expectations for quality derive from the central mission of each institution. Emphasis on accreditation standards, on autonomy of the institution and independence of individual Departments aids in maintaining both self-management and self-direction thus contributing to higher academic quality” (2006,www.Miramarcollege.net/cmte/accreditation/index.asp,www.beckfield.edu,www.online-education.net, www.online-degrees-and-scholarships.com, www.ed.gov).

7. Conclusions

Quality services are the basic factor which determines the image of a tourist destination and in turn defines its comparative advantage through the main features of subjectivity and selectivity (Stavrakis, 1979, 2007). Education should play a prime role in tourism development itself and in the prospects of viability for businesses in this sector. “On a national, as well as an international level, the tourism education has developed heterogeneously (Baum, 1993), in relation to the actual or perceived needs of the tourist industry. The goal of tourism education ought to be its development in keeping with tourism and the academic environment, so as to attract and maintain a workforce of high quality (Baum, 1995). Despite the importance of this sector for the development of a country as a whole, there exists shortage of knowledge, skills, attitude and limited choice in human resources.

A Higher Tourism Education Department should seek to:

- Develop the individual, providing the necessary and essential skills of critical and creative thinking.
- Prepare students for active practice, both in private and public, as well as in professional activity.
- Trigger intellectual curiosity and passion for lifelong learning.
- Aim at dignity balanced with social awareness.
- Enrich cultural identity and deep appreciation of human nature in all of its diversity.
- Cultivate awareness of the fact that truth is complex, multifaceted and multiform.

To achieve the above goals, it is required to encourage and support excellence in teaching, research activity, productivity, rendering of services. Objective assessment and evaluation of the quality of teaching and learning should incorporate the element of observation (Robbins, 2005: 453).

“Excellence in research is required if a higher education department is to fulfill its leading role in modern scientific and technological development” (Crete University, 2002). Research strategy should aim, first, at its own exploitation for the students’ benefit and, second, at international recognition of the H.T.E. Departments through their contribution to the propagation of knowledge and scientific publications.

All the above pre-require the application of quality indicators to all the stages and the agencies involved in the educational process, the determination of a well-defined mission and strategic goals and acceptance of institutional changes

concerning “Evaluation-Self evaluation-Accreditation” by all H.T.E. Departments.

Regarding non-academic evaluation, the accrediting agencies should they themselves be subject to evaluation for efficiency of their resources and their impact on the educational institutions, promote institutional autonomy, academic freedom and organizational quality, cultivate ingenuity and innovation by developing internal procedures of self-improvement and inner-culture.

Therefore, “the main problem of Greek Higher Education remains the radical reformation of the educational institutions through reformation of their institutional framework, essential and institutionally insured administrative and financial autonomy and through large funding which will enable them to keep up with and compete with foreign universities on equal terms” (Babiniotis, 2001). Quality evaluations will also affect students when selecting an institution and a department of studies within a wider and accessible higher tourism education European market. Employers will also be required to apply quality criteria to this unified business market in which mobility will be supported by mutual recognition of degrees for clearly professional purposes.

REFERENCES

Greek References

- Babiniotis G., (2001), «The Declaration of Bologna- Converging the Higher Education European systems. Social-Humanistic Sciences» National Conference, Greek Ministry of Education.
- Blanas G.N. (2003), «Reticulation of total quality», Athens: Pataki pp. 40
- Bourantas D. (1999), «Guide for the strategic planning in higher education (Universities/Technological Institutions)» Athens University of Economics and Business, pp. 34-35.
- Brownell, Chung J. and B. (2001) «A Management Development Program/The management development program: A competency-based model for preparing hospitality leaders. *Journal of Management Education*, 25(2), 124-145.

- Ciochos P., Papanikolaou G.D., (1988) «Action planning of companies» Piraeus: Stamouli pp.24-26.
- Dervitsiotis K. (2001) «Competitiveness by applying Total Quality Management» Athens: Interbooks pp. 429, 533.
- James P. (2003), «Total Quality Management», Athens : Kleidarythmos.
- Logothetis M. (1996), «Upgrade and update of Tourism Education», Athens: Institutouto Touristikwn kai Ksenodoxeiakwn Erevnwn pp. 8.
- Logothetis N. (1992), «Total Quality Management. From Deming to Taguchi and SPC» , Athens :Interbooks pp. 16,17.
- Papoulias D. 2002 «Strategic Management of Companies and Changes» Athens: Kastaniwths.
- Psacharopoulos G.-Kazamias A. (1985) «Education and Development in Greece: social and economical study on higher education». Athens: EKKE pp. 243.
- Rigatou N. (2002) «Papers about Education. Do universities have to take exams? Insurance of quality in education» Athens: Atrapos.
- Saitis A. (2000), «Organization and Administration of Education» Athens : Atrapos .
- Spanos A. (1997), «How are effective quality services produced and provided», Athens: Galaios pp. 47, 197.
- Stavrakis D.,(2007), «Methodological Communicative Approach of a tourism destination's image. Case-study. Cyclades. Paros-Antiparos».(under publication) in Scientific Tourism Review .
- Stefanatos S. (2000), « Total Quality» Patra: G.O.U. pp. 120-125.
- Tsaousis G.D. (1993), «The Greek University on the doors of the 21st century» Athens: Gutenberg, pp. 98, 101.
- Tsiotras G.D (2002), «Improvement of quality» Athens: Benou pp. 391
- University of Crete, (2002), «Strategic Planning 2002-2012» Crete.
- Varvaressos S. (1997), «Tourism. Economical Approaches» Athens: Propompos, pp. 165.
- Zeugaridis S., Stamatiadis G. (1997) «Administration and Supervision of personnel» Athens: Interbooks, pp. 61 .

English References

- Adriaensens B., Ingham M., Vankerem M. (1993), *Marketing et Qualite Totale De Boeck-Wesmael Bruxelles* pp 172-173.
- Barron P. Maxwell G., (1993), *Hospitality management students' image of the hospitality industry* International Journal of Contemporary Hospitality Management, Vol. 5 No 5.
- Baum T. (1993), *Human Resource Issues in International Tourism* Butterworth-Heinemann, Oxford.
- Baum T. (1995), "Managing Human Resources for the European Tourism and Hospitality Industry. A Strategic Approach" Chapman & Hall, London.
- Becket N., (2005) in Airey D., Tribe J., "An International Handbook of Tourism Education" University of Surrey, Elsevier, pp.319
- Besterfield D., Besterfield C., Besterfield G., Besterfield M., (2003), "Total Quality Management" New Jersey : Prentice Hall pp 207-211.
- Bloom B.S., Engelhart M.D., Furst E.J., Hill W.H., Krathwohl D.R. (1956), *Handbook I: Cognitive Domain" Vol.1 of Taxonomy of educational objectives: The classification of educational goals*, New York: Longmans, Green.
- Burton P.E., (July 1988) *Building bridges between industry and education* conference paper, University of Surrey .
- Bush T., Bell L., (2002) *The Principles and Practice of Educational Management* Paul Chapman Publishing London .
- Crosby P.B. (1981) *Quality without Tears*, Mc Graw – Hill, New York pp. 190-192.
- Deming W.E. (1984), *Quality, Productivity and Competitive Position*, MIT, Center of Advanced Engineering Study, Cambridge, N.A. pp. 174.
- Gower, (1994), *Gover Handbook of Quality management* Gover Publishing Ltd., pp. 18.
- Hamalainen K., Satu P.V., Wahlen S., (2001), *Institutional Evaluations in Europe* ENQA Workshop Reports, Monila , Helsinki, Finland pp 5-8.
- James L. F., (1996), *The new philosophy for K-12 education : a Deming framework for transforming America's schools*, Milwaukee: Quality Press., pp 195, 216.

- Kandampully J., Mok C., Sparks B., (2001), *Service Quality Management in Hospitality, Tourism, and Leisure* Haworth Hospitality Press, pp. 116-117.
- Louis G.R., Smith H.D. (1999), *Total Quality in Higher Education* Florida St Lucie Press.
- Panagopoulos, An., (2003), *A study of tourism development in Athens (1990-1999)*, Ανάπτυπο, Μελέτες προς τιμή του Καθηγητού Αποστόλου Α. Λάζαρη, Πανεπιστήμιο Πειραιώς.
- Ray M., (1996), *The problem of defining. The Customer and the Product makes conceptualizing education market difficult* Journal of Economic Education. Vol.27.No.3.pp 276-283
- Robbins D. in Airey D.,Tribe J., *An International Handbook of Tourism Education* University of Surrey, Elsevier, pp.453
- Skerritt O.Z. (1997), *Professional Development in Higher Education A Theoretical Framework for Action Research*, Biddles Ltd, Guildford and Kings Lynn, Great Britain, pp. 114-118.
- Stavrakis D. (1979), *Le phenomene touristique international- demande, organization, problematique, tendances futures*, Editions d' Aujour' hui, Col. Theses et Recherches, Paris.

Internet Sources

- Mehrotra, D., (2006), *Applying Total Quality Management in academics*, www.sixsigma.com/library/content/c020626a.asp.
- Tsoukalis, L., (2006), *Greek Higher Education within the new European and International Enviroment*, www.eliamep.gr/eliamep/files/paideia_Policy_paper.pdf. ELIAMEP
- 2006, Reasons for the importance of Accreditation, <http://accreditation-guide.com>, www.online-education.net, www.beckfield.edu, www.e-collegedegree.com, www.tourismcollege.com
- 2006, Accreditation (Present Situation in the U.S.A), www.ed.gov/admins/finaid/accred/accreditation.html, www.miramarcollege.net/cmte/accreditation/index.asp, www.beckfield.edu, www.online-education.net, www.online-degrees-and-scholarships.com, www.ed.gov.)
- 2006, *Procedure and types of Accreditation of Educational Institutions* www.ed.gov, www.online-education.net.

2006, *Accrediting Agencies–Accreditation/ Certification* CHEA-www.chea.org,

2006, *Criteria of Accreditation* www.evc.edu, www.miramarcollege.net

2006, *Criteria-Comments on the evaluation of the three aspects* www.flinders.edu.au/teach/t41/assess/trg.doc

2006 University of California Santa Barbara <http://www.oic.id.ucsb.edu/Services/ESCI/index.html>