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From the Editor

Dear Readers,

In this volume of our Journal, the section, “From the Editor”, presents the results of the grant research project, “Sustainability and Modernization of the Public Pension Scheme” which was financed by the Research Promotion Foundation and was completed by the end of the year 2008.

The participants of the research network which was developed for executing the research project, were Americanos College as the sponsor of the project, Muhanna & Co. Actuarial Services, the Aegean University, Department of Geography and the Department of Sociology as research partners, the Ministry of Finance, Department of Public Administration and Personnel and the Treasury of the Republic as the final users of the outcomes of the research project.

The research project has determined the following objectives:

1. Examining the sustainability of the Scheme and its impacts on public economics.
2. Examining different parametric changes in the current Scheme so as to develop its sustainability.
3. Designing a new system for the Public Sector’s Pensions that will be sustainable in the long-run and the burden on public economics will be lower.
4. Suggesting amendments in the Law which governs the Public Pension Scheme, so that the proposed reforms of the Scheme to be governed by a complete legal framework.

1. General Comments on the Results

The expenditures of the Scheme in 2006 were 2.2% of the GDP. It is estimated that they will remain on the same levels until 2030, but by the year 2040 they will reach 2.8% of the GDP. In 2006 the cost of pensions as a percentage of the remunerations was 28% and it is estimated that by the year 2040 it will be 50%.

The actuarial liability of the pensioners’ benefits and of the accrued rights of the current civil servants is estimated to be €8.34 billion.

2. Reform Packages

Based on the outcome of the alternative scenarios, the research team proposes two Reform Scenarios of the Scheme. Scenario 1, suggests parametric reforms that include the existing civil servants as well as the new ones that will be employed after the

implementation of the reforms. Scenario 2, suggests structural reforms that include the civil servants who will be employed after the Reforms are implemented.

2.1. Reform Scenario 1

Scenario 1, suggests the following parametric reforms:

1. 3.5 percentage units increase in the contribution for widow/ orphan pensions, which is equal to the 50% of the cost of these pensions. This rational was valid when the system was designed in the year 1967. For retirement pensions, a contribution of 5% is suggested. The sum of contributions is 8.5% and will cover only 23% of the total cost of pensions.
2. It is suggested that the retirement age is raised for all those who retire before the age of 60. In the case of educators it is suggested that the retirement age is the 63rd. For all those who retire at the age of 55, (members of the police force up to the surgeon), it is suggested that the retirement age is the age of 60 and for those who currently retire at the age of 60 (officers of the police force) it is suggested that the retirement age is the age of 63.
3. Regarding pension raises, it is suggested that the pensions should be raised based on the inflation index.

Based on this scenario, the actuarial liability decreases to €6.42 billion and the normal contribution for financing the future service decreases by 10.3 percentage units. That is, it decreases to 26.2% of the remunerations.

2.2. Reform Scenario 2

Scenario 2, suggests structural reforms of the Scheme and includes the new civil servants who will be under a new Defined Contributions Scheme (DCS). This new Scheme will offer benefits based on the accumulated value of the contributions of each member. The objective of the DCS will be to supplement the Social Insurance Pension, so that the sum of the pension benefits replaces the 75% of the gross salary before retirement. It is proposed that a total contribution of 11.3% (5% to the DCS and 6.3% to the Social Insurance Fund) must be made by the employee. Based on this scenario, the new employees will contribute 6.3% to the Social Insurance Fund as all employees.

Based on the scenarios studied (projected simulation tests), the government as the employer will contribute to the Social Insurance Fund 6.3% and to the DCS from 5% - 15%. The total cost of the pension benefits of the new civil servants to the government will be less even if the contribution of the government to the DCS is up to 15%. In the case of the DCS, the contributions of the government and the employee will be invested and the accumulated account of the member will be transformed into pension at retirement, part of which can be transformed into a lump sum.

3. Amendments of the Law

According to the suggested reforms, the amendments of the Law that will govern the Pension Scheme of the State employees were proposed, in case the suggested reforms were implemented:

- (a) *Increase in the contributions of the employees to the financing of the Scheme:* Article 41 of the Basic Law can be amended and the contribution percentages of 0.75 and 1.75 respectively can be replaced by a single contribution of 3.5% of the annual remuneration for any level of salary (contribution for the widow pension). There is also the proposal of adding an additional paragraph for the contribution of 5% (contribution to the Pension Scheme), so that the total contribution to be 8.5%. Similar amendments will be made in the case of the DCS. A new paragraph will be introduced underlining that the total contribution of the new employee will be 11.3% (5% to the DCS and 6.3% to the Social Insurance Fund) and that the government will contribute 10.3% to the Social Insurance Fund (6.3% as an employee and 4% as government) and 5% - 15% to the DCS according to what will be finally adopted.
- (b) *Rise of the retirement age:* In the case of educators and state employees, article 12(1) of the Basic Law will be amended. In the case of the police force article 12(2) of the Basic Law will be amended accordingly.
- (c) *Adjustment of pensions based only on the inflation index:* Article 8 of the Basic Law will be amended according to what will finally be approved by all the interested parties in combination with Article 2 of L.69 (I) / 2005 as it was recently amended.

The results of the research project were presented to the interested parties at a conference held on the 21st October, 2008 at Hilton Park in Nicosia, Cyprus. Also, very shortly a book will be published by Americanos College titled, "Sustainability and Modernization of the Public Pension Scheme".

Lastly, once again I acknowledge the worthy contribution of the members of the Editorial Board, the authors and friends of our Journal. Their commitment to the Journal has been expressed in variegated forms throughout the development of this academic journal edition. Also, my thanks to the readers who so warmly have embraced The Cyprus Journal of Sciences so as to achieve its main objective – to serve the international academic community.

Charalambos N. Louca

INTERSECTIONS OF RACIAL/ETHNIC DISCOURSES IN MANAGEMENT AND SPORT: MAKING EMBODIED WHITENESS VISIBLE

ANTON ANTHONISSEN* and ANNELIES KNOPPERS**

ABSTRACT

Although managerial discourses seem to be ideologically neutral, they often have racial and ethnic subtexts. These discourses are informed by white western culture including meanings given to the body, physicality and sport. Sport is an area for the (re)production of discourses about the body and physicality across social relations. We examine dominant directions in research about ethnicity/race constructions in managerial work. We then explore ethnic/racial discourses about bodies and physicality in sport. Subsequently we explore possible ways in which ethnic/racial dominant discourses about managerial work and sport/physicality are intersected and suggest directions for research in this area.

Keywords: Race; Ethnicity; Sport; Managers; Body.

1. INTRODUCTION

Ethnicity and race are constructions by which individuals and groups are classified by others, are assigned labels and/or assign labels to themselves (Thomas & Dyal, 1999). These classifications and labels are not discrete variables however, but are constructions; race is often associated with meanings given to physical differentiation while ethnicity is associated with cultural and geographical differentiation (see for example, Asfar and Maynard, 1994; Duncan, 2003; Nkomo, 1992; Thomas & Dyal, 1999; Whitehead, 2002). The concept of 'ethnicity' is more encompassing than race since it denotes various hybrid, overlapping, and changing forms of ethnicity, racial and religious constructions. 'Race' remains a 'significant symbolic marker of social, political and economic entitlement' (Duncan, 2003, p. 138) and power¹. However, the growth in the multiplicity of meanings for (hybrid) social identities has extended the conceptualization of ethnicity/race. We define race/ethnicity 'as behaviors, languages and practices, existing in specific cultural and organizational locations' (Whitehead & Barrett, 2001, p. 15)², which are commonly associated with either black or ethnic minorities and white or ethnic majority³. We refer to ethnicity and race as conflated concepts in this paper.

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A considerable body of research has been developed that focuses on the dynamics of race and ethnicity in managerial work, using categorical, distributive or relational approaches (cf. Hall, 1996). Categorical research focuses on social group differences and similarities; distributive research examines inequalities in resources and access to opportunities across race and ethnicity. Relational research explores how discourses about management, ethnicity, race [and other social relations], intersect and thus create, reinforce and challenge distinctions among social groups. Meanings given to the body and embodied identities are often neglected in these approaches (Trethewey, 2000). Yet bodywork and physicality are often used to perform race and ethnicity and other social relations. This is most obvious in the world of sport in which bodies are given meaning as they are praised, derided and publicly celebrated (see for example Coakley, 2007; Messner, 1992). Black and white sporting bodies and forms of physicality are given different meanings. Black athletes may be revered because of their accomplishments and at the same time ascribed stereotypes about their embodied identities⁴. According to Long & Hylton (2002) a stereotypical lens is infrequently used to describe White athletes because their dominant social position is seen as 'normal'. These meanings given to sporting bodies may influence managerial discourses, because managers use bodywork and sport in socializing after working hours or attending sporting events together (Charles & Davies, 2000; McDowell, 2001; Rutherford, 2001; Timberlake, 2005). Participation in (male dominated) sports and client entertainment at sport-events can therefore influence managerial careers (McDowell, 2001). However, the extent to which meanings given to sporting bodies and physical activities of a white majority and black (and other) ethnic minorities serve as subtexts for and/or intersect with managerial discourses work, has received little scholarly attention. The purpose of this paper is to explore intersections among discourses of race/ethnicity, management, sport and physicality. We use English and Dutch literature on ethnicity and race, management and sport/physicality to make this analysis.

We first examine common ways of researching ethnicity/race in managerial work and question the assumptions underlying this research. Then we focus on ethnic/racial subtexts in discourses about sport, physicality and the body and argue that research that explores race and ethnicity in managerial work needs to include discourses about sport/physicality. We show how racial/ethnic subtexts in discourses of management and sport/physicality may intersect and reinforce each other and conclude by arguing for the necessity of interrogating embodied whiteness in (research on) managerial work.

2. DIFFERENT APPROACHES ON RACE AND ETHNICITY IN MANAGERIAL WORK

Since a considerable amount of *categorical and distributive research* has focused on ethnic/racial constructions in management, we will briefly describe the results, followed by a summary of the possible deficiencies of such research. Much of the categorical research in the area of ethnicity/race in management has focused on differences and similarities in leadership, work ethic and managerial styles (see for example, Arslan 1999; Bartol et al. 1977; Xin & Tsui, 1996). In general, such research shows little difference in leadership, work ethic and/or managerial styles across race and ethnicity. These results differ however, from those of distributive research.

Significant differences have been found across race and ethnicity in structural dimensions of managerial work such as type of psychological support and networks, promotion opportunities and performance evaluation. Landau (1995) for example, found a significant relationship across race and gender in ratings by senior managers of the promotion potential of 1268 managers and professionals in a multinational Fortune 500 company. Blacks and Asians were rated significantly lower than were white managers. In part, this difference in perceived promotion potential may be due to differences in types of supportive networks. Similarly, Igbaria & Wormley (1992) found that black managers and professionals within a large information system company received lower performance ratings and less career support than did their white counterparts. Although same -race networks tend to provide psychological support for both black and white managers, such networks are more influential in career support and the promotion chances of whites than blacks (Thomas, 1990; Ibarra, 1995). Ibarra (1995), in a study of four Fortune 500 firms in different industries, found that while the instrumental usefulness of networks did not influence day to day interactions among managers, such networks significantly enhanced the career possibilities of white managers more so than they did those of black managers. The degree of impact of race/ethnicity on performance evaluations and promotion may vary by sector however. Powell & Butterfield (1997), for example, found no direct significant effect of race on promotion to senior management positions in US governmental agencies. They suggested that the negative effects of race in promotion opportunities for blacks might have been blunted by the explicit promotion protocols that were used to select senior managers in governmental agencies. Yet, Powell & Butterfield also found that blacks who were recommended for positions in top management had significantly more work experience and were more likely to have worked in the department doing the hiring than white managers were. In other words, blacks had to be 'known' to be considered for promotion. These distributive variables of evaluation, networks and promotion potential therefore have a cumulative and multiplicative effect.

Although such categorical and distributive studies about ethnicity and race may yield accounts about similarities and differences among managers, they are very limited and have several underlying questionable assumptions. First, often such management research assumes that managerial styles and differences are stable and can be empirically verified (Mumby, 1996). Managerial styles and practices are not straightforward however, but are complex, situation-specific and contradictory. Although senior managers have an influence on employee behavior and on organizational culture for example, they themselves are subordinate to other organizational members such as the director, the chief executive officer or the chair of the board. As Maile (1999) argues, in this relationship managers may (have to) behave as subordinates such as following the wishes of others, putting others/team first, and acting in a deferential manner. This relationship requires different behaviors than the manager-employee relationship. Similarly, autonomy is never total. A senior manager may be dependent on his or her subordinates for important information and for meeting organizational targets. Thus, style may be situation specific and not easily quantified and/or generalized.

Second, research that compares management styles, motivations and behaviors across race and ethnicity often erroneously assumes that social relations such as race and ethnicity can be treated as demographic variables. This is problematic in several ways. In contrast to the number of members of a white ethnic majority in an organization, the number of subjects per ethnic minority tends to be small. Quantitative management and organizational research designs therefore often require that the different minority ethnicities be combined, resulting in categories such as 'whites', 'blacks' and 'others' (Powell & Butterfield, 1997). Such procedures however, mask the heterogeneity of these various ethnic groups, which means that the results of such studies may be misleading. For example, the percentage of minority men in Dutch management seems to be increasing, but this percent masks the heterogeneity and complexity of a group's history within the country itself.⁵ Colonial immigrants with roots in Indonesia have lived in the Netherlands since the 1950s, while colonial immigrants from Surinam and Dutch Antilles came in the 1970s and later (Vermeulen & Penninx, 2000). The second-generation of these colonial immigrants tends to be found in middle management positions, especially in semi-governmental organizations such as the police and civil service. Labor immigrants came to the Netherlands from Morocco and Turkey (and south European countries) in the 1960s and 1970s to do the menial work for which there were not enough laborers of white Dutch descent. Immigrants from Morocco and Turkey therefore, tend to be found on low job positions (Vermeulen & Penninx, 2000). We assume that the same is true for Arabic, Asian and African immigrants who came primarily as refugees and asylum-seekers from the 1980s until now. Obviously then, the increase in ethnic minority managers refers primarily to (mostly) men from regions that have a colonial

connection with the Netherlands. Treating ethnicity as a homogeneous variable therefore often ignores the historic context of each ethnic minority group.

Third, demographic research about race and ethnicity may also erroneously assume stability in the creation of ethnic and racial groups. Each ethnic/racial group however, creates a country-specific version of ethnicity. Arabic-American immigrants have for example, created their versions of the North American capitalistic culture and its ways of classifying people (Naber, 2000). Xin & Tsui (1996) compared influence tactics used by Asian-Americans and European- American managers, and found that Asian-American managers tended to use tactics that more accurately reflected those used by European-American managers than by Asian managers in their country of origin. Xin & Tsui concluded that the results from cross-cultural studies cannot automatically be generalized to corresponding cross- ethnic minority comparisons. This conclusion was confirmed by Landau (1995) who found that managers in a multinational Fortune 500 company rated the promotion potential of Hispanics from Spain higher than that of Hispanic-Americans. In addition each ethnic minority not only has its own history in a country but each context has its own fluid definitions of a racial/ethnic minority. In Africa, for example, the relatively dark colored Arabs, Berbers and Tuaregs have been defined as white (Lyde, 1914 cited in Bonnett, 1998, p.1040) while in the United States, Irish Catholic immigrants with their white skin color and red hair were only seen as 'white' after they had created their own economic power and opportunities (Ignatiev, 1995 cited in Bonnett, 1998, p.1043).

Fourth, contradictions exist within these classifications. Those who feel marginalized may classify themselves as black although official governmental definitions may define them as white. For example, since 'black' has been associated with marginalization and given political meanings signifying resistance to white racism, marginalized ethnic groups in Great Britain identify themselves as 'black' (Back, 1996). South Asian British Muslims from India, Pakistan and Bangladesh, who are phenotypically lighter than African Caribbean British people, use black identity politics to denote an anti-white stance. These examples show that the categories for classification of social groups across race/ethnicity are themselves fluid social constructs.

Race and ethnicity are therefore not only difficult to capture as separate variables but are fluid and also conflated with each other.² Classification of ethnic /racial groups can therefore vary by context, that is, by groups, organizations, countries and continents. Traditional classification systems on which these categorizations are based are not ideologically neutral but are socially reproduced and situated in specific ideologies (Bordo, Bradley & Fenton 1999). Obviously then, use of race and/or ethnicity as demographic variables to study race and ethnicity (and management) is problematic because it ignores historic, social relational and/or organizational contexts and how ethnicity and race are embedded in discursive practices (see also Knoppers & Anthonissen, 2005; Nkomo, 1992).

Since meanings given to race and ethnicity are based on ideologies, *relational research* into the nature and use of discourses (symbolic level) about managerial work and ethnicities may yield new insights. The focus is then not on who says or does what but on what is said and done and how ideas about race and ethnicity are a subtext for these actions (cf. Whitehead & Barrett, 2001). Discourses suggest, often in a very persuasive way, what can (not) be said in a specific setting. They contain powerful messages about what is perceived as (not) true and as common sense and how individuals should behave in a specific situation. Discourses about ethnicity and race (often intersecting with other social relations, such as gender) are an inherent part of discourses about management and shape managerial practices. Meyerson & Kolb (2000) argue that managerial practices are created for white heterosexual middle-upper-class men so that managerial discourses reflect their experiences, values, and life situations. Senior management functions therefore require minority men and women to develop specific skills and management styles that are congruent with certain forms of white discursive practices. Such practices however are not only informed by culture but also by meanings given to the body, physicality and/or sport (Knoppers & Anthonissen 2005; Mc Dowell 2001; Trethewey, 2000).

3. RACIAL/ETHNICAL BODIES IN THE CONTEXT OF SPORT

Ever since white Europeans began to theorize about ‘blacks’ in the eighteenth century, their theories have ascribed a certain type of physicality to black skin color (Saint-Aubin, 2002). White Europeans tried to describe how ‘blacks’ were different from and inferior to them and located those differences in physicality/body. They used what they saw as racial differences in the appearance and behaviors between themselves and ‘blacks’ to construct a theory of race. Consequently, meanings given to the body played and continue to play a large role in the construction of race and ethnicity. What the sporting body is assumed to be able to do and does are often constructed as ‘natural.’ It is not surprising then, that essentialist perceptions and stereotypes about inherent physical and mental skills and abilities across race/ethnicity, especially with respect to black athletes, predominate and are often reproduced in the (sport) media. They tend to be grounded in a biological view of race, often mixed with ethnicity and other social relations (for a detailed discussion of racial representation in the sport media see Davis & Harris, 1998; Van Sterkenburg & Knoppers, 2004). The existing skewness in representation of black athletes in sport has played a significant role in the creation of dominant discourses about race and ethnicity.⁶ Such discourses about race acknowledge the achievements of black men (and women) but also often attribute that excellence to physical superiority in strength and explosive power, not to mental superiority (McCarthy & Jones, 1997; Van Sterkenburg & Knoppers, 2004). The stereotypic association between strength and

explosive power of black (male) athletes in professional sports has strengthened dominant white societal discourses about blacks (Ferber, 2007) and has several consequences.

First, this stereotypic association means that black men in North American and British baseball, football and soccer have often been assigned to what have been defined as peripheral and non-leadership positions although this is beginning to change (Buffington, 2005; Eitzen, 1999; Sage 2001).⁷ Since central positions tend to be the pool from which captains, coaches and managers are drawn, it is not surprising that regardless of sport, blacks and other (ethnic) minorities are relatively under-represented in leadership positions in sport, although they are over-represented as athletes (Cunningham & Sagas 2004). King (2000), studied the relationship between race and football/soccer, and concluded that the physicality of blackness is exploited in the playing of the sport but “made redundant in the white administrative structures” (p. 20).

Second, meanings given to black sporting physicality are also embedded in discourses on physical and verbal aggression. Violence during or after soccer competitions between a team defined as ethnic minority or black and a team seen as white or ethnic majority, is labeled as ethnic/racial aggression (Verweel & Anthonissen, 2006).⁸ Sport organizations have tried to control the occurrence of such incidents primarily by creating strict rules based on stereotypes with stringent punishment. White administrators and managers often interpret the assertiveness of black men as aggressive and difficult behavior because blacks are expected to act in a submissive manner (King, 2000; Messner, 1992: 2002). Sport governance and therefore, ‘positions of power in sport are dominated by white people’ (Long, Robinson & Spracklen 2005: p.43). It is not surprising then, that some whites fear the verbal aggression of blacks (and other ethnic minorities). The extent to which ethnic and racial majorities embed this fear of the physicality of these non white men in their discursive managerial practices is not known and needs to receive scholarly attention.

Third, although blacks may be marginalized in management positions, they show resistance to this marginalization in various ways. Majors (1990), who conducted research about the meanings given to sport by African Americans, found that their relatively large number in certain sports enables them to create room for showing more emotional expression than white athletes do. He calls this expressiveness ‘cool pose’. Black athletes may see this expressiveness and other behaviors associated with it, as part of their resistance to white racist culture in sport. They may create their own sport culture in which individuality, language, and expressive behaviors are accepted (Majors, 1990; Messner, 1992; Goldsmith, 2003). As Majors (1990) points out: ‘Black males...have taken a previously white dominated activity (basketball) and constructed it as an arena in which they find accessible recreation, entertainment, stimulation and opportunities for self expression and creativity’ (p.12). Although Majors wrote primarily about African-Americans, other athletes classified as non-white or ethnic

minorities, such as Asian- British or Arab-Dutch, people also find their own context to practice resistance (Johal, 2000; Knoppers & Anthonissen, 2001). Black and ethnic minority athletes, coaches and managers may use such acts of resistance to strengthen their racial and ethnic identities. The danger of the outward manifestations of such practices of resistance is, however, that others may interpret them differently than those engaging in them. As such, these acts of resistance may be given meanings that reinforce essentialized stereotypes/discourses about blacks and other minorities that create non-white athletes often as a homogeneous group. Resistance is therefore complex and may be given various meanings and/or become part of dominant (managerial) discourses instead of changing those discourses.

4. USING SPORT(ING BODIES) IN MANAGERIAL DISCURSIVE PRACTICES

Since white managers ally themselves with sporting discourses it is not surprising then that various aspects of sport such as sport talk, sport participation and attendance at sport events can be part of their discourses and/or networks (Rutherford 2001; McDowell, 2001). Their networks are places where they construct and negotiate their status with other white(s). White managers however, do not see these networks as white. They tend to see themselves as colorblind and as non-raced individuals while they see minority managers as being part of a racial and ethnic group (King, 2000). Sometimes white managers assume that all ethnic minorities are beneficiaries of affirmative action and that non-white applicants for managerial positions may not have the requisite skills for such positions; in addition, some white managers fear that appointing minority managers may elicit negative reactions from employees and/ or managerial colleagues (Knoppers & Anthonissen, 2001).

Little is known about the extent to which 'white' managers, project these discourses onto minority managers and how minority managers react to the use of these racialized/ethnicized sport discourses by white managers. Dominant white organizational culture may for example, require minority managers to downplay their embodied identities, with respect to their hairstyles and ways of speaking, walking and interacting. To what extent does the use of sport talk and interest in sport contribute to solidarity among black managers? What does the black superstar's body represent in terms of cultural identity for the white spectator/manager (Whitehead, 2002)? King (2000) has focused on the ways black athletes are excluded from managerial positions. He found that blacks who were involved in English football had to 'play the white man' in order to succeed and even then they had a difficult time attaining and keeping managerial positions. Miller (2001) has shown that for most African-American men success in sport does not lead to career success outside of sport.

Minority managers may not all have the same experiences, however. Some organizations may allow a greater diversity of embodied identities than others. In

addition, geographical context of an organization may also play a role in meanings given to embodied identities. Charles & Davies (2000), for example, have shown how the geographical location of an organization in part accounts for cultural stereotypes that inform the gendering of senior management. We assume this is also true for race and ethnicity. An explicit focus on embodied whiteness in managerial discourses within different organizational contexts may yield understandings of ways in which white managerial privileges are resisted, sustained or changed.

5. NAMING WHITENESS IN MANAGEMENT AND SPORT

Although the social construction of 'whiteness' has been part of scholarly discussions on race relations for the last ten years, the ways white managers reproduce and resist racism have received relatively little attention (Grimes, 2002). As we indicated earlier, white managers (and white researchers of management) tend not see whiteness as part of social relations but instead tend to construct ethnicity/race as only affecting blacks and other minorities. This perception is rooted in colonial images in which 'black' (and ethnic minority in general) were seen as 'other' and 'white' were unmarked, invisible and therefore without color/ethnicity (Andersen, 2003; Johnson, Rush & Feargin, 2000). Consequently, whiteness is rarely problematized in managerial work in Western Europe and the United States. This practice ignores the social constructions of whiteness as part of ethnicity and race and its conflation with power/privileges in organizations and in sports (Doane & Bonilla Silva, 2003; Grimes, 2002; King, Leonard & Kusz, 2007).

Grimes (2002), argues that researchers need to explore the ways organizational and managerial whiteness are masked, re-centered, and interrogated by white managers. Managerial whiteness is masked when its existence and the accompanying privileges of whiteness are made invisible by means of a discourse of color blindness and the denial that inequality exists. Those who are seen as 'other' are expected to engage in dominant white discursive managerial practices that can include discourses about sport/physicality. This color blindness seems to be an underlying assumption of much of the type of categorical managerial research we cited earlier. Existing differences tend to be attributed to personal differences while minority group issues are often ignored (Moodley, 1999; King, 2000). Obstacles that ethnic minority managers may encounter are individualized so that whiteness is the invisible standard. The invisibility of whiteness in discursive practices may be strengthened by the use of sport discourses in entrepreneurial discourses. Entrepreneurial practices require senior managers to be hard nosed, to be competitive, to focus on reaching targets, to be efficient and to work long hours. Organizations may sponsor sport events or teams, its members may watch and discuss sport together and embed sport discourses within organizational talk, goals and policies, and, simultaneously be blind to racial/ethnic inequalities inherent in those sport discourses.

Meritocracy and ideology of equal opportunity are dominant themes in sport and entrepreneurial discourses (Hall et al, 1990; McKay, 1997; Knoppers & Anthonissen, 2001). Sport is constructed as a place where objectivity and color blindness prevail because performance results are measured in a seemingly objective nonracialized manner. It is not surprising then that sport metaphors are used in entrepreneurial managerial discourses. Yet little has been done to explore how whiteness plays a role in this sport discourse of meritocracy. As Hartmann (2003) explains ‘there are color-blind, individualist ideals at the root of much liberal democratic theory and practice that make it difficult, especially for the privileged, to even recognize racial categories and inequalities, much less provide mechanisms to address them.’ (p. 474).

Other managerial practices that try to re-center whiteness acknowledge that differences exist. Those differences may be located in (dismantling) stereotypes about ‘Others’ (Grimes, 2002) and make it seem that all differences are accepted and treated equally. Sport discourses may play a contradictory role in this re-centering. Blackness may be valued in sport but not elsewhere. As we indicated earlier in this paper, the success of African- American and African -Caribbean athletes in certain sports may reinforce stereotypes that are based on essentialist notions of embodied blackness. Discursive practices in sport can be used to “excuse or legitimate existing racial inequalities by making it seem as if there were no fundamental barriers standing in the way of African American mobility and assimilation. If in sport, the implicit thinking goes, why not in other social spheres?” (Hartmann, 2003). Programs that manage diversity in sport and nonsport organizations may acknowledge differences but tend to neglect issues of power (Hall, 2004; Malcapine & Marsh, 2005; Spracklen, Hylton & Long, 2006). Grimes (2002) shows, how the complaints of white males about being ignored in diversity programs for example, neglect the overall ‘over-privileging’ of white managers in organizations. ‘There seems to be an understanding that people of color (and white women) in organizations should have more but a resistance to the notion that white men get less’ (Grimes, 2002, p. 393). Sometimes, re-centering whiteness seem to suggest that all groups fight equally against a nameless and powerful oppressor while in actuality, it is white managers who hold most of the power. Whiteness continues to be privileged and in the center but tends not to be named (Long & Hylton, 2002). Change therefore tends to be superficial.

In contrast to managerial practices and research methods that mask and re-center whiteness, the interrogation of whiteness in management requires whiteness to be named, unmasked and de-centered so that unassimilated diversity (difference) becomes the norm (Forbes, 2002; Grimes, 2002; Johnson, Rush & Feagin, 2000). The interrogation of whiteness in managerial work requires recognition of race and ethnicity as a power structure that materially benefits whites in both sport and nonsport settings. The interrogation of whiteness and the creation of unassimilated diversity are difficult to investigate and implement. The tendency of individuals and groups to assign labels to themselves and/or actively redefine those labels that have

been assigned to them by others requires a critical orientation of researchers, managers, and policy makers toward the creation of meanings. Grimes (2002), points out that many white managers see themselves as unprejudiced and are unaware of their own unconscious feelings and beliefs. Yet [male] embodied whiteness continues to be the most important criteria in the selection of managers.

Earlier in this paper, we described some of the structural barriers that minority managers often face in management. Interrogating whiteness means that white managers and researchers become transformative and explore the barriers that prevent them from seeing whiteness as a discursive practice and the forms it may take (Johnson, Rush & Feagin, 2000). Discussions about the influences of sport discourses must be part of this self-reflection and research reflexivity. This reflection includes an exploration of intersections between racialized discourses about the body, sport and management. White managers and researchers must however, avoid taking on the identities of blacks as often occurs when whites become aware of racism (Johnson & Roediger, 2000; King, 2000). King (2000) calls this 'black manning.' Yet, at the same time, managers and researchers should not see 'whiteness' as a static classification but as a discursive practice that intersects with other social relations such as gender, age and sexuality.

6. FURTHER RESEARCH DIRECTIONS

We have argued that categorical and distributive ways of managing ethnic/racial diversity may do little to change managerial practices since the assumptions that undergird these perspectives are not ideologically neutral. These assumptions are part of white managerial discourses and are dominant in specific organizations and situations. Research questions about ethnicity and race in management can include various directions. First, the interdependence of sport and managerial discourses requires researchers to pay more attention to ways meanings given to racial and ethnic physicality-/embodiment are explicitly and implicitly embedded in discursive managerial work. Since sport is an important site for the creation and reproduction of discourses about physicality and since race and ethnicity are embodied discursive practices, sport discourses should be taken into account in the interrogation of how whiteness structures management. Second, race and ethnicity research requires an examination of how whiteness manifests itself in every day managerial work and how it structures managerial and sport discourses in different organizational contexts or locations. Third, this research should include an exploration of the extent to which white managers project these discourses onto the ways in which black and other minority managers engage in managerial work and how these minority managers react to the use of these racialised sport discourses by their white managerial colleagues. Fourth, such research requires a discussion of the ways in which black and other minority managers use sport in their managerial discourses and how sport may

structures their networks. Finally, research that focus on the ways in which meanings on sport and physicality can interrogates managerial whiteness, requires white researchers to be self reflective about their own assumptions (Grimes, 2002) and be open to exploring contradictory discursive practices.

NOTES

1. Black and other ethnic minorities face barriers and discrimination in all areas of society including management. Although racism or race logic is based on a false binary, it reflects an ideology that is used to justify the sub-ordination and marginalization of all those defined as 'black' or and to privilege those defined as 'white' (Ignatiev, 2003).
2. Whitehead & Barrett (2001) use this definition to define 'masculinities' in the context of gender-issues. We assume that a similar definition can be used for ethnicity/race and other social relations.
3. Black/white relations should be seen as a ideological practice that is sustained by discursive practices that reproduce and create systemic inequalities (Duncan, 2003).
4. Other minority athletes, such as those with an Asian or Middle East background, are labeled in ethnocentric or racial ways, although stereotypes can vary (Walseth, 2006)
5. This perception of scarcity is also based on our experiences in teaching management courses for senior managers in non-profit organizations in the Netherlands. The overall relatively low participation rate of minority managers has changed little in the last ten years although white managers in these courses state that there has been an increase of minority managers at the middle management level. Demographic data about managers across ethnicity and race are difficult to come by in the Netherlands since most non-profit organizations do not register such demographics.
6. In the USA, black athletes tend to be relatively over-represented in several sports such as basketball, athletics, baseball and football. Eitzen (1999) notes that 12% of the American population is African-American while 80% of the players in professional basketball, 67% in football and 18% in baseball are African- American. Although Dutch sport organizations refuse to collect demographic data about the ethnic/racial background of their members, minority athletes in the Netherlands seem to be over represented in combat sports, athletics, aerobics, baseball and cricket (Elling, Knoppers & De Knop 2001).
7. No data are available for the Netherlands.
8. This is not to say that these are the only occasions that fighting occurs in football/soccer; it occurs among teams of similar ethnicity as well but then it is not labeled as ethnic or racial violence. In contrast, the violence that is part of hooliganism is rarely described as ethnic violence although it primarily involves white men.

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DISABILITY IN LESVOS AND CHIOS, GREECE: KEY FINDINGS FROM MULTI-METHODOLOGICAL SOCIAL RESEARCH

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ABSTRACT

The aim of this article is to present some key findings on crucial social dimensions of mobility disability in a peripheral area of insular Greece (Lesvos and Chios). The findings are derived from a telephone survey research on local population's stances towards people with disabilities and from in-depth qualitative research on social representations of people with disabilities, concerning mainly their social life, social relations, family and social reproduction, educational and labour market arrangements and participation and interaction with health and social policy institutions.

Keywords: Disability; Mobility Problems; Multi-methodological Social Research.

1. INTRODUCTION

This paper concerns basic findings derived from a multi-methodological social research on the social dimension of disability in the islands of Chios and Lesvos, Greece. This study was part of a broader research project (EQUAL Initiative) funded by the European Union. Lesvos and Chios islands are located in the northeast of Greece and are characterized by socio-economic peripherality and geographic remoteness. The permanent population of Lesvos is, according to the latest national survey (2001), about 108.000 people (the capital of Lesvos Mytilini accounts for about 38.000 people) whereas the permanent population of Chios is about 53.000 people (the capital of the island accounts for about 25.000 people) (NSSG, 2001). The particular social, economic and cultural characteristics of the two islands were historically formed under the strong influences from the multicultural and multinational urban centres of Asia Minor (Siphneou, 1994). This historical continuity was ruptured after the Greek-Turkish war of 1919-1922, which ended with Greek defeat. The following extensive exchange of Muslim and Christian populations between Greece and Turkey marked the end of Greek presence in Asia Minor. The impact of this historic change on Lesvos and Chios, which were encapsulated in the Greek national territory in 1912, was manifold; disruption of commercial, social and cultural bonds with Asia Minor,

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which contributed to the decline of financial investments and corresponding employment opportunities; lack of infrastructural development; the cultural degradation and the gradual formation of a mentality of 'isolationism' in the two prefectures (Htouris, 2000). Thus today the 4th Community Support Framework recognizes North-East Aegean islands as one of the Greek regions eligible for additional financial support, in order to converge with the rest of the country. Two important features, related to our research with people with disabilities in Lesvos and Chios, characterize this socio-economic environment:

- The first feature is related to the limited socio-economic and employment opportunities for people with disabilities compared to those available to other areas of Greece (mainly to the major urban centres of the country), associated with exacerbated infrastructural problems.
- The second feature is related to the strong sense of 'community' in Chios and Lesvos and to the central role of family relations and networks to the social reproduction of people with disabilities. This feature results to a series of positive and negative outcomes as regards social integration of people with disabilities in the area and is discussed later on in the paper.

2. RESEARCH DESIGN AND METHODS

The basic methodological approach of this study was that of the in-depth qualitative investigation of stances and interpretations of disabled people in Lesvos and Chios, as regards their social role, relations and position. Complementary to this basic approach, we conducted a telephone survey in the municipalities of Mytilene, Lesvos and Chios, in order to investigate the stances of general population towards people with disabilities. The telephone survey questionnaire included fourteen (14) basic questions and the mean time of completion was between five and ten minutes. Thus, choosing the technique of telephone interviewing led to a relatively large sample of completed interviews, allowing the capturing of basic trends as regards broad social stances towards disabled people in the two islands. In total four hundred and eighty two (482) complete telephone interviews were taken (254 in Mytilene, Lesvos and 228 in Chios). The sample frame used was that of the most recent voting catalogues of the two municipalities and the final sample was formed by stratified random sampling according to age and gender. The basic findings of this survey research are presented and discussed in the next section of the paper.

Our main methodological approach was based on a series of in-depth semi structured interviews with people with mobility disabilities in Lesvos and Chios. We put an emphasis on the people with mobility problems because this category comprises the vast majority of people with disabilities in Lesvos and Chios (NSSG, 2002). This was also reflected in the findings of the general population survey. The

vast majority of people in Lesvos and Chios develop or had developed occasional or more stable social relations with disabled people with mobility problems. In total twenty-two (22) in depth-interviews were taken in the two islands (12 in Lesvos and 10 in Chios). Eighteen of the research participants were men and four were women. The age of the vast majority of them ranged from 20 to 45 years; twelve research participants had mobility problems from birth and the rest acquired the problem at some time in their life-span (mainly caused by car accidents). The general purpose of this study was to understand the implications of being a person with mobility problems in the specific context of north Aegean islands. More specifically we ought to answer the following, interrelated research questions:

- What are the basic features and characteristics of social life of people with mobility problems in Lesvos and Chios and how they construct and interpret their social relations?
- What is the role of family and family relations to the social reproduction of people with mobility problems and to their overall life trajectories?
- How people with mobility problems are integrated (or not) into society through educational and labour market arrangements and participation?
- How people with mobility problems relate with health and social policy institutions at national and local level?

In order to address these questions we constructed a detailed *Interview Guide*. The guide was divided into four major thematic parts; the first part concerned with broad social life and social relations, the second part with family and family relations, the third part with education and labour market participation and the last one with medical care and social policy. The above themes and sub-themes were developed further into a series of open-ended questions, giving special emphasis to the wording and the sequence and to the avoidance of leading, biased or insulted questions (Denzin and Lincoln, 1994). Although the interview research framework proved to be quite detailed and analytic, it changed considerably through the research process due to the constant interaction between researchers and research participants and due to the open character of the whole process (Glaser and Strauss, 1967; Glaser, 1992; Flick et al, 2004). Thus the participants brought up several themes and issues during the interviews, which subsequently were extensively discussed with other interviewees. In all instances we made an effort to keep a balance between pre selected interview themes and interviewee suggestions and responses.

The whole research process was based on teamwork. Four researchers participated in the research process after reaching an agreement on basic common interviewing approaches. Research lasted for about five months (July - September 2002, February - March 2003) and the average duration of each interview was over two and a half hours. All interviews were recorded with the consent of the participants in combination with parallel note taking. Interviewees talked extensively about their

personal and collective life experiences and interpretations giving rich and detailed information about most or all of the research issues. Total anonymity was guaranteed and the purposes and scopes of research were explained to the prospective research participants in detail. Additionally, the possibility of ending the interview process at any time was made clear in all of the prospective participants (Hopf, 2004). Furthermore, access of research participants to the interim and final research reports for review, evaluation and response was guaranteed. For this purpose all research reports were made publicly accessed via the Internet, while hard copies were available to all research participants on request.

The selection of prospective interviewees was based on the snowballing technique and the initial contacts were made through various associations of people with disabilities in Lesvos and Chios ('Iliatida' and 'Kipseli' in Lesvos and 'Panhiakos' and 'Iones' in Chios) (Robson, 2002). We made an effort, through the selection process of prospective interviewees, to capture the whole spectrum of their basic characteristics such as age, gender, place of residence, educational level and working experience. Furthermore we included people who were born with mobility problems and people who acquired mobility problems at some time in their life course. This difference proved to be crucial for social life trajectories, social relations and social integration (please see next part). Almost all interviews were conducted at the associations' premises and at the houses of people with mobility problems. The research process ended when a certain degree of saturation was reached and when we felt that the research questions were satisfactorily addressed (Robson, 2002). The degree of saturation was mainly dependent on the repeatability of responses of the interviewees. It was also dependent on the formation of a set of qualitative data, through which the research questions were answered in a comprehensive way.

3. KEY FINDINGS AND DISCUSSION

3.1. Survey findings

Starting from the basic findings of the general population survey in the two islands, Table 1 shows the basic demographic characteristics of the final sample. These characteristics correspond to a great extent to the real characteristics of the population of the municipalities of Mytilene, Lesvos and Chios.

Almost 54% of all research participants stressed that they know or have known in the past a disabled person or persons. Nevertheless almost half of the sample has never developed any kind of social relation or contact with people with disabilities (see Table 2). The vast majority of people which stressed that they know or have known a disabled person (over 70%) determined that these persons have some kind of mobility

disability. The rest comprised of various categories of disability or perceived disability such as mental problems, psychological problems, vision and hearing problems etc.

TABLE 1: BASIC DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Gender			Age			Education		
	Frequency	%		Frequency	%		Frequency	%
Male	239	49.5	18-35	113	23.4	Primary	79	16.3
Female	243	50.4	36-50	116	24.0	Secondary	173	35.8
Total	482	100	51 and above	253	52.4	Post-secondary and higher	166	34.4
			Total	482	100	No response	64	13.2
						Total	482	100

Source: Survey results

TABLE 2: RESPONSE TO THE QUESTION ‘DO YOU PERSONALLY KNOW OR HAVE KNOWN AN INDIVIDUAL WITH DISABILITIES?’

	Frequency	%
Yes	260	53.9
No	218	45.2
No response	4	0.8
Total	482	100

Source: Survey results

The basic causes of social contact with people with disabilities are three (see Table 3). The first one is related to the association (accidental, occasional or more frequent and stable) with people with disabilities because of sharing common social grounds, environment or relationships (for example common friends). The second cause is related to the fact that the disabled person is a family member and the third is related to the fact that the disabled person is a working colleague.

The dominant types of social relations with disabled people were again three (see Table 4). The first important type is the familial one (13%) whereas 18% of the respondents said that their relations with people with disabilities are only accidental, superficial or occasional. Only 17% of the sample maintains close or simply friendly relations with a person with a disability.

TABLE 3: CAUSES OF SOCIAL CONTACT WITH PEOPLE WITH DISABILITIES

	Frequency	%
Social environment	163	33.8
Family member	67	13.6
Work	45	9.3
Other	34	7.0
Special associations	8	1.6
No response	165	34.2
Total	482	100

Source: Survey results

TABLE 4: TYPE OF SOCIAL RELATIONS WITH PEOPLE WITH DISABILITIES

	Frequency	%
Occasional or accidental social relations	87	18.0
Friendly and close social relations	83	17.2
Social relations because of family membership	63	13.0
Other	44	9.1
No response	205	42.5
Total	482	100

Source: Survey results

We think that the answer to the hypothetical question ‘Would you develop close social relations with people with disabilities?’ has great implications on the understanding of the general social stances towards disabled people (see Table 5). Almost 22% of the sample would not develop any kind of social relations with people with disabilities or would develop some kind of relations under special circumstances and under conditions. This quite high percentage for a telephone survey, where respondents could take a more favorable position without any personal cost, reveals the relatively widespread stereotypical and biased social stance of a large proportion of the population towards the disabled (Lambridis, 2004). This finding is reinforced from the kinds of answers in the hypothetical question ‘Would you cooperate with people with disabilities at work?’ (Table 6). Here about 31% of the sample would not cooperate with disabled persons at work or would cooperate under special circumstances or conditionally. This very high percentage of dismissal of the possibility of cooperation with the disabled at work is of great importance as it concerns a field (work and the labour market) which plays an extremely important role to the social integration and inclusion (or exclusion) of people with disabilities.

TABLE 5: RESPONSE TO THE QUESTION ‘WOULD YOU DEVELOP CLOSE SOCIAL RELATIONS WITH PEOPLE WITH DISABILITIES?’

	Frequency	%
Yes or probably yes	363	75.3
No or probably no	85	17.6
Under conditions	21	4.3
Other	6	1.2
No response	7	1.4
Total	482	100

Source: Survey results

TABLE 6: RESPONSE TO THE QUESTION ‘WOULD YOU COOPERATE WITH PEOPLE WITH DISABILITIES AT WORK?’

	Frequency	%
Yes or probably yes	313	64.9
No or probably no	112	23.2
Under conditions	37	7.6
Other	6	1.2
No response	14	2.9
Total	482	100

Source: Survey results

Finally, the survey comprised a question on evaluating Greek public policy for people with disabilities (see Table 7). Although about 62% of respondents found public policy on the matter not satisfactory, 26% were satisfied or relatively satisfied from the public provisions and benefits for disabled people in Greece. This finding, is once again, characteristic of broader social stances towards disabled people, as it is generally recognized that public disability policy in Greece is still underdeveloped, failing to combat the multidimensional problems of the disabled population in an effective way and to create a social, economic and cultural environment of inclusion and integration (Darais, 2001; NSSG, 2002; Psilla et al., 2003)

TABLE 7: EVALUATION OF PUBLIC POLICY FOR PEOPLE WITH DISABILITIES IN GREECE

	Frequency	%
Not satisfactory or relatively not satisfactory	297	61.6
Satisfactory or relatively satisfactory	117	24.2
Very satisfactory	8	1.6
No response	60	12.4
Total	482	100

Source: Survey results

In general, the findings of the survey of the population of municipalities of Mytilene, Lesvos and Chios, Greece revealed a certain trend of social prejudice and bias towards the disabled people. This trend is verified further as it corresponds with the experiences and interpretations of disabled people themselves in their narratives. Those interpretations concern mainly four fields of social life; social relations and participation, family relations, education and employment and medical care and health policies.

3.2. Qualitative research findings

3.2.1. Social relations and participation

The fear of social rejection, which is a relatively extended social phenomenon in the study areas as the findings of the telephone survey in Lesvos and Chios indicate, the frequent weakness of independent mobility and the problem of access to public and private places, due to the absence (in most cases) of suitable infrastructure, pose obstacles to the everyday life of persons with mobility problems. As it is obvious by the narrative of an interviewee, the fear of social rejection is very strong:

“When they brought me the wheelchair, it was a sensational moment in my life. For the first time, I was going out of my house, out of my bed. And when I went to the square, as it was summer, people gathered on the balconies, outside the houses, in the square [...], they thought they were seeing a monkey...A gypsy who came with his monkey to give a performance...So I summoned up my strength, my courage and I faced everyone with self-control and stoicism. I had to give the performance...Is he crazy, is he stupid, is he this or that [...], everyone [...], as I told you, I was a stranger...It was the first time that I went outdoors, to the community. And especially to that [community] of a village, because people of the village have strong curiosity.”
(age 72, male, disabled because of illness, date of interview: 09/02/2003)

Talking about social rejection, another interviewee presents characteristically her experiences:

“...I can’t keep my temper, you know...One day, I’m getting off the car and I am ready to get on the wheelchair, and behind me there was a taxi driver, and he was just the first car ...So he could see what was happening, he wasn’t the last one where there was no visibility, so he looks at me and starts honking. Then, I was pissed off and I said, “Why are you honking, are you blind?”

“Another day, I was getting off the car and there was a Mercedes. There was space. If he got slightly on the pavement, he could pass through. The other cars did that, but he was afraid for the tires, I don’t know what he was afraid of, and he didn’t get on the pavement. So I go to him, pissed off, and I say, “Eh buddy, what do you think you are doing? Do you think your Mercedes is more expensive than this thing

I'm sitting on?" [the wheelchair] And he apologized for honking. You see? ..." (age 27, male, disabled because of accident, date of interview: 14/02/2003).

There is a widespread feeling of social discrimination among the interviewees. This discrimination is perceived mainly as social prejudice related to their particular situation and place in society. It must be noted that the majority of interviewees connected the feeling of being discriminated against, with specific incidents and associated behaviors taking place outside their home, at recreational places and during their contacts with state or local institutions. For many research participants, these incidents marked significantly the way of viewing society and their place and role within it. Another crucial issue of perceived social discrimination is related to the serious access problems that interviewees face in their daily routines, which keep them excluded from basic activities of social life. Although the access problem of people with disabilities is general in Greece, it is worse in Lesbos and Chios as these islands are less favored areas and are characterized by major infrastructural deficiencies.

Wider uneasy social relations lead to high appreciation of social life within special associations of people with disabilities. For the vast majority of interviewees, associations form the most important field for their social interaction, socialisation and respective activities. The value ascribed by the research participants to these special associations is indicated below:

"I like it very much in the association because it is a place where I can get help when I want to be informed on something concerning people with disabilities, solve a problem of mine and have the possibility of learning things. It is a friendly environment where I have a good time, get to know people and so I don't stay isolated within the walls of my house."

"...In the past, I stayed most of the time at home, then things got better. Through the association I acquired all the knowledge on my work. In the beginning, I didn't want the job. At first, we are afraid to begin something. At first I made some mistakes, but gradually I improved..." (age 22, male, disabled since birth, date of interview: 06/08/2002).

"I come to the association; I talk with the people and deal with the various activities of the association as well as the different discussion groups. Furthermore, here I work out, I play basketball and take part in all activities. My life has changed a lot in the association; now I have a very good time and enjoy myself much more than in the past" (age 29, male, disabled since birth, date of interview: 24/07/2002).

"I didn't manage to make friends and keep contact with people who don't belong to the association. This is not easy and I know it from experience, because friendships I made with many able-bodied persons didn't last; the next day the most, everything was over. I say that, because I have made this mistake many times..." (age 22, male, disabled since birth, date of interview: 06/08/2002).

The degree of dependence on associational social life between people with acquired mobility problems and people with mobility problems from birth differs

considerably. The former develop wider social relations and are more autonomous even when their mobility problems are more serious than those of the latter. On the contrary, people with mobility problems from birth – even in cases that their problem does not inhibit their independent mobility – show greater hesitation and express greater insecurity regarding their social contacts and relations, especially with non disabled people. Those people firmly prefer the development of relationships with persons facing the same (or similar) disability or (even generally) with other disable people, whereas they are particularly hesitant in sharing emotions and experiences with others.

Friendly or intimate relationships with others are considered to be «difficult» or even «problematic», by the vast majority of research participants. In general, they believe that the contact with another disabled person is easier, whereas they consider extremely difficult the development of a stable social relationship or an intimate affair with non-disabled people. As an interviewee puts it:

“...Now if you have an affair [...]; it is widely believed that a handicapped man should have an affair with a handicapped woman, if a normal woman goes with me, she is not normal or she is ‘weird’ or crazy or something else, in other words, this is the ‘status’ in Greek society. The handicapped will marry [...], he has the right to get married or have affairs only with a disabled woman... You must be normal, honestly I don’t know how they define ‘normal’...” (*age 36, male, disabled because of accident, date of interview: 12/02/2003*).

“...The relations of disabled people are a bit more difficult. The relationships of able-bodied persons, able-bodied man with able-bodied woman, are different from a relationship of a guy on a wheelchair with a non able-bodied girl. It’s like puzzle pieces that must be compatible, in other words disabled man with disabled woman and so on. Let’s say, a man on a wheelchair must get married to a woman who has a problem. Basically, an able-bodied woman will not accept to live her life with a man on a wheelchair. I believe that a girl would consider the relationship with me as a hang-up, because I have a mobility problem. She would meet many difficulties in taking this decision. I would try it, but if she were an able-bodied woman, a hundred percent I would fail. Whereas if she was a non able-bodied woman she would fully understand me since she would also have a problem...” (*age 22, male, disabled since birth, date of interview: 24/07/2002*).

The participation in associations of disabled people is considered to be a largely positive characteristic of social life by the interviewees. Within the associations lasting friendships, relations and cooperation are developed. On the other hand for the vast majority of the research participants their social life is limited within the associations. While they have developed strong social bonds within these associations their ties with the ‘outside’ world are relatively weak and in many cases emotionally painful. Thus, the contradictions of associational social life lead to raising important questions on the process of broader social integration.

3.2.2. Family relations

The most striking finding as regards family relations is that family overprotection leads to dependence and social closure, even in cases where there is high potential for autonomous living and full social participation. A characteristic example of family over protected behaviour, which causes social isolation and exclusion, is given below:

“Many times, I fear to make contact with people, despite the fact that my problem is not so serious. I fear that I’ll feel embarrassed, you know! This feeling was in part provoked by my family, because sometimes they told me not to go out so as not to be seen and feel embarrassed. They said such things; it was difficult for them, too!” (*age 27, male, disabled because of accident, date of interview: 28/08/2002*).

From the whole research process, it became evident that although family support is crucial for people with mobility problems, its content needs major redirection towards the enhancing of their autonomy and social participation and away from the promotion of passiveness and social closure. Thus, family dependence emerged as an extremely crucial issue from the whole research process. This dependence is related to the seriousness of the mobility problem but what is more important is the associated over-protection behavior of the vast majority of their families. Family over-protection reinforces the dependence feeling, as it limits the prospects for greater autonomy and personal development of people with mobility problems.

3.2.3. Education and employment

People with mobility problems adjust their reactions to their educational and labour problems according to the type and degree of their inadequacies, as well as the time and the circumstances under which they were manifested. In cases where disability existed from birth and the people with disabilities were never self-defined as «healthy», a predisposition of low expectations regarding education and employment is obvious, both by him/herself and his/her family. The majority of people with disabilities from birth have only completed the compulsory public elementary education, while they enrich their (general and professional) knowledge and training through their participation in associations, professional workshops and professional training centres. As one of these interviewees reported:

“Thanks to the association I started fulfilling my dream which was the basic education. It also helped me deal with computers. Financial problems kept me from carrying on this occupation at home. I occupy myself as much as I can and I have some equipment but I didn’t have the chance to carry on further.” (*age 29, male, disabled since birth, date of interview: 06/08/2002*).

Under these circumstances, the role of the «educational» and «supportive» personnel of the associations for people with disabilities is very crucial: if they are patient and persistent (and they are in most cases) they can boost certain changes of

the mentality of people with mobility problems. Although initially, people with disabilities are usually self defined as incompetent and inadequate, they can regain a great part of their self-confidence, through their participation in the educational and working procedures organised by the above mentioned agents:

“I just finished elementary and middle school because I believed I didn’t have the strength to go on with high school. But here at the association, I have learnt many things about computers and there was a girl who was a volunteer and thanks to her I learnt some things about the Internet, Word and PowerPoint and I liked it very much” (*age 22, male, disabled since birth, date of interview: 24/07/2002*).

“I work at the association [as supportive personnel] and I’m very happy with my job. I believe that what matters, is not just the availability of employment posts, but to love your job. The more love you show, the more you will accomplish and succeed in anything you want, even if you are a person with disabilities ...I like my job so much and I am very satisfied with my life regarding my profession. Of course, I don’t know what I’ll do after the completion of the programme, but for now it doesn’t bother me. I enjoy the co-operation with the other people very much...” (*age 22, male, disabled since birth, date of interview: 24/07/2002*).

According to the aforementioned statements, we can assume that people with mobility problems suffer more from the lack of awareness and guidance for improving their skills, rather than from their disabilities themselves. This conclusion is enhanced by the (well-founded) tendency for systematic self devaluation of their abilities, especially in relation and coherence to various educational procedures. The negative self image concerning their educational abilities and skills, and consequently their social inclusion and acceptance, it seems to be a major problem for the people with mobility problems in their effort for social inclusion:

“I finished high school. Initially they stared at me in a strange way but later on they got used to me. At high school things were harder. I remember a fellow student who threw me the ball after the accident and told me: ‘Now, you must forget all these!’ I didn’t say anything to him because I had realised that all these, indeed, was not for me any more. I couldn’t imagine playing basketball then, although I had seen it in America [USA], I always thought of Greece, about the Greek standards...At school I couldn’t sit behind the school desk properly and one of my teachers said to me: ‘Masters desk doesn’t lower!’, while another teacher lowered the masters desk in order for me to write an essay...” (*age 36, male, disabled because of accident, date of interview: 13/02/2003*).

It is indicative that people who suffered mobility problems at a relatively late stage in their life course adopt a more «open» and «courageous» attitude about the issues of education and professional rehabilitation:

“I attended up to middle school and I was awarded the school certificate although I had hardships with my health every now and then, and I had to be absent; after middle school I went to a school...of three years of duration and I received a certificate. There

were seminars about learning different crafts and I chose; and at this school we also were paid. Then I attended some computer seminars that lasted 6 months. The association for people with disabilities informed me about these seminars and I enrolled and attended them. We learnt many things there about computers such as Windows, Corel Draw and Excel... Most of all I liked Windows, it was a very good experience for me, I enjoyed it, because if you ask for a job you must have some skills. I followed some English lessons too, but then I quitted so I didn't get any certificates ...” (age 25, female, disabled since birth, date of interview: 06/02/2003).

“After finishing school I worked there at the service of economics for six months doing my practice. It was very good there because my colleagues considered me as equal. I would like to find a job relative to what I have studied, because now I'm doing something different. The job I have now at the office of ...did me good on social issues, because people saw that I can make some things and they are no longer hesitant towards me. In the past, they thought that because of my disability I couldn't do things, since they didn't know ...” (age 36, male, disabled because of accident, date of interview: 12/05/2003).

After the completion of their studies, people with mobility problems still have to cope with social stereotypes, since, most employers, even the unprejudiced, prefer to employ able-bodied, «healthy» persons. This attitude very often drives people with mobility problems to social and labour market exclusion:

“In fact, I have not tried to find working positions outside the association to see to what degree people consider people with disabilities able to cover the needs of a job. Perhaps these problems that I imagine don't exist at all, however I don't think so, because not all bosses are 'saints', and in some cases not so tolerant. I believe that the relations in the working environment are rather defined mostly by the employer, because even if your colleagues are OK with you, if your boss doesn't like you or doesn't consider you important, then things become bad. If I had an employer who wouldn't treat me well I would try to show him that I am willing to succeed ...OK, I can't say that I am perfect, since sometimes due to problems of transport, I may be late for example, but I would try to show my boss that although I'm a little bit late, I'm quick-witted...” (age 22, male, disabled since birth, date of interview: 24/07/2002).

However, despite the difficulties faced by people with mobility problems, there are recorded experiences of some of them who managed to be admitted to the labour market. An experience of that kind is described as following:

“In the beginning, people showed great hesitation. They thought I couldn't do various things...you know, people thought of me...can he use a computer? When they asked me to write, you know at first all of them showed hesitation...could he make photocopies? One day, an elder woman, around 70, said 'son could you write for me the address to send the letter to my child'. 'I'll write it', I said and so I wrote the address and there was a [lady] behind me...[who said] 'Oh! He can write!' in other words she confirmed something which [is a common ground: mobility handicap

subconsciously is connected by the wide public to a general disability of working]...” (age 36, male, disabled because of accident, date of interview: 12/05/2003).

An additional series of important problems of people with mobility difficulties working «outside protected structures» concerns their financial earnings, their working rights, as well as their relationship with employers. As one of them stated:

“...Legislation must give motives to employers and support the socialisation of people with disabilities and include them in the labour market. Employment is a fundamental condition for socialisation and it is both a financial and psychological support ...Usually, the employer, receives by OAED some money [he/she] pays I.K.A. [Social Insurance Foundation] and gives the rest to the employee, you see? And sometimes he doesn't give him/her the entire sum that rests so in a way we can't say that financial support is guaranteed. He doesn't pay overtimes, neither Sunday working, he keeps him/her working at irregular hours...there are some things that basically cannot be dealt with so easily...” (age 46, female, disabled because of accident, date of interview: 10/02/2003).

Interview data reveal that there are limited opportunities for social development, which are mainly observable in the fields of education, training and active labour market participation. Apart from the developmental and structural problems that characterize the local economies of Lesbos and Chios, what is more important is the low self esteem of people with mobility problems and the associated perceived 'inability' to participate fully to educational and labour market procedures away from the educational, training and working activities available within associations.

3.2.4. Medical care and health policies

People with mobility difficulties were (in general) very critical about the Greek National Health System, as well as the health policies addressed to them. The majority expressed great dissatisfaction about the quality and effectiveness of Public Health in the sector of rehabilitation, while in many cases, they have also pointed out crucial, according to their opinion, mistakes of the medical and nursing personnel, which had unpleasant physical and psychological consequences for people with disabilities :

“...In 1997, I was admitted to a public hospital in Athens and I had a bed which should be a special one in order to protect us, since if you stay still you get bedsores. That happened to me, which is extremely painful! It is the worst thing I have ever experienced in my life and I still suffer, because that got me upside down, I couldn't practice anything I had learnt! The availability of special beds, special mattresses are essential...There should be a suitably operating Public Rehabilitation Centre, not a 'Dahaou'... Buildings should be different and there should be available modern medical equipment, not only for us but for others, too ...” (age 36, male, disabled because of accident, date of interview: 13/02/2003).

Summoned up, their critiques focused on issues concerning mainly public hospitals. People with mobility problems believe that the Greek State should deal with the issue of rehabilitation with greater responsibility and Public Health Services must be staffed with specialised medical and nursing personnel who, apart from the medical knowledge, should show greater sensibility about the way of treating people with disabilities:

“In other words, there should be specialised personnel, medical personnel knowing well their work and knowing how to treat patients who suffer from these problems and are in this position ...” (*age 36, male, disabled because of accident, date of interview: 13/02/2003*).

4. CONCLUDING REMARKS

People with mobility problems in Lesvos and Chios, Greece face a series of intense difficulties related with different aspects of their social life and a series of challenges. Due to family dependence, over-protection and a series of negative social experiences, people with mobility problems have, in a great extent, ‘internalized’ the ‘social stigma’ (Lemay and Ashmore, 2004) of being a disabled person. These experiences are mainly related to social rejection and prejudice against people with disabilities. The findings of both the survey and the qualitative part of research are in agreement on this extremely important matter. Thus, the relatively high percentages of social rejection of people with disabilities found in the telephone survey research coincide with the discourses of those people, who talked extensively about different aspects of the negative side of their broad social relations. People with disabilities in Lesvos and Chios have gradually adopted a highly negative self-image, which is indicated in their discourses and interpretations of personal ‘inability’, ‘inefficiency’, ‘incapability’ and ‘powerlessness’. Despite that, this image is in direct contrast with their actual capabilities and personal qualities (as showed by their activities within their associations), it leads to curbing their great autonomy potentials and results to minimal broader social integration. These research findings contribute to the limited Greek literature on the matter, mainly by changing the view of the role of families of disabled people and by showing the ambiguity of associational participation. Empirical research on disability in Greece is still limited despite the great social problems that those people face, which are mainly related to social discrimination and closure, exclusion from the labour market, inefficient education and training and access problems due to unsatisfactory infrastructural arrangements (Ksiromeriti-Tsaklaganou, 1984; Stasinou, 1991; Psilla et al, 2003; Dourakopoulos, 2004)

The constant negotiation between the autonomy potential and the negative self image among people with mobility problems, and among disabled people in general, raises broader public policy questions, such as the need of redirection of public intervention towards the creation of permanent structures of family training, personal

empowerment and social sensitizing. Specific policy recommendations, derived from the whole experience and findings of this research, are the creation of specialized and permanent structures of family counseling, the development of programs for the empowerment of people with disabilities, the generous increase of public spending for the disabled persons, the significant improvement of infrastructure, especially in peripheral areas and the creation of stable structures of additional training and education of people with disabilities without separating people with disabilities from mainstream educational institutions.

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WORK/FAMILY BALANCE AND FAMILY-FRIENDLY POLICIES - THE ROLE OF TRADE UNIONS: A LITERATURE REVIEW

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ABSTRACT

The issue of work/life balance has become increasingly prominent on the policy agenda. This paper uses a literature review to explore the effects of family-friendly policies on work/family balance. It also examines the role that trade unions have been playing in the provision of family-friendly policies. The paper concludes that practices such as parental leave, childcare, flexible working hours and part-time working generally promote work/family balance. Additionally it is shown that trade unions appear to help with work/family issues by increasing the availability of family-friendly policies, especially in large companies and public sector organizations.

Keywords: Family-Friendly Policies; Work/Family Balance; Trade Unions; Paternal Leave; Childcare; Part-Time Work; Flexible Working Hours.

1. INTRODUCTION

Over the past thirty years, the employment rate for mothers with young children has increased in almost all countries (OECD, 2001). At the same time many comparative studies have shown that women appear to increase their attachment to the labor force when given the opportunity to take paid leave (Blau and Ehrenberg, 1997; Waldfogel et al., 1999). Interest in the growth of flexible working practices has also been increasing all over the world.

In some cases employers have introduced flexibility in order to survive in increasingly competitive environments (Casey et al, 1997). The positive effects on the labor market tend to outweigh the costs of conducting such benefit policies thus legitimizing the family- friendly policies (Ronsen and Sundstrom, 1996; Joshi et al., 1996).

Originally these arrangements were aimed at helping the newer workforce of women with children, but gradually the needs of male employees with a wider range of responsibilities have been considered.

Action to enable men and women to reconcile the demands of work with the demands of their home life has also been noted as a relevant and important issue by the European Union. Their most recent employment directives have been concerned

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with the work- family issue because it offers scope to foster equal opportunities as well as act as a generator of new employment through increased demand for childcare and services (Lewis and Lewis, 1996). It is undoubtedly the case that societies face a challenge if they are to balance paid work and caring needs (Daly, 1996).

Family- friendly working has essentially been a corporate led development (in the UK, USA and Australia) motivated by national concern about the shrinking pool of labor caused by the declining fertility rate (Spearrit and Edgar, 1994), as well as in response to the issues women employees are facing issues in terms of family-formation (Forth et al., 1997). In addition, demographic changes and high employment levels raise the costs to employers of excluding a section of the workforce (Cassel, 1996). Thus, there has been an expansion of a number of family-friendly policy initiatives over the past decade (Datta Gupta et al., 2006). However, as Liff, (1989) points out, once a certain approach to a problem becomes established, the success of policies is evaluated in terms of the scale and integrity of their adoption, rather than in terms of their ability to achieve a particular outcome. In addition, company-level equal opportunities policies may conflict with other strategic management goals: for example, individual contracts and pay determination make equal opportunities policies difficult to enforce (Bruegel and Perrons, 1998). On the other hand, management of diversity is usually thought to entail a long-term strategic view of equality issues, in contrast to the reactive, compliance route of the earlier equal opportunities perspective (Mabey et al., 1998).

Of course, one other main factor, which is very important for employment equity, is the wage gap. In a micro-study of 22 countries, Blau and Kahn (2003) demonstrate that highly centralized wage bargaining settings increase female wages relative to male wages by setting wage floor at the bottom of the distribution, where females tend to be located. Therefore decentralization should adversely affect the gender wage gap. However, studies in Sweden and Denmark which have analyzed changes in the gender gap over time, both document the stagnation of overall female wages (Albrecht et. al., 2003; Datta- Gupta, et. al., 2006; Edin and Richardson, 2002). In contrast, in the U.S. there is evidence that a tendency towards equalization of male and female wages stagnated during the 1990s mainly because of a changing demand and supply structure which was less favorable to women in the 1990s compared to the 1980s (Blau and Kahn, 2003). In addition, retirement policies are an example of other factors which have implications for family-friendly policies (Hutchens and Martin, 2006).

On the other hand, unionism seems to play a significant role in promoting FFP (Family-Friendly Policies). Indeed, as Sisson (1993) points out, employers are more likely to perceive the benefits of equal opportunities in a competitive labor market and HRM practices are more likely to occur in unionized workplaces than in a non-union sector.

Using a literature review, the aim of this paper is to firstly review the influence that family-friendly policies have on work/family balance, and secondly, investigate

the role that trade unions have in the application of family-friendly policies. The paper is organized as follows: following the introduction, section two provides a review of family-friendly orientation. The next section discusses the effects of 4 major friendly-policies on work/family balance. The fourth section outlines the role of trade unions in the application of family-friendly policies. Finally the paper concludes with a summary of the aims that were described previously.

2. ORIENTATION OF FAMILY-FRIENDLY POLICIES

The wide range of policies that have been assumed under the heading of family-friendly precludes a concise definition. These are policies concerned with employees' hours of work (job sharing, part-time work, flexi-time), leave entitlements (paternal leave, career break), financial assistance (child care, maternity pay) and particular responsibilities, such as care of the elderly or of children.

The literature on employment-provided family-friendly benefits, and fringe benefits more generally, posits a range of alternative explanations as to why employers might provide family-friendly practices. There are three theories: neoclassical economics, internal labor markets and institutional (or neo-institutional) theories.

The neoclassical economic explanation of employer-provided benefits focuses on employer decision-making in spot labor markets. The use of non-pecuniary benefits as a tool to attract employees is well documented in labor supply literature (Killingsworth, 1983). Economy theory suggests that firms will introduce family-friendly policies as long as they increase profits, either through an increase in productivity, a lowering of the costs associated with higher wages, or through higher turnover or absenteeism (Glass and Fujimoto, 1995). There is a wide variety of non-pecuniary benefits that can be offered and profit-maximizing companies would only choose to offer family-friendly benefits if there was a sufficient level of demand among its current and potential employees (Guthrie and Roth, 1999). According to this theory, the changes in the labor supply of women and the division of household non-labor market work across parents, lead to increased demand from workers for family-friendly practices and cause profit-maximizing employers to offer such benefits. Empirically, this implies that demographic controls are important because different groups of workers will have varying levels of demand for such policies. This theory also suggests that employers might need to offer additional benefits to attract employees when labor markets are tight.

Internal labor market explanations of employer-provided benefits stem from employers' need to develop employee commitment. Firms invest in workers and they want workers to invest in firm-specific human capital so as to develop high levels of commitment. Thus, Osterman (1995) argues that firms provide non-pecuniary benefits such as family-friendly practices when they face difficulties employing high quality

workers into work tasks that require high levels of commitment and non-supervised performance. Empirically, this implies that measures of internal labor markets and high commitment work systems, such as the presence of training, job ladders, work teams, and employee seniority, will be important.

In contrast, institutional theories emphasize that organizations respond not only to economic factors, but also to the institutional environment (Guthrie and Ross, 1999; Kelly and Dobbin, 1999). In this model, firms are essentially pressured into adopting family-friendly policies by various institutions. Of particular interest for this study is one of the key workplace institutions: trade unionism. Unionization of a work group can bring about two important changes in the workplace. Firstly, to the extent that the right to strike results in collective bargaining power that is greater than an individual's, labor's bargaining power will increase. This increased bargaining power might allow unions to negotiate family-friendly policies. Secondly, union representation can change the nature of workplace decision-making from a neoclassical focus on the marginal employee to a median-voter model with a focus on average preferences (Freeman and Medoff, 1984). If the average worker has a greater preference for family-friendly policies than the marginal worker, unionized workplaces will have a greater frequency of family-friendly policies.

TABLE 1: ORIENTATION OF FAMILY-FRIENDLY POLICIES (F. F. P.)

Theory	Explanations	Authors/ Year
Neoclassical Economics	Firms will introduce FFP to increase profits either via an increase in productivity or by lowering the costs.	Killingsworth, 1983 ; Glass and Fujimoto, 1995; Guthrie and Roth, 1999.
Internal Labor Market	Firms will provide FFP to develop employee commitment	Osterman, 1995.
Institutional	The provision of FFP is due to the institutional environment: in particular, trade unionism.	Guthrie and Roth, 1999; Kelly and Dobbin, 1999 ; Freeman and Medoff, 1984.

3. WORK/FAMILY BALANCE AND FAMILY-FRIENDLY POLICIES

The way in which people balance their work and family responsibilities is becoming increasingly prominent on the policy agenda. There is no doubt that FFP (Family-Friendly Policies) have an effect on family behavior and welfare (Jaumotte, 2004). In addition, the interdependency of work and family life also suggests that firms can benefit from providing family-friendly workplaces.

This section explores the influence of the wider use of family- friendly policies (OECD, 2002; Forth and Kirby, 2000; Millward et. al., 2001), on work/family

balance, including parental leave, childcare, part-time work and flexible working hours.

3.1. Parental (Paternal-Maternal) leave

The literature surveyed suggests that provision (or not) of parental leave can have effects on child cognitive development, child health, fertility, economic growth and labor force participation (Ingram and Simons, 1995; Galinsky and Bond, 1998; Sundstrom and Dufvander, 2002; Buchanan and Thornthwaite, 2002; Ronsen, 2004). On this point it must be mentioned that, in the literature reviewed, maternal leave is defined as a leave period that is reserved for the mother only. If the leave is transferable between the father and mother, the leave period is denoted instead as 'paternal leave'. In most countries there is a short period of leave for the father immediately following the birth of the child, typically 2 weeks. This father-leave period (which can be used by the father even though the mother is also on leave) is denoted as "daddy days", (Haataja and Nyberg, 2005).

Brooks-Gunn, et.al., (2002) found that children whose mothers worked in the first nine months of the child's life were less school ready at 36 months than children whose mothers did not work at all in that time, suggesting positive grounds for paternal leave. A number of research findings also point out how important the earliest years of a child's life are in determining their wellbeing later in life (Waldfogel, 2002). There is no doubt that maternal leave periods of a certain length are highly beneficial for the children's health and general wellbeing. However, where rights already exist, extensions of the rights and prolonging the maternity leave period beyond a certain point, may have the opposite effect (Ronsen and Sundstrom, 2002), because long periods on maternity leave imply career interruptions, and thus, a reduced labor supply.

The OECD (2001), have reviewed the literature referring to the impact of paternal leave policies. Maternal leave policies (with employment protection) were expected to raise maternal employment rates. Indeed, employers were found to be implementing such policies in order to improve staff retention rates. Long periods of leave were predicted to be detrimental, as women become detached from the workforce. Ruhm's (1998) comprehensive comparative study on European countries also found that parental leave legislation raises the female employment-to-population rate by 3-4%, and even more for women of childbearing age.

Evans (2002) considered the link between work/family policies such as maternity, paternity and parental leave, gender wage equity and occupational segregation using evidence from the OECD countries. He found general agreement among the literature that maternity, paternity and parental leave tend to encourage female workforce participation. However there is a growing concern that policies, such as maternity and parental leave (generally taken up disproportionately by women), can lead to a greater

gender gap and greater inequity in the work force for women. In addition, access to leave, may mitigate to another gap: women with leave access are higher paid than women without (Waldfogel, 1998a). Additionally, women who have children, move onto a lower earnings profile, relative to those who have not (Waldfogel, 1998b).

3.2. Childcare

In 2002 the OECD investigated the effect of policies such as childcare and paid parental leave on child development. It found that while it is generally accepted that the first years of a child's life are among the most important in terms of cognitive and behavioral development, a significant body of research shows that participation in good quality childcare can have positive impacts on cognitive, emotional and social development. However, the evidence on this issue is mixed.

Several studies conducted in Sweden showed that children starting childcare at between 6-12 months of age achieved markedly better in aptitude tests and made greater socio-emotional advancement than those entering childcare later or those cared for at home. In addition, those children who entered childcare in their second year of life had lower school performance, although those cared for at home had the lowest level of performance (Andersson, 1992; Broberg, et. al., 1989; Nielsen et. al., 2004).

A meta-analysis by Violato and Russel, (2000) on the psychological effects of non-maternal care on children's cognitive development showed that, unlike children in maternal care, children in day care are not at risk of negative outcomes. Additionally, one study suggested that low income families, in the absence of subsidized childcare, often rely on informal and relative care that does not provide adequate cognitive stimulation in contrast to preschool (Fuller, et. al., 2002). In addition, schemes which subsidize parents (mothers) with informal and relative care have negative labor effects (Schone, 2005; Aslaksen et.al, 2000). A number of studies have found that when a mother works outside the home it can be harmful for the cognitive development of their children; Ruhm (2004) for U.S. evidence and Ermisch and Francesconi (2001) for the U.K. According to a survey by Waldfogel (2002), also confirmed by a study by Gregg (2005) in the U.K., the main lessons from the empirical research are that parents' care is important but that the quality of child care is even more important.

The OECD (2002) found that childcare facilities, either completely publicly provided or subsidized, can have positive effects on the maternal employment rate. In Germany Hank and Kreyenfeld (2000) reached the same conclusion. However, research undertaken by Butig and England (2001), found that the gap between womens earnings is due to whether or not they have children, and that woman without children are better-paid.

Dex and Scheibl (2001, 1999) found that firms may benefit from providing childcare for their staff by reducing absenteeism and sickness absences.

3.3. Part-time work

Two opposing views on part-time work have been suggested by the literature. The first is that part-time work offers the perfect balance of work and family life. The second is that the low rates of remuneration, routine tasks and limited career opportunities that characterize a lot of part-time work make it more difficult for women to balance their work and family lives. Higgins, et al., (2000) conducted a study using both interviews and surveys to investigate whether part-time work helped women to balance their work and family lives. The authors found that both of these views may be valid. They also argued that work may play a more central role in the life of career-oriented women than it does in those who are not career-oriented.

Tausig and Fenwick (2001) considered the effect of alternate work schedules such as part-time work, non-Monday-to-Friday, non-daytime shift work, and flextime on the work/family balance. In terms of part-time schedules, they found that, after accounting for the differences in hours worked by full and part-time workers, those working part-time reported greater work/family imbalance. This finding raises questions regarding the commonly held belief that provision of part-time schedules aids in achieving a positive work/family balance. The authors suggest that in trying to swing the work/family balance towards family, part-time schedules lead to a greater imbalance on the work side, because of financial and career costs that may offset the benefits of greater family life. For example, Evans (2002) has considered the role of part-time work in the context of gender equity and occupational segregation. He found that part-time employment may serve to promote inequity and segregation even though it is highly valued by women and serves to increase female participation rates. Part-time work is generally characterized by lower pay and lower job status and therefore may not provide sufficient remuneration or career fulfillment, even though it may promote work/family balance.

On the other hand employers seem to benefit the most from the application of part-time work. Skiner (1999) found that employees had greater enthusiasm for their work when they were employed on a part-time basis, a factor which might then be expected to generate higher productivity. The fact that part-time employees may not require a paid break can also reduce costs for employers (IRS, 2001).

3.4. Flexible working hours

Flexible working hours appear to be the most commonly provided family-friendly measure. In theory, flexibility in hours allows workers more control over the balance between their family and working lives. However there is a distinction between flexibility for the worker and flexibility for the firm. The former could potentially aid the worker while the latter could ultimately serve to constrain the worker.

Staines and Pleck (1986) have investigated the impact of flexible work schedules, in the context of non-standard work schedules, on the quality of family life. Non-standard work schedules have in general been held to be detrimental to quality of family life. Staines and Pleck investigated the extent to which the provision of flexible working hours moderated these negative effects. They found that the relationship between family life and non-standard working schedules is stronger the more limited the control workers have over their schedules. They also found that when workers had some control over their working hours it generally ameliorated the negative effect of non-standard working schedules.

Tausig and Fenwick (2001) investigated the impact of flexible schedules on the work/family balance. They found that the availability of flexible work schedules (flexible hours, extended lunch breaks) had no effect on work/family balance. Instead, it was the perception of control over schedules that improved work/family balance. Lewis, (1997) believes that flexible working is increasingly offered to meet the changing structure of demand for labor, rather than the needs of workers with families.

4. TRADE UNIONS AND FAMILY FRIENDLY POLICIES

Trade unions have an important bearing on the implementation of family friendly policies. Despite the emphasis on the responsibilities of governments, it is increasingly recognized that trade unions have an important role to play in reducing work/family conflict, and promoting family supportive employment policies (Lewis and Cooper, 1995).

Researchers have identified the pro-active role played by unions in the development of family working arrangements (Forth et.al., 1997; Marchington and Grugulis, 2000; Buchmueller, et. al., 2002).

Freeman and Medoff (1984), and others have documented that individuals represented by trade union are more likely to receive traditional fringe benefits such as health insurance and retirement plans.

Some researchers have shown that the active involvement of unions has pushed large and public sector organizations to consider family-friendly policies. Forth, et al., (1997) express the opinion that although the private sector makes a lower level of provision than the public sector there is a slightly better level of provision when a private company is unionized and of a large size. Fredriksen-Golden and Scharlach (2001), found that companies with fewer than 100 employees are significantly less likely than larger firms with over 100 employees to recognize unions and therefore to offer benefits such as retirement, health insurance, life insurance, disability insurance, or paid time off. Ingram and Simons (1995) cite literature indicating that large organizations have also been found to be more responsive to work-family issues because they are more visible and are under more pressure to respond to work-family concerns. Goodstein (1994) also states that the greater the size of an organization, the

greater its level of responsiveness to institutional pressure on employers to be involved in work-family issues. For similar reasons, public sector organizations are responsive to institutional pressures (Goodstein, 1994; Ingram and Simons, 1995). Smaller organizations may use informal practices to address similar work-family issues because they may have the luxury of addressing each employee's situation individually and thus not need to establish formal policies.

Machin (2000) found that older workplaces are more likely to recognize a trade union. In addition, Goodstein (1994) hypothesizes that the greater the dependence of an organization on female employees, the greater its level of responsiveness to institutional pressures on employers to be involved in work-family issues.

5. CONCLUSIONS

The basic aim of this article was to study the influence of the most widely used family- friendly policies on work/family balance, through a literature review.

The provision of parental leave is highly beneficial for children's health and general development and it is expected to raise maternal employment rates. However, long periods of leave were predicted to be detrimental, as women can become detached from the workforce.

The provision of childcare can improve women's participation in paid work and early childcare can give children a socio-emotional advantage. However, the quality of childcare is critical. High quality childcare has no apparent negative effect on children's cognitive development and it may indeed have positive effects, particularly for children from disadvantaged backgrounds.

Part-time work can also increase female labor force participation, but it is often associated with lower job status, low prospects and lower pay. Working part-time can have different effects on work/family balance depending on the characteristics and preferences of individual workers.

The provision of flexible working hours is the most common family-friendly measure. It can allow workers more control over their work/life *balance*. However, flexible work schedules have little effect on work/family balance unless workers have some control over that flexibility.

The second objective of this paper was to examine the relationship between unions and the availability of family-friendly policies through a literature review. It was found that unions appear to positively affect the provision of family-friendly policies. This effect is more pronounced in large and public sector organizations.

Taking all these factors into account, it is obvious that family- friendly policies affect work/family balance positively. The important bearing of unions on the take up rate of family-friendly policies is also evident. However, given that this study has certain limitations, there is a need for more extensive research in order to further clarify the issues.

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MORAL FUNCTIONING AMONG HANDBALL TEAM PLAYERS

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ABSTRACT

The aim of this study was the investigation of the possible relationship between sport participation and moral functioning between Greek handball team athletes. The instrument that was used was developed by Gibbons, Ebbeck, and Weiss (1995). The sample consisted of 204 athletes, 107 men, 97 women. Factor analysis revealed 4 factors. Cronbach's varied from .81 up to .88. Statistical significant differences were indicated in the dependent variables of: (1) lying, (2) violation of a rule, (3) intentional injury, and (4) deliberately hurting. Conclusively, the results support the use of the instrument for measuring moral functioning among Greek athletes.

Keywords: Moral Functioning; Handball Team; Unsporting Behaviour.

1. INTRODUCTION

Nowadays sport constitutes a way of getting away from everyday routine. Many believe that children should devote some of their free time to sports, in order to improve their quality of life. All stress the beneficial aspects of sports for the body and spirit. Since ancient times, sport was the basic factor in shaping somebody's character. However, today, violence and aggressiveness are connected directly with sports and constitute a major problem.

On the subject of ethics the research in the area of sports is mainly empirical. Bredemeier and her students in their research (Bredemeier and Shields, 1984, 1986a, 1986b, Bredemeier, Weiss, Shields and Cooper, 1986, 1987) mainly examined the relationship between athletic attendance and the various subjects of ethics, such as moral causality, tendencies of aggressiveness and judgement in regard to the legality of deliberate harmful athletic actions. The major part of this research was focused on moderate and high contact sports where ethics plays a major role (Bredemeier and Shields, 1986).

They have discovered that two strategies coexist and determine the relationship between athletic attendance/experience and morality. The first strategy compares

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athletes with non-athletes in regard to moral causality, which is reported in the criteria that someone uses in order to find solutions to moral conflicts. The second strategy determines how much the degree of sport involvement is related to moral causality, aggressive tendencies and crisis in regard to the legality of deliberate detrimental athletic energies.

The research on morality initially started in the area of physical education and education in generally. A distinguished contribution with respect to teaching strategies and the focus on ethics is reported in the "Fair Play for Kids" (Gibbons, Ebbeck, and Weiss, 1995) handbook. This handbook includes a line from academic study and educational activities that concern children from the 4th up to the 6th grade. These activities focused on the growth of attitudes and behaviours, which are used as examples and also the ideas of "fair play", which were determined by a particular committee: a) respect to rules and regulations, b) respect to officials and their decisions, c) respect to opponents, d) equal opportunity for all students wishing to participate and e) maintaining of self-control at all time.

Based on Kohlberg's (1984) theory of moral maturity, a model of four components on moral action was drawn by Rest (1984), and its results were very promising in the area of competitive sports. In recent studies, the indications of the model were used in order to evaluate different aspects of moral functioning (Kavassanu and Robers, 2001, Kavassanu, Roberts, and Ntoumanis, 2002, Ommundsen, Roberts, Lemyre and Treasure, 2003). The proposal of Rest's model was the research on the subject of social behaviour. Concerning Kohlberg's theory, (1984), Rest (1984), disagreed that in order for us to comprehend moral behaviour, internal processes that produce this behaviour should be examined thoroughly and approached carefully.

In Rest's model (1983,1984), four basic processes are involved: a) interpretation and explanation of the situation, recognizing possible causes of action and how much the various actions influence the well-being of all the people who are involved, b) the creation of moral crisis with regard to which is the "right thing" to do for every individual, c) to decide which is the action that someone really wants to do and d) the implementation of that decision, which represents realistic behaviour. Rest (1983, 1984) reports that the four processes are interrelated, influencing one another. For example, motivation is a major aspect of the decision process that an individual follows, while real behaviour is influenced by circumstances, while distress or other factors may prevent somebody from acting accordingly.

Shields and Bredemeier (1995) used Rest's model in Physical Education, and moreover they supported that, these four components are found in the area of sports, and can potentially be influenced by the teammates' perceptions, or the coaches' opinion with regard to what constitutes suitable or unsuitable behaviour. Based on the work of Kohlberg (Higgins, Power and Kohlberg, 1984, Kohlberg, 1984, Power, Higgins and Kohlberg, 1989), Shields and Bredemeier (2001) proposed that moral

crisis-estimate in competitive team sports is probably a deflexion of the norms that exist in student groups.

Kavussanu Roberts and Ntoumanis (2002) in their research with a sample of 199 basketball athletes on the moral aspect of motivation and moral atmosphere realised that moral functioning takes place in sports, after the athletes corresponded with success in moral dilemmas that described individual, not athletic behaviour that is likely to happen during a basketball game. The same results were found in the research of Kavussanu and Ntoumanis (2003), which examined with the help of a questionnaire, the moral growth of athletes in combination with their attendance-experience, their goal setting and their social wish. The participants were 221 college athletes who participated in 4 contact sports (basketball, football, field hockey and rugby). The results showed that attendance in contact sports preview positive ego orientation, which in turn previews low levels of moral functioning. On the other hand, high levels of task orientation previewed high levels of moral functioning.

With regard to the subject of how important the type of sport is, if it is a contact sport or not, an initial research that included measurements of general moral maturity showed that, college basketball athletes had lower levels of maturity in relation to the student average (Hall, 1981, Bredemeier and Shields, 1984). Additionally, the basketball athletes showed lower levels of maturity in relation to non-athletes on the subject of life and athletic moral dilemmas (Bredemeier and Shields, 1986a). Nevertheless, no major differences were found between high school basketball athletes and college swimming athletes (Bredemeier and Shields, 1986b).

Also, Bredemeier and her co-researcher (1986a) realised that boys in high contact sports such as rugby, wrestling and judo, and girls who participated in medium contact sports such as football and basketball, are related with low levels of maturity and high levels of tendency for aggressiveness in sport settings and in life, in general. Other studies agree with the previews results (Conroy, Silva, Newcomer, Walker and Johnson, 2001; Bredemeier et al., 1987). The attendance in non contact sports such as gymnastics, golf, swimming and track and field, does not result as a factor for preview of ethics in any of these studies.

Many researchers in the area of moral functioning, study this subject in relation to other factors. The most popular is moral atmosphere (Higgins et al. 1984, Kohlberg and Higgins, 1987, Power, Higgins and Kohlberg, 1989, Stephens, 1993, Stephens and Bredemeier, 1996, Bredemeier, 1999, Shields, Bredemeier and Power, 2002), aggressiveness (Bredemeier, 1985,1994, Bredemeier and Shields, 1986, Bredemeier, Weiss, Shields and Cooper, 1986, Kavussanu and Roberts, 2001, Conroy et al., 2001), and the subject of an athlete trying to remain moral while he/she seeks success in the area of sports (sportspersonship) (Stuart and Ebbeck, 1995, Shields and Bredemeier, 1995, Lemyre, Roberts and Ommundsen, 2002, Chantal, Robin, Vernat and Bernache-Assollant, 2005, Gano-Overway, Guivernau, Magyar, Waldron and Ewing, 2005). Finally, the motivation climate that is created by the coach (Ames, 1992; Shields,

Bredemeier, Gardner and Bostrom, 1995; Miller, Roberts and Ommundsen, 2000; Ommundsen, Roberts, Lemyre and Treasure, 2003; Miller, Roberts and Ommundsen, 2004). All these factors, together or separately, contribute to the better comprehension of moral operation. A lot of researchers have located differences between men and women in the sector of sport ethics. Bredemeier (1985) reported that men are more likely to approve the use of aggressiveness and deliberate hurting actions in sports than women. Moreover Bredemeier and Shields (1986), found that female high school basketball players had more mature moral causality than male basketball players in sports and in life, even at a collegiate level.

Duda and her co-researchers (1991) recognized that the male basketball players are more ego oriented and had low conceiving aggressive behaviour in relation to female players. Similarly, Kavussanu and Roberts (2001) found that male college basketball players were highly ego oriented and also, had low levels of morality in comparison to female ones.

Moral atmosphere and the "legal" action of hurting an individual constitute two other moral functioning factors of study. Many researchers showed gender differences (Shields et al. 1995, Tucker & Parks, 2001, Guivermau and Duda, 2002, Gardner and Janelle, 2002, Miller, Roberts, and Ommundsen, 2004).

This research is a study of moral functioning and ethics in Greece, via the adaptation of moral dilemmas in Greek sports life. The aim of the research was twofold: a) to examine the structural validity of the instrument of Gibbons, Ebbeck and Weiss (1995) and b) to investigate if sex, and age differentiate the moral dilemmas of athletes.

2. METHOD

2.1. Subjects

The sample included 204 handball team athletes. More specifically, they were 107 men and 97 women. Their mean age was 17.5 years and the ages ranged from 12-33 years.

2.2. Questionnaire

To measure moral functioning, the instrument that was used then was one that was developed by Gibbons, Ebbeck and Weiss (1995). The instrument includes 4 dilemmas referring to unsportsmanlike behaviours: (1) lying to an official, (2) breaking a rule, (3) risking injuring an opposing player and (4) deliberately hurting an opponent. The instrument was translated into Greek using a back translation procedure in an earlier study by Konstantoulas, Bebetos and Mihailidou (2006). For the purpose of the present study, the Greek version was administered to 10 handball team athletes

to examine whether the items of this version were comprehensive and well understood. No further modifications were made after the above process.

Respondents were instructed to extent their morality and answer to 5 questions for each dilemma. Each question was answered on a 5-point scale anchored by 1: never and 5: always. Also, at the end of the dilemmas the athletes indicated their gender and age. More specifically, for the age the sample was separated into 3 groups. Group 1 athletes up to 18 years of age (43.5%), Group 2 athletes up to 25 years of age (34.2%) and Group 3 all the athletes over 25 yrs. (22.3%) (Martin, 1991; Bebetos and Antoniou, 2003).

2.3. Procedure

The method chosen to conduct the research was that of self-completed dilemmas. Researchers informed all subjects that their participation was completely voluntary and the individual responses would be held in strict confidence.

3. RESULTS

3.1. Psychometric Characteristics

One of the objectives of the paper was to test the psychometric properties of the scale in the context of Greek handball team players. A principal component analysis with varimax rotation was performed to test the factor structure of the scale. The above analysis was selected since the two factors were found to be uncorrelated. As shown in Table 1, 4 factors that emerged from the analysis accounted for the 71% of the total variance. These factors were the same as the dilemma factors mentioned above. Using the Cronbach coefficient α for internal consistency, the value for lying to an official was 0.82, for breaking a rule 0.81, for risking injuring an opposing player 0.85 and for deliberately hurting an opponent 0.88.

3.2. Gender

Interdependent-samples t tests applied to assess differences between genders, yielded no significant differences on any of the dilemmas.

3.3. Age

One-way analysis of variance was conducted to examine differences by the age of the athletes. For the first dilemma the analysis revealed statistical significant differences $F_{(4,176)}=3.58$, $p<.01$. More specifically, the youngest age group had the

highest scores ($M=2.6$, $SD=0.11$), followed by the mid age group ($M=2.4$, $SD=0.10$) and last the oldest age group ($M=2.3$, $SD=0.15$).

For the second dilemma the analysis revealed statistical significant differences $F_{(4,166)}=4.43$, $p<.01$. More specifically, the youngest age group had the highest scores ($M=2.6$, $SD=0.11$), followed by the mid age group ($M=2.3$, $SD=0.10$) and last the oldest age group ($M=2.2$, $SD=0.15$).

For the third dilemma the analysis revealed statistical significant differences $F_{(4,176)}=4.36$, $p<.01$. More specifically, the youngest age group had the highest scores ($M=2.3$, $SD=0.12$), followed by the mid age group ($M=2.1$, $SD=0.10$) and last the oldest age group ($M=1.8$, $SD=0.15$).

Finally, for the fourth dilemma the analysis revealed statistical significant differences $F_{(4,176)}=3.39$, $p<.05$. More specifically, the oldest age group had the highest scores ($M=2.6$, $SD=0.13$), followed by the mid age group ($M=2.3$, $SD=0.11$) and last the youngest age group ($M=2.2$, $SD=0.17$).

4. DISCUSSION

One of the objectives of the present study was the initial examination of the structural validity of the questionnaire of athletes' moral functioning. The results confirmed the existence of four factors, as they were, also, reported by Gibbons, Ebbeck and Weiss (1995). Moreover, the high internal cohesion of the four factors confirms the reliability of the questionnaire. This also means that other researchers, coaches or administrative executives of sport settings could use that particular instrument in order to measure the level of operation of ethics of athletes.

The results of the present study prove the existence of morality and moral functioning and agree with previous studies, where the relationship between sports and quality was a key point (Shields & Bredemeier, 1984, 1986a, 1986b, Kavussanu, Roberts, & Ntoumanis, 2002, Kavussanu & Ntoumanis, 2003). Other studies relative to the subject of morality and ethics simply dealt mainly with the distinction of sports in contact and non-contact (Kavussanu, Roberts, and Ntoumanis, 2002, Kavussanu and Ntoumanis, 2003).

The results of the present study not only showed the existence of the relation that was mentioned before, but showed, also, differences between age groups. More specifically, the results showed that the younger children (12-16 years) comprised the group who had the highest scores on the "lying to an official" factor. It is speculated by the researchers that a possible reason for these results might be the existence of pressure and tiredness during practices, where the sense of playing and enjoyment is replaced by sentiments such as intensity, anxiety and the passion for victory.

Continuing from the previous results it was found that the same age group had the highest scores on the second factor "breaking a rule". It was speculated that -due to the fact that younger children do not have such a great sense of danger - do not understand

exactly how and when exactly they break a rule in contrast to older players where maturity and a greater sense of knowledge and understanding of the rules is obvious.

Regarding the third factor of the questionnaire “risking injuring an opposing player”, again the youngest age group had the highest scores. The researchers believe that these results are a continuation of the violation of rules aspect. We must not forget that such actions might take place because the athlete tries to stop the opposing team from an offensive action or even prevent scoring. In many cases such actions might be considered as actions of spontaneity where - in combination with the young age of the players – it does not necessarily mean that the player had a bad intention. Another reason could be that younger players do not have a very good knowledge of the rules as older players do. Additionally, the younger athletes might show a greater passion during the game because they try to establish themselves as players on the first team. On the contrary, older athletes have already established their position in their team. It is important to indicate that in the present research, older players had the lowest scores in all three factors that were mentioned before.

For the fourth factor “deliberately hurting an opponent”, regarding the age, the highest results were shown by the oldest players. The lowest scores were indicated by the youngest group. It is important to note that deliberately hurting an opponent is not only stopping the opposing team from scoring but, also, hurting an individual player in such a way where he will be forced to leave the game. It was speculated that as the players grow older and their team competes under more stressful and serious situations/conditions (national and/or international competition, Olympic Games, money prize etc.), quite often those players might overexert themselves and act in a very serious manner for the opponent’s health and body integrity. Also, no gender differences were found in the present study in any of the factors. Similar results were found in a previous research on water polo players (Konstantoulas, Bebetos, and Mihailidou, 2006).

In conclusion, the present study extends previous work that has identified the relationship between sport involvement and various aspects of morality, and furthermore underscores the role of morality in different age groups in association with weekly practice. However, as with all aspects of human interaction, moral functioning in sport is a complex phenomenon influenced by multiple variables. Age constitutes only one influence that mediates the relationship between participation in sports and moral functioning. In short, more research is needed to examine other variables and reveal the processes through which they influence moral functioning in sport.

Finally, the limitations of the present study should be reported. All athletes were athletes competing in the first national division (elite athletes). Additionally, the samples were athletes that live in a big urban city of Greece (Thessaloniki). Also, the questionnaires were completed after a practice session and not after a game.

TABLE 1: PRINCIPAL COMPONENT ANALYSIS

Item	Lying	Breaking	Injuring	Hurting
Do you think it is appropriate to lie to an official during a critical game?	.72			
Would you lie to an official during a critical game?	.70			
How often did you lie to an official this season?	.83			
How many of your teammates would lie to an official if it would help the team win a critical game?	.78			
Would the coach encourage lying to an official if it would help the team win a critical game?	.75			
Do you think it is appropriate to violate a rule during a critical game?		.76		
Would you violate a rule during a critical game?		.64		
How often did you violate a rule this season?		.72		
How many of your teammates would violate a rule if it would help the team win a critical game?		.75		
Would the coach encourage violating a rule if it would help the team win a critical game?		.75		
Do you think it is appropriate to risk injuring an opponent during a critical game?			.69	
Would you deliberately risk injuring an opponent during a critical game?			.69	
How often did you risk injuring an opponent this season?			.68	
How many of your teammates would risk injuring an opponent if it would help the team win a critical game?			.61	
Would the coach encourage injuring an opponent if it would help the team win a critical game?			.67	
Do you think it is appropriate to deliberately hurt an opponent during a critical game?				.65
Would you deliberately hurt an opponent during a critical game?				.68
Would you deliberately hurt an opponent during a critical game?				.66
How many of your teammates would deliberately hurt an opponent if it would help the team win a critical game?				.67
Would the coach encourage deliberately hurting an opponent if it would help the team win a critical game?				.71
Eigen value	4	4	3.5	3
% of variance explained	20	20	18	14
Mean Scores	2.3	2.4	2.1	2.4
Cronbach's alpha	.82	.81	.85	.88

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CORPUS-BASED ANALYSIS: STOCK MARKET INVESTORS' COMMUNITY

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ABSTRACT

For a teacher of English for Specific Purposes (ESP), finding appropriate teaching materials is not an easy task as the majority of coursebooks deal with General English. This project demonstrates how a teacher can analyse the language of a particular discourse community using a corpus-based analysis and find the prominent lexical items and grammatical structures useful for the students of that discourse community by analysing the stock market investor's community.

Keywords: English for Specific Purposes; Discourse Community; Corpus-based Analysis.

1. INTRODUCTION

“A Corpus is a large computer-held collection of texts (spoken, written, or both) collected together to stand as a representative sample of a language or some part of it. Corpora provide easily accessible and accurate data, useful to descriptive and theoretical linguistics. They may also be used to calculate frequency of occurrence of items and, as repositories of actual instances of language as they have a place in language teaching textbook design. [...] (Johnson & Johnson, 1998)

As this definition suggests, corpus is a representative collection of spoken and written texts of a particular language. Corpus Linguistics uses such collections to analyse and study the language that is used. According to Biber et al (1998), there are four basic characteristics of a corpus based analysis. First of all, it analyses the actual patterns used in natural texts, and these analyses are empirical, that is, it relies on experiments and/or experiences, not on theory. Secondly, the collection of natural texts that are to be analysed -corpus- should be large and principled. Thirdly, the analysis is made by the use of computers. With computers, the analyst can use automatic techniques to easily analyse a large amount of complex patterns and be consisted and reliable without getting tired – traditionally, this was done by hand. Also, computers can be used interactively which means that the computer can keep a record of any comments made by the analyst. Finally, the fourth characteristic is that the analysis should be quantitative as well as qualitative; after reporting all the findings (quantitative) a meaningful analysis of those findings should be made (qualitative).

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Another important point to be made about corpus based analysis is that the traditional way of analysing language through introspection, practiced by two, amongst others, famous linguists, Saussure and Chomsky, is no longer seen satisfactory. This is because these linguists argued that linguistics can be based on intuitive data and isolated sentences. Furthermore, Chomsky has since argued that corpus does not give any revealing information. However, nowadays language is analysed using both corpus and the analyst's intuition (Leech, 1991). This was influenced by a British school of linguistics developed by Firth, Halliday and Sinclair. They argued that language should not be studied in isolated sentences but instead, study complete contexts. They also focused on the empirical evidence of the language as it is actually used (Stubbs, 1996).

However, a corpus based analysis is not only carried out to check one's intuitions or find frequently re-occurring patterns but more meaningful results could be drawn. It could help investigate lexical and grammatical associations, that is lexis and syntax study, register and genre studies as well as dialect studies, more widely known as sociolinguistics (Biber, 1998).

The purpose of the following corpus based analysis is to investigate the discourse community of 'Stock Market Investors' and closely examine the language that is used in this community in order to help students who will be studying that topic.

2. DISCOURSE COMMUNITY (DC)

Discourse Community is a term not yet fully established, however, Swales (1990) proposes six defining characteristics of discourse community which could help in identifying a discourse community. First of all, *'a discourse community has a broadly agreed set of common public goals'*. This is a straight forward characteristic simply meaning that members of a DC have the same goals. This, however, should not be confused with a shared object of study because a shared object of study does not mean a shared goal, for example if the shared object of study is the Vatican, students who study in the Vatican history departments and birth control agencies in the Vatican do not have the same goal and therefore do not form a DC (ibid). The second characteristic is *'a DC has mechanisms of intercommunication among its members'*. Such mechanisms could be meetings, communication through telephone or correspondence, newsletters and many more. This means that even though members of a DC might never directly interact, mechanisms like these help them communicate. The third characteristic is that *'a DC uses its participatory mechanisms primarily to provide information and feedback'*. Members of a DC have to actively use the mechanisms of intercommunication available to them to get information and feedback; there is no use in having those mechanisms available and not use them. It should also be added that the information exchange will vary depending on the goals. The fourth

characteristic is that *'a DC utilizes and hence possesses one or more genres in the communicative furtherance of its aims'*. These genres create discursal expectation amongst its members. The fifth characteristic is that *'in addition to owning genres, a DC has acquired some specific lexis'*. Such specific lexis could be some common lexis used in a particular DC with more special or technical way or it could be technical lexis only, usually, understood only by members of that DC. Members of a DC also use special abbreviations and acronyms. Finally, the sixth characteristic is that *'a DC has a threshold level of members with a suitable degree of related content and discursal expertise'*. That is, a DC has changing memberships with older members leaving the DC and new members entering which means there are different levels of expertise (Swales, 1990).

'Stock Market Investors' (SMI), which is the object of study of this project, can be considered to be a DC as it will be demonstrated here by showing how SMI meet each DC characteristic. First of all, SMI have common goals two of which are to buy and/or sell stocks. Also, SMI have many mechanisms of intercommunication some of which are meetings and telephone conversations among stock brokers or between stock brokers and stock holders or, the mechanism of intercommunication that was used in the compilation of this corpus, media coverage. Having seen these examples, we can say that the purpose of those mechanisms is to give its members both information as well as feedback. Moreover, SMI use language that consists of many genres including reports and the genre that will be under investigation in this analysis, 'media coverage'. Furthermore, SMI use a specialised lexis, abbreviations and acronyms. Finally, SMI have changing memberships and therefore different levels of expertise since many young people get involved in stock market investing and many people have been working as stock market investors for many years.

Consequently, having seen that SMI have common goals, they use mechanisms of intercommunication to exchange information and get feedback, they use different genres, they use specialised terminology and that they have different levels of expertise, we can conclude that SMI form a discourse community.

3. THE DATA

Designing a corpus is not an easy task; there are many issues to be taken into consideration before collecting the data. First of all, the content of the data has to be decided and in order for a decision to be made, we need to know exactly what we want to examine. The more representative and restricted our data is the clearer and useful our findings will be (Barnbrook, 1996). For this project, the data is a collection of commentary on financial and related media coverage including analysis of political and social influences on the business world in the USA with the more general headings of 'The Market Today' and 'The Market this Week'. These commentaries were found in the World Wide Web (www.analyze-media.com/) which brings us to

another issue, the issue of where to get texts from. There are many ways of getting texts for our data; one can download texts from the internet, use a CD-ROM, use institutional text archive sites or even type or scan texts in (ibid). As already mentioned above, the data for this assignment was taken from the internet and there was no problem using the data from the internet since the texts were computer-readable. Should the texts had not been computer-readable, more effort should be made to turn them into a computer-readable form (ibid). Furthermore, there is the issue of the size of the data. It is difficult to know in advance how much data will be needed since every corpus analysis has different needs (ibid). This analysis is very restricted and therefore small in size; about 115.000 words. Finally, there is the issue of copyright; that is, permission needs to be obtained from the copyright holders to use any texts protected by copyright (Biber et al, 1998). This issue was not a problem for this project because the texts that were downloaded from the internet were not protected by copyright.

4. THE PROCEDURE

After collecting the data, the first step of the analysis was to produce a wordlist of the top 200 most frequent words by using 'Wordsmith' concordancing tools (see appendix1), and examine to see which content words that were high in frequency seemed to be more interesting. To check whether those frequent words had any significance, they were compared with a wordlist of frequency words from a 'general English' corpus, the 'Birmingham Corpus' (BC). In this way words that had high frequency in both corpora were seen as common and therefore uninteresting for the analysis. The words, on the other hand, that were high in frequency in the SMIC corpus but less frequent in the BC were considered to be of greater importance to the SMIC. The next step then, was to choose the words that were thought to play an important role in the SMIC and thus need a closer investigation (corpus plus intuition¹). The investigation was carried out by using the 'concordance tool' for each word under investigation. Once the concordance lines of the words were displayed more concordancing tools were used. More specifically, the 'show collocates' option gave the collocations of the node word, that is the search word, and the 'clusters' option gave chunks that collocate with the node word. Furthermore, to see how strong the collocations were, an investigation of the collocations and clusters from a 'general English' Corpus was carried out. Unfortunately, access to the BC was not possible, instead, the Guardian-Observer Corpus (GOC) was used which is also a general English corpus. Finally, to analyse the meaning of those findings, concordance lines were used.

5. THE ANALYSIS

Looking at the SMIC and BC wordlists, we immediately notice that the SMIC has a high lexical density; the first content word, in the SMIC is 'market' (no.17), which is register specific, whereas in the BC the first content word, is 'people' (no. 72) which is a general noun. Also, if we compare the content words with the function words of the two top 200 wordlists, in the SMIC there are about 94 content words and 106 function words whereas in the BC there are only about 37 content words and 163 function words. There are more than double the number of content words in the SMIC than BC which confirms the claim that SMIC has a high lexical density.

5.1. Pronouns

Before we look at the content words in more detail, however, we will look at the function words. The most sticking discovery is that personal pronouns have a high frequency in the BC but not in the SMIC; some pronouns do not even appear in the top 200 words:

TABLE 1: FREQUENCY OF PRONOUNS

Pronouns	SMIC ranking	BC ranking	Pronouns	SMIC ranking	BC ranking
I	99	8	SHE	—	31
HE	128	12	HER	—	36
YOU	64	14	THEY	31	21
HIS	152	23	WE	48	30

Source: Developed by the author

This suggests that this genre of SMIC is mainly impersonal. This could be because what this genre does is report situations and when reporting something, usually, personal opinions and interpretations are not given.

5.2. Verbs

Furthermore, examining the verbs that appear in the top 200 wordlists, we can observe that there is an uneven distribution of verbs as well:

TABLE 2: FREQUENCY OF VERBS

VERBS	SMIC ranking	BC ranking	VERBS	SMIC ranking	BC ranking	VERBS	SMIC ranking	BC ranking
IS	7	11	WOULD	74	44	FELL	156	_____
WILL	11	77	MAY	77	118	RALLIED	158	_____
ARE	12	27	HAD	92	19	YIELD	159	_____
BE	15	18	DO	101	53	DID	161	95
WAS	19	10	SHOULD	115	133	KEEP	162	_____
HAVE	20	24	CAN	117	60	GO	168	100
HAS	28	61	COULD	124	71	GAINS	180	_____
BEEN	47	50	GOING	127	112	DOES	185	188
WERE	50	37	BEING	133	130	GET	188	85
RALLY	62	_____	SELL	140	_____	TAKE	190	148
FED	71	_____	CONTINUE	149	_____			

Source: Developed by the author

More verbs from the BC not found in the SMIC are: said, think, might, want, see, got, say, know, come, work, made, make, must, came, thought, says, went, put, look, mean, find, left, looked and used.

5.3. Function verbs

The major difference of the two wordlists in terms of the verbs is that the most frequent verbs in the SMIC are ‘grammatical’ or ‘function’ verbs; they do not convey a clear meaning when they stand alone. In this category, some modal verbs are noticeable: will, would, should, can, could, may.

‘Will’, ‘may’ and ‘could’ are more frequently used in the future, to show possibility or to make future predictions. ‘Can’ is used to show ability and ‘should’ is used to give advice or opinion, or show an expectation in the future. Finally, ‘would’ is mainly used to speculate about past events. This leads us to the conclusion that one of the characteristics this DC and in particular this genre, is that it is important to make predictions and also speculate about how things would have been if certain things had happened.

5.4. Content verbs

Also, the content verbs of SMIC, compared with BC, are register specific. This is because some verbs are unusually high in frequency, like fed and sell, and many everyday used verbs which are frequent in the BC, like think, are not even in the top 200 words.

What was surprising though was that when the first content verb of the SMIC was investigated, ‘rally’, which was initially regarded as a verb, was discovered to be more commonly used as a noun, collocating with ‘market’. Also, looking through the

concordance lines, it was discovered that 'rally' in this context has a different meaning than the everyday use of it to mean a large public meeting to support a particular idea. Here, it means 'an agreement' when used as a noun and 'to improve' or 'regain strength' when used as a verb. Also, clusters and concordance lines suggest that 'rally' as a verb is more frequently used in the future tense to make predictions. This finding intrigued me to investigate the verb 'rallied'. What was found was that 'rallied' was used as the past tense or past participle of 'rally' and has the same collocations with rally as a noun, as well as the collocation 'rallied strongly'. This difference of frequency between 'rally' and 'rallied' in terms of tense, suggests that 'rally' is a past action rather than a future one.

I also wondered whether 'gains' was more widely used as a verb or as a noun. The analysis showed that 'gains' was used as a noun. There was only one piece of evidence of 'gains' used as a verb, which was a headline of an article, and was actually used for a past event². Instead, there were other word forms of 'gain' used as a verb, which were not in the top 200 words. As with 'rally', 'gain' was used for past and future actions not present. Also, 'yield' was more frequently used as a noun to mean 'the rate of income received by an investor from a security' (Alan, 1989) but was also used as a verb to mean 'to produce'. What was interesting to discover was that 'yield' was mainly used in the future tense.

What these findings suggest, is that in the SMIC mainly uses past and future verbs; past verbs for past results and future verbs for future predictions. This reinforces the findings of the usage of modal verbs.

In addition, the word 'fed' was investigated, which was thought to be a strange verb to be so high in frequency (no. 71) and wondered whether it was used metaphorically. The investigation showed that it was not a verb; there was not a single example of it used as a verb. It was actually an abbreviation of the 'Federal Government' of the USA. It became more apparent that 'fed' was some kind of a formal body by the fact that in all the examples 'Fed' was written with a capital 'F'.

5.5. Content words

Furthermore, the content words that were high in frequency in the SMIC, but not in the BC, and that were thought to be of great significance to SMIC were investigated. These words are: market, markets, equity, equities, bond, bonds, day, economy, economic, stock, stocks, dow, street, rate, rates, data, earnings, points, trading, share and shares. However, not all words showed any unusual usage or meaning. Here, only the words that behaved differently in the SMIC will be presented. These words are: market and markets, bond and bonds, equity and equities, share and shares, stock and stocks. Also the words 'above' and 'over' and 'dow' will be under investigation.

The analysis of these words aims to discover whether SMIC uses common lexis that is used in this DC with more special way or whether it uses technical lexis only,

usually, understood by members of that DC. As it will be demonstrated below, it has been discovered that the SMIC uses common lexis which gets a more specialised meaning by the context and by different collocations that precede or follow that lexis.

Firstly, ‘market’, the first content word of the SMIC, and ‘markets’, the second content word, behaved in the same way but had different collocations from the GOC and some of them were rather unusual, giving the words a specialised meaning:

TABLE 3: COLLOCATIONS OF ‘MARKET’ AND ‘MARKETS’

SMIC: market(s)			GOC: market(s)	
The Bond Stock Equity Treasury Bear Housing Bull	market markets	and rally has will are have	The Stock Labour the	market markets

Source: Developed by the author

In this context ‘market’ means ‘the total public demand for a commodity’ (ibid), whereby different collocations are formed, for example, ‘treasury market’ and ‘housing market’. These collocations, even though they have a specialised meaning, they are relatively easy for people outside the DC to understand. What are unusual and quite opaque are the collocations ‘bear market’ and ‘bull market’; their meaning cannot be guessed just by explaining the words. ‘Bear market’ means ‘a market in which prices are tending to fall’ (ibid) whereas ‘bull market’ means ‘a market in which prices are tending to rise’ (ibid).

The next words under investigation are ‘bond’ and ‘bonds’. The analysis found that there is some difference between the meanings of the two words.

TABLE 4: COLLOCATIONS OF ‘BOND’

SMIC: Bond			GOC: Bond	
The And Treasury year	bond	markets yields prices markets	And the	bond

Source: Developed by the author

‘Bond’ here has shown two different uses and meanings. The first one is as an adjective and it is used as a general term for ‘any fixed-interest security’ (ibid). The

second use is as a noun and it means 'a document issued by the government or a company borrowing money from the public, stating the existence of a debt and the amount owing as principle and interest to the holder of the document' (ibid). The collocations that precede or follow 'bond' give it a very register specific meaning, for example 'Treasury bond' (second sense of the word) means a bond issued by the Treasury. In the GOC, however, 'bond' shows little connection with the stock market; many concordance lines are about James Bond, the fictional character.

Interestingly, the collocations of the word 'bonds' came after the word and were mainly verbs.

TABLE 5: COLLOCATIONS OF 'BONDS'

SMIC: 'Bonds'			GOC: 'Bonds'
And that	bonds	and that are will have were rallied	No collocations No clusters

Source: Developed by the author

This means that 'bonds' is used as a noun which suggested a connection with 'bond' as a noun. The analysis proved this to be true. The meaning of 'bonds' is 'an accepted word for unregistered bonds' (ibid).

Moreover, 'equity' and 'equities', has been discovered, are words that do not need collocations to give them a register specific meaning. They themselves carry a specialised meaning. Perhaps this is the reason why no important collocations were found apart from 'equity market'. However, 'equity' and 'equities' have a different meaning. 'Equity' is 'the value of a company's shares' whereas 'equities' is 'shares in a company which do not pay a fixed amount of interest' (Hornby, 2000). The fact 'equity' and 'equities' are register specific and thus not very common outside SMI Community is reinforced by the fact that in the GOC there were only five entries for 'equity' and no entries for 'equities'.

'Share' and 'Shares' have no difference in meaning as used in the business world which is 'a particular separate part or portion into which the capital of a company is divided' (Alan, 1989) and they do not seem to have any significant collocations or clusters apart from 'share market' and 'shares and bonds'. Even though these words become register specific when in the SMIC, they are widely understood by people outside this DC. This is evident in the GOC where 'share' was used as a main verb. 'Shares', in the GOC, was more frequently used than 'share' as with the SMIC.

Furthermore, ‘stock’ and ‘stocks’ were investigated:

TABLE 6: COLLOCATIONS OF ‘STOCK’

SMIC: Stock			GOC: Stock
the	stock	market markets prices	The stock (5 instances) Stock market (7 instances)

Source: Developed by the author

‘Stock’ and ‘Stocks’, like ‘share’ and ‘shares’, when used in a business context they are registered specific. Two uses of ‘stock’ have been observed. The first one is as a noun used to mean ‘the value of the shares in a company that have been sold’ (Hornby, 2000). The meaning becomes obvious by the fact that in the concordance lines the examples that had this meaning denote a connection with money or rates. The second meaning of ‘stock’ is ‘a share that somebody has bought in a company or business’ (ibid). This use of ‘stock’ was strongly connected with collocates like market(s) and prices. Also, ‘stocks’ is used as the plural of the second use of ‘stock’ and has similar collocations.

Furthermore, it was initially planned to investigate the collocations of the collocations to check how strong the collocations are. However, after the analysis of the chosen words, it was discovered that this was not necessary because it was obvious that the words collocated with each other. We have thus: ‘stock market’, ‘bond market’, ‘equity market’, ‘bonds and stocks’, ‘equity and bond’. This shows that these words have a strong bond among them and it also shows their importance in the SMIC; not only they are very high in frequency but they complement each other as well. The strong collocations among the chosen words confirmed that the words were worth investigating and analysing.

In addition, the words ‘above’ and ‘over’ were investigated to see how they are used in the SMIC and see whether it is the same in general English. The analysis has shown that these words are used more restricted in that they are used to convey fewer meanings than in general English; the Oxford Advanced Learner’s Dictionary (Hornby, 2000) presents ten different uses of ‘above’, five as a preposition, three as an adverb one as an adjective and one as a noun. The SMIC has revealed the following four uses: (a) adj. to refer to ‘something mentioned previously’, (b) n. ‘the above’ to refer again to ‘something mentioned previously’, (c) adv. to mean ‘earlier in something written or printed and (d) prep. to mean ‘greater in number’. From these four uses of ‘above’, only the last one, (d), shows a link with the context of SMIC. The other uses are plainly used to create syntactical style.

Additionally, ‘over’ showed a similar behaviour. The Oxford Advanced Learner’s Dictionary (Hornby, 2000) presents eighteen uses of ‘over’. In this data, there were

observed six uses of 'over'; (a) prep. to mean 'more than' used with numbers and money, (b) prep. to mean 'during something', (c) prep. to mean 'in or on all or most parts of something', (d) adv. to mean 'repeatedly', (e) adv. to mean 'ended' and (f) adv. to mean 'above'. The most frequent uses of 'over' in the SMIC were 'a' and 'e'. From the examples in this corpus, the use that has a direct link with the DC under investigation is the first one, (a) which is used to mean 'more than'. This is reinforced by the fact that the word is used with numbers and money which is what this DC is all about. The other meanings of 'over' are used, as explained above with the word 'above', for syntactic reasons.

Finally, the word 'dow' was investigated, a high frequency word which did not seem to mean anything. The analysis was proved to be worthwhile because this word was discovered to be an abbreviation of the 'Dow Jones Average' which, in USA, is 'a number of weighted averages of prices of leading stocks quoted on the New York Stock Exchange, calculated by Dow Jones & Co. and published hourly in their Wall Street Journal, as well as being reported daily in other newspapers all over the world' (Adams, 1989). The concordance lines have revealed that Dow is always with a capital 'D' and always preceded by 'the'; 'the Dow'. They have also revealed two different types of Dow Jones Averages. The first one is 'Dow Jones Industrial Averages', sometimes abbreviated to 'the Dow Jones Industrial', which is 'probably the world's best known index of the movement of prices and yields of common stock on the New York Stock Exchange. It is based on 30 leading US industrial companies' (ibid). The second one is 'Dow Jones Transportation Average', sometimes abbreviated to the 'Dow Jones Transports', for 'calculated on the stock prices of 20 leading air, road, rail and freight-forwarding companies' (ibid). The analysis of this word has not only revealed yet another abbreviation used by this DC, which is part of the fifth characteristic of a DC as presented by Swales (1990), but it has also revealed other genres of the SMIC, which is the fourth characteristic.

6. CONCLUSION

The aim of this corpus-based analysis was to investigate how Stock Market Investors use language in their community and thus create appropriate teaching materials for students studying this particular business area. Here, is a summary of the findings:

- There is a high lexical density;
- Reporting of events is impersonal;
- Past and future tense is more widely used than present tense;
- Non-specialised, common lexis is used but gets a more specialised meaning by the context and by different collocations that precede or follow that lexis and becomes register specific;

- Some abbreviations were found such as ‘Fed’, ‘the Dow’;
- New genres that they are utilized were discovered.

Undoubtedly, there are many more things to be said and be investigated about this DC, however, due to the small nature of the project, only the most prominent findings were presented. Also, due to the small size of the data, perhaps not all relevant collocations and clusters were revealed.

Nevertheless, this corpus-based analysis revealed interesting and enlightening insights into the Stock Market Investors Community. Corpus was without a doubt a great source of information and an effective way of analysing language. Following the analysis, a teacher can produce appropriate, helpful and interesting materials for an ESP (English for Specific Purposes) class of business, studying about the stock market.

NOTES:

1. As Pattington explains (1998), an analysis based on intuitions as well as corpus, is coordinated in the following way; the analyst has an intuition about something and with the help of concordancing tools checks the corpus data to see whether his or her intuition is feasible or not. It is also possible to discover something that was not previously suspected.
2. Using present simple tense for a past action is a typical journalistic style (Evans, 2000).

APPENDIX:

First 120 word forms in the Stock Market Investors Community Corpus compared with the Birmingham Corpus:

SMIC	BC	WORD	SMIC	BC	WORD	SMIC	BC	WORD
1	1	THE	42		BONDS	83	131	ALSO
2	3	AND	43	33	ONE	84		DATA
3	4	TO	44	38	WHICH	85		EARNINGS
4	6	IN	45		BOND	86	64	INTO
5	2	OF	46	142	DAY	87	74	OTHER
6	5	A	47	50	BEEN	88	161	LAST
7	11	IS	48	30	WE	89	128	STILL
8	7	THAT	49		WEEK	90		POINTS
9	15	ON	50	37	WERE	91		TRADING
10	26	THIS	51		WAR	92	19	HAD
11	77	WILL	52	149	AGAIN	93	59	VERY
12	27	ARE	53	51	OUT	94	110	MANY
13	9	IT	54		ECONOMY	95	68	WELL
14	13	FOR	55	46	NO	96	174	MR
15	18	BE	56	183	YEAR	97		STOCK
16	17	AS	57	42	THEIR	98		EVEN

17		MARKET	58	39	AN	99	8	I
18	25	NOT	59		STOCKS	100	135	HERE
19	10	WAS	60	92	DOWN	101	53	DO
20	24	HAVE	61	103	AFTER	102	81	BECAUSE
21	20	BUT	62		RALLY	103	72	PEOPLE
22		MARKETS	63	63	SOME	104	111	GOOD
23	28	OR	64	14	YOU	105	87	ANY
24	29	BY	65		DOW	106		IRAQ
25	41	WHAT	66	70	TIME	107	65	THEN
26	22	AT	67	73	ITS	108		WALL
27	16	WITH	68	80	JUST	109	86	SEE
28	61	HAS	69	145	OFF	110	136	LONG
29	45	ABOUT	70	99	NEW	111	175	ONCE
30	34	ALL	71		FED	112		TREASURY
31	21	THEY	72		STREET	113		HOUSING
32	40	SO	73	56	WHO	114		REPORT
33	48	UP	74	44	WOULD	115	133	SHOULD
34		U	75		RATES	116	75	ONLY
35		S	76	83	OVER	117	60	CAN
36	55	MORE	77	118	MAY	118		TODAY
37	66	NOW	78		THAN	119		FRIDAY
38	35	THERE	79		ECONOMIC	120	197	END
39	43	IF	80	91				
40	32	FROM	81					
41		EQUITY	82	49				

Source: Developed by the author

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A HYPERGEOMETRIC MODEL FOR INFORMATION RETRIEVAL

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ABSTRACT

Response time in an information system can be improved by reducing the number of blocks accessed when retrieving a document set. One approach is to restructure the document base in such a way that similar documents are placed close together in the file space. This ensures a greater probability that documents will be co-located within the same block. This paper is based on a file sequencing algorithm proposed by in [Lowden 1985, Moghrabil (1996)] and attempts to improve the aforementioned algorithm. Three sequencing algorithms are considered. The effect of associating weights to key terms during document sequencing is the major area of interest. A study of the algorithms' performance is conducted using statistical and experimental methods of these algorithms. In specific, statistical formulae are employed to predict the algorithms' behavior on a random sample.

Keywords: Clustering; Hypergeometric Models; Term Weighting; Database; Statistical Models; Information Retrieval.

1. INTRODUCTION

Generally speaking information retrieval is a discipline involved with the organization, structuring, analysis, storage, searching and dissemination of information. Information retrieval systems are designed to make available a given stored collection of information items with the objective of providing, in response to a user query, references that would contain the information desired by the user. In other words, the system is intended to identify which documents the user should read in order to satisfy his/her information requirements.

It is common, in information retrieval, to suppose that each document is indexed by a set of content identifiers that are variously known as key terms, index terms or subject indicators. This would require the application of some automatic or manual indexing technique to the full text or some surrogate of the documents in order to identify the key terms to be used in their representation. In addition to the selection of index terms to represent documents, it is also common to associate weights that reflect the importance of each key term (Wong et al 1986).

In 1985, Lowden (Lowden, 1985) proposed a file sequencing algorithm to reduce the access time required for information retrieval. His work was extended by

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Thompson (Thompson, 1989) who introduced a similar algorithm that sequenced a file in a significantly reduced amount of time. His work included a large number of simulations to determine the effectiveness and duration of the algorithm. The conclusions obtained, while clearly indicating a reduced sequencing time, contained a number of unexpected and unexplained results.

The purpose of this paper is four fold:

1. To investigate various document classification algorithms and compare their performance during document retrieval.
2. To compare Lowden's and Moghrabi's sequencing algorithms to determine the effectiveness of each.
3. To investigate the effect of 'weighted-key terms' on the file sequencing efficiency of the above algorithms.
4. To analyze statistically the file sequencing algorithms in an attempt to explain the results obtained.

2. INFORMATION RETRIEVAL ISSUES

All search strategies are based on comparison between the query and the stored documents. The search strategies to be employed in an information retrieval system depend mainly on the file structure of the system. Different file structures would have different strategies and appropriateness for searching. Sometimes comparisons may only be achieved by comparing the query with cluster profiles (cluster representatives) indirectly.

The following Retrieval Models are mostly employed in the representation of data/document representatives and that suggest methods for comparing the similarity between a document and a query:

- (1) The Vector Space Model: represents both queries and documents by term sets and computes global similarities between them.
- (2) The Probabilistic Retrieval Model: is based on the idea that since relevance of a document with respect to a query is a matter of degree, then when the document and query vectors are sufficiently similar, the corresponding probability of relevance is large enough to make it reasonable to retrieve the document in answer to the query.
- (3) The Boolean Family of Retrieval Models: which compare Boolean query statements (i.e. the ones with AND, OR and NOT operators) with the term sets used to identify document content (Salton, 1989).

Matching a query with existing documents plays an important role in query processing. Different file organizations have been used to aid the matching process and the most common ones are the Inverted List and the Multi-list file organizations (Ashford, 1989).

3. DOCUMENT CLUSTERING

One disadvantage of conventional information retrieval methodology, using inverted index files, is that the information pertaining to a document is scattered among many different inverted-term lists. Furthermore, information related to different documents with similar term assignments may not be in close proximity within the file system. Hence, during retrieval, documents satisfying queries would not appear close together. This problem may be overcome by the use of *clustering* operations that group into common areas items judged to be similar (Salton, 1989).

In general, a clustered file provides efficient file access by limiting the searches to those document clusters which appear to be the most similar to the corresponding queries. At the same time, clustered file searches may also be effective in retrieving the wanted items whenever the so-called *Cluster Hypothesis* applies. The hypothesis states that closely associated documents tend to be relevant to the same request (Van Rijsbergen, 1979). According to the cluster hypothesis, it is obvious that storing similar documents together would reduce the time required for retrieval.

Various classification methods have been proposed by various researchers. However, for a good classification method, a few criteria should be emphasized:

- the method produces a clustering which is unlikely to be altered drastically when further objects are incorporated;
- the method is stable in the sense that small errors in the description of the objects lead to small changes in the clustering; and
- the method is independent of the initial ordering of the objects.

Two approaches of cluster-generation will be introduced next.

3.1. Hierarchical cluster generation

Two main strategies can be used to carry out the cluster generation. Firstly a complete list of all pair wise document similarities can be constructed, in which case it is necessary to employ a grouping mechanism capable of assembling into common clusters documents with sufficiently large pair wise similarities. Alternatively, *heuristic methods* can be used that do not require pairwise document similarities to be computed (Salton, 1989). The heuristic methods will be discussed in the next section.

When clustering depends on pairwise document similarities, a document similarity matrix is conveniently used as a starting point, followed by a comparison of all distinct pairs of matrix rows to be used for document clustering. Suppose there are N documents in total, the pair wise comparison of matrix rows produces $N(N-1)/2$ different pair wise similarity coefficients for the documents. No matter what specific clustering method is used, the clustering process can be carried out either *diversively* or *agglomeratively* (Jain, 1958). In the former case, the complete collection is

assumed to represent one complete cluster that is subsequently broken down into smaller pieces. In the latter, individual document similarities are used as a starting point, and a gluing operation collects similar documents into larger groups (Murray, 1972). In both cases, a document hierarchy called a dendrogram would be produced (Jain, 1988). Here the agglomerative process, which is more commonly employed in information retrieval systems, will be considered.

A simple outline for a hierarchical, agglomerative clustering process is given below:

1. Compute all pair wise document-document similarity coefficients.
2. Place each of the N documents into a class of its own.
3. Form a new cluster by combining the *most similar pair* of current clusters (i) and (j); update the similarity matrix by deleting the rows and columns corresponding to i and j and then calculate the entries in the row corresponding to the new cluster $i + j$.
4. Repeat step 3 if the number of clusters remaining is greater than 1.

Each item is thus placed in its own class and then the two most similar items are combined into a single class; the combining process is continued until only a single class of objects remains.

In *Single-Link* clustering, the similarity between a pair of clusters is taken to be the similarity between the *most similar* pair of documents, one of which appears in each cluster. Thus each cluster member will be more similar to at least one member in that same cluster than to any member of another cluster.

In *Complete-Link* clustering, the similarity between the *least similar* pair of documents from the two clusters is used as the cluster similarity. Thus each cluster member is more similar to the most dissimilar member of that cluster than to the most dissimilar member of any other cluster.

Group-average clustering is a compromise between the extremes of the single-link and complete-link Systems, in that each cluster member has a greater average similarity to the remaining members of that cluster than it does to all members of any other cluster (Murray, 1972).

It can be seen that a single-link system produces a small number of large, poorly linked clusters, whereas the complete-link process produces a much larger number of small, tightly linked groupings. Because each document in a complete-link cluster is guaranteed to resemble all other documents in that cluster (at the stated similarity level), the complete-link clustering system may be better adapted to retrieval than the single-link clusters, where similarities between documents may be very low. Unfortunately, a complete-link cluster generation is generally more expensive to perform than a single-link process.

3.2. Heuristic cluster generation

The hierarchical clustering strategies just described are based on prior knowledge of all pair wise similarities between documents. Therefore, the corresponding cluster-generation methods are relatively expensive to perform. In return, these methods produce a unique set of well-formed clusters for each set of data, regardless of the order in which the similarity pairs are introduced into the clustering process. Furthermore, the resulting cluster hierarchy is stable in that small changes in input data do not lead to large rearrangements in the cluster structure.

These desirable clustering properties are lost when heuristic clustering methods are used; heuristic methods produce rough cluster arrangements rapidly at relatively little expense. The simplest heuristic process, a *one-pass* procedure, takes the elements to be clustered one at a time in arbitrary order, requiring no advance knowledge of document similarities. The first document is initially taken and placed into a cluster of its own. Each subsequent document is then compared against all existing clusters, and is placed in a previously existing cluster whenever it is similar enough to that cluster. If a new document is not sufficiently similar to any existing cluster, the new document forms a cluster of its own. This process is continued until the last element is processed.

A somewhat different heuristic clustering method is based on identifying individual documents that lie in dense regions of the document space, that is, documents surrounded by many other documents in close proximity. When such a document is located, it is used as a cluster seed, and all sufficiently similar documents in the same general vicinity then form a common class of documents. More specifically, a *density test* is performed sequentially for all documents not yet clustered. Whenever a document passes the density test by exhibiting a sufficient number of close neighbors, a clustering operation forms a new cluster around the document. The density-test process is then resumed with the next document not yet clustered. At the end of the process, some documents remain unclustered either because they failed the density test, or because they were too far removed from cluster seeds to fit into any existing cluster. Such 'loose' items may either be left unclustered, or assembled into cluster structures of their own (Salton, 1989).

Although the desirable properties of the hierarchical clustering strategies are not retained by the use of the methods described here, the time saved during clustering makes it advantageous to perform clustering heuristically.

4. DOCUMENT SEQUENCING

4.1. File system description

The records of the files in this paper are assumed to be of fixed length and the key-terms are confined to particular fields within the records. Such records serve as identifications or pointers to actual documents in the Information system.

A key conversion table is used to convert key-terms into numerical values within some range. Thus, every attribute will be mapped into its equivalent numerical value, according to the data it holds in that record. Thus, there is a mapping of records such that each record can be viewed as a vector X in a geometrical space and X can be represented as:

$$X=(x_1, x_2, x_3,..., x_n)^T \text{ \{where n is the number of key-terms\}}$$

Moreover, all of these X vectors, assuming that each is unique, can be written as a linear combination of the vectors of the basis in a unique fashion.

4.2. Hamming distance

Various measures and methods have been used for gauging the dissimilarity (or otherwise) between two given records. Let the difference between the i^{th} and k^{th} records be denoted as: $d(i, k)$

One such ‘cheap’ measure that we adopt in this work is the Hamming Distance (HD). Let HD stand for Hamming Distance; then, the difference between two records is given by:

$$d(i, k)=\sum_{j=1}^r f(x_{ij}, x_{kj}) \text{ \{where r is the number of attributes of a record\}}$$

where, $f(x_{ij}, x_{kj}) = 0$ if $x_{ij} = x_{kj}$

and $f(x_{ij}, x_{kj}) = 1$ if $x_{ij} \neq x_{kj}$.

The total hamming distance of the file is given by [2]:

$$HD=\sum_{i=1}^{N-1} d(i, i+1) \text{ \{where N is the total number of records\}}.$$

4.3. Clustering algorithm 1 (Moghrabi)

This algorithm is based on the specification of a threshold value. When the latter is satisfied, no further comparisons are made and an insertion of the record in the bucket that satisfied the threshold condition occurs, thus reducing the number of comparisons.

Given a file of size N and a dissimilarity index definition d , a complete weighted graph denoted by (N, d) may be constructed. Each of the N nodes in the graph

represents a record in the file space of size N . The weight $d(x, y)$ on each one of the $N(N-1)/2$ edges of the graph represents the dissimilarity between the 2 records x and y connected by the edge (x, y) . The algorithm's goal is to construct a short spanning path through the nodes thereby reducing to *near* optimal the overall hamming distance.

Thus, the operational steps of the algorithm can be specified as follows: a sub-path of the graph (N, d) is an ordered subset of the nodes in N . (P, m) denotes a path including a path P and an extra node m which is not in P . The path (P, m) is formed as follows:

Case 1: If P passes through more than one node then

- (a) find an edge (x, y) between nodes of P such that the value
 $[d(x, m) + d(m, y)] - d(x, y) \leq h$ (some user-defined threshold value)
or is minimal if no such edge exists
- (b) delete edge (x, y) and add edges (x, m) and (m, y) to form path (P, m)

Case 2: If P passes through exactly one node n then make path (P, m) as the edge (n, m) or (m, n) .

The clustering process starts by retrieving the records in the order they were originally arranged and finding an insertion position among the already clustered records in the new file. The position that is sought for each incoming record is one leading to an increase in hamming distance of the new file only by the threshold value specified or less. Thus, the incoming record starts at the front of the already clustered records and tries one position after the other until a position is found where the increase in hamming distance is less than or equal to the specified threshold value. If no such position is found, the insertion would take place at the position yielding the smallest increase in hamming distance even though it is greater than the specified threshold value, which had been kept track of during the search.

The increase in hamming distance ranges between 0 and r inclusive, r being the number of attributes per record. It is 0 when the incoming record is placed adjacent to a record that it is identical to. The increment is r when the record is placed between two records it does not have a single common attribute with and the two records also do not have any common attribute.

The higher the threshold value, the fewer positions the incoming record needs to try before it finds itself a satisfactory position. A threshold value equal to r results in a total number of comparisons equal to the number of records in the file minus two since the first two records do not need any comparisons. With such a threshold value, no clustering is done and the resultant file turns out to be a copy of the original file.

A low threshold value implies a higher number of positions tried and, therefore, a greater number of comparisons. For example, with a threshold value of 0, and if the records in the file are unique, no position tested will be satisfactory. Incoming records will all end up being placed at the position giving rise to the smallest increase in hamming distance. This is the optimal ordering of the records which is $O(n^2)$. Thus, a wise choice of the threshold value is essential.

4.4. Clustering algorithm 2

This clustering algorithm, before doing any physical clustering, starts matching each record to one of the nodes of the already built query history tree. The tree maintains a history of the most frequent queries posed to the IR system. In other words, it tries to assign each record to the most frequent query that it satisfies. It is a single pass process which takes each record of the file, traverses through the tree and assigns it to the query with the highest frequency (or priority) that it satisfies. It stops when the file is exhausted.

Once the first phase is over, the second phase of clustering starts which is the real physical clustering of the file. It starts reading the file in sequence and puts the records that satisfy the same query in contiguous physical positions. Those records that did not satisfy any of the queries of the query tree are clustered according to a specified threshold value following the steps of algorithm 1. In other words, while the first part of the resultant file consists of buckets of records that belong to the same query, the second part consists of a sequence of records that are clustered according to a dissimilarity index which in our case is the hamming distance.

Thus, if a record was assigned to a query during the first phase of the algorithm, then its position in the new file will be at the end of the current sequence of records that satisfy that query. If a record does not satisfy any of the queries, then the clustering algorithm will fetch a position starting from the first record of the first bucket of the second part of the file trying to place it in a position where the increase in hamming distance is less or equal to the threshold value specified.

Those records that are assigned to the same query will be put in proximity to one another in the same bucket (and consecutive ones if they need more than one bucket). The clustering is based on the assumption that since these queries are asked very frequently, and consequently their probability of being asked again is very high, then by putting records that satisfy the same query in contiguous locations will result in the retrieval of the minimum number of blocks.

This strategy tries to make a compromise between the most frequent queries and the minimum hamming distance.

4.5. Document insertion

Document insertion by both types of classification methods is the same: insertion is done by looking up the file in the same way as in query processing. The document to be inserted is treated as a query. It is then inserted into the location where its neighbors are most similar to it.

For hierarchical clustering, the document is inserted into the cluster which members are most similar to it.

For file sequencing, an incoming record is inserted into a location that results in the lowest increase in the total Hamming Distance.

4.6. Document deletion

Document deletion, like insertion, is also treated like query processing. When such a document is found, it is deleted from the file.

It is less of a problem to hierarchical clustering since the document is only taken out from the cluster it is in. Only when the cluster is too small (i.e. less than the pre-set threshold) would a file reorganization be required.

For file sequencing, since the neighbors of each document are quite similar to each other, deletion of a few documents would not cause many problems. However when deleting a large number of documents, file reorganization may be necessary.

Suppose there are N documents in total, the hierarchical cluster-generation methods would require $N(N-1)/2$ pair wise document similarity coefficients. In order to sort them in descending order for clustering, it would require a total of $O(N^2 \log N^2)$ operations.

The file sequencing algorithm would require $O(N^2)$ comparisons for document insertions. The hierarchical-generation algorithms are therefore more expensive than the file sequencing algorithm. However, files generated from file sequencing are more sensitive to update operations. Therefore there is a trade-off between efficiency and effectiveness.

In the next section a few heuristic modifications of the file sequencing algorithm will be introduced. Their efficiency and effectiveness will be investigated both experimentally and statistically.

The performance of different sequencing algorithms with key term weighting will be analyzed both experimentally and statistically with the help of computer programs.

5. NEW SEQUENCING METHODS

5.1. Key-term weighting

According to the original work of Lowden [Lowden 1985] all key terms are of equal weight. However in real life some key terms are more important than others and therefore would have higher chance to appear in queries. In order to simulate this

situation, a weight is now given to each key term. During sequencing, records containing key terms with higher weights would have higher likelihood to be clustered together. It can help reduce the number of block accesses during query processing. The approach can be achieved by modifying the method of calculating the Hamming Distance. The idea can be illustrated by the following example.

Suppose there are seven key terms (a, b, c, d, e, f, g) with weights (1, 1, 2, 1, 1, 4, 3) respectively and two records R1 and R2 of the following form:

R1 = < a, b, C, d, e >

R2 = < b, C, e, f, g >

By the original method of calculation of Hamming Distance, i.e. each key term is of equal weight, HD (R1, R2) would be equal to 2 since only b, C and e are in both records.

According to the new key term weighting scheme, a, b, d and e are normal key terms while C, f and g are more important key terms and therefore have higher weights. The magnitude of the weights reflects the importance of them in comparison with the normal key terms. Under this key term weighting scheme, the new HD(R1,R2) would be evaluated as follows:

$$\begin{aligned} \text{HD(R1,R2)} &= \text{original HD} - \sum [\text{weight}(\text{key term in common}) - 1] \\ &= 2 - (1 - 1) - (2 - 1) - (1 - 1) = 1 \end{aligned}$$

The performance of all three sequences with and without this key term weighting scheme will be investigated. Their performance under the adjustment of the weights of key terms, number of attributes in queries and the size of a block will also be investigated.

In addition to simulating the performance using computer programs, it can also be estimated by statistical methods. The experimental results will be compared with the theoretical results so as to validate their correctness.

The total Hamming Distance of an unsequenced file is dependent on its characteristics such as the number of attributes in a record and the number of possible key terms. It is therefore possible to estimate its total Hamming Distance with the use of some statistical models.

The experimental result will be compared with the theoretical statistical predictions in order to assess the effectiveness of the statistical estimates.

5.2. Choosing thresholds for sequencing 2

According to the key term weighting scheme, it is clear that different thresholds are needed for key terms with different weights. Some thresholds may be more effective than others to a particular set of weights. Therefore choosing a suitable threshold for a particular situation is crucial.

Thresholds may be chosen according to experience or by statistical estimation. Both approaches will be carried out to investigate the effect of different thresholds. It is possible that an optimal threshold could be found which suits all situations.

This part will be carried out using a statistical technique called *Multiple Regression*. It is a general statistical technique through which one can analyze the relationship between a dependent or criterion variable and a set of independent or predictor variables. The value of the dependent variable can also be predicted by the values of the set of independent variables.

The results from Regression Analysis will be justified by a series of statistical *Hypothesis Testing*.

The Hamming Distance of the sequenced files will depend on the number of attributes in a record, the number of possible key terms and their respective weights. Multiple Regression will be used to find out their relationship. The result can help to predict the Hamming Distance of the sequenced files before sequencing is carried out.

Apart from the factors mentioned above, the structure of the unsequenced file is an important factor which affects the resulting Hamming Distance of the sequenced files. If the relationship between the Hamming Distance of the sequenced files and the unsequenced one can be found, it may be possible to predict the Hamming Distance of the sequenced files in advance. Multiple Regression will be used to investigate this relationship.

6. EMPIRICAL RESULTS

6.1. Hamming distance of the unsequenced file

The unsequenced files are generated such that each key term (attribute) is represented by a random number. It is possible to estimate the Hamming Distance of an unsequenced file with the help of statistical probability distribution theories since the probability of a specific record being generated is known.

Since each key term can only appear once in each record, sampling is therefore done by *Simple Random Sampling without Replacement (SRSWOR)*. Let r be the number of available random numbers and n the number of attributes in a record, the number of possible unique records to be generated will be equal to rCn . That means the probability of each record being generated is equal to $1/rCn$.

After the first record has been generated from the set of rCn , the probability of the second one having identical "key terms" as the first one follows a *Hypergeometric* distribution.

Suppose there are r preferred objects out of a population of N objects. A sample of n objects is taken from these N . The probability of having x preferred objects in this sample is equal to:

$$Ncx[r / n \dots r-(x-1) / N-(x-1)][(N-r)/(N-x) \dots \{(N-r)-(n-x-1)\} / \{N-(n-1)\}]$$

$$= \{rCx \quad N-RCN-X\} / NCn$$

The first record of the unsequenced file, having n distinct attributes, is drawn from a population of r key terms. For the second record, the key terms are drawn from the same population but with n key terms which are already present in the first one. Therefore, the probability of having x key terms equal to the first one is:

$$P(X) = ncx \quad r-ncn-x / rcn.$$

As records are generated independently from each other, when generating the k record, the probability of having x matches with the $(k-1)$ record is still equal to $p(x)$.

According to this principle, the total Hamming Distance of the file can be estimated by calculating the expected value of the Hamming Distance. When the number of matches is x , the Hamming Distance between the two records is $(n-x)$. Therefore, the expected total Hamming Distance is:

$E(\text{total HD}) = (n - 1) * \sum_{x=0} (n - x) p(x)$, where n = total number of records in the file.

Experimental results generated from computer programs are compared with the values obtained from this expression. A file size of 1000 was used. The result is plotted in Figure 1. The experimental results would be closer to the theoretical values if the points are distributed near to the diagonal. From the figure, it is clear that the results are quite satisfactory.

6.2. Choosing threshold for sequence 1

When sequencing the records according to the key term weighting scheme with Sequence 2, different thresholds would be needed for different weights of the key terms since insertion of new records can only be done if the increment in total Hamming Distance is less than the threshold. If the threshold is set too high, the records will not be sequenced at all. If it is too low, the number of comparisons will be too high. Therefore, choosing suitable thresholds is crucial for getting satisfactory sequenced files.

In order to set a reasonable value for the threshold, the first thing to consider is the possible Hamming Distance between two records. The threshold should be at least smaller than the mean of the possible Hamming Distance. That means insertion can only be done if the records are at least 50% similar to each other. Otherwise, the

insertion would be meaningless.

To simplify the situation for analysis purposes, during the experiments the number of attributes in a record is fixed to 10 and only one key term will have a higher weight. All other key terms have weights equal to one.

Let w be the weight of one of the key terms. If there are x key terms in common within two adjacent records and they contain the higher-weighted key term, the Hamming Distance between these two records will be $[(10-x) - (w-1)]$. On the other hand, if they do not contain the higher-weighted key term, the Hamming Distance between them will be $(10 - x)$. Therefore, the following relationship can be obtained:

TABLE 1: POSSIBLE HD BETWEEN ADJACENT RECORDS AND THE PROBABILITY OF ATTAINING THEM

Number of matching Key-terms between 2 records (x)	Possible HD	Presence of higher weighted key-term	Prob. (HD/x)
10	1-w	y	0.5
	0	n	0.5
9	2-w	y	0.5
	1	n	0.5
1	10-w	Y	0.5
	9	n	0.5
0	10	-	1

According to the description in section 6, the number of matches between two records follows the Hypergeometric Distribution. Hence the expected value of the Hamming Distance between two records would be equal to:

$$E(HD) = \sum \text{possible HD}_i * P(HD_i \cap X) \\ = \sum \text{possible HD}_i * P(X) * P(HD_i/X)$$

It is obvious that any threshold higher than this value would be meaningless. Using some calculations, the following threshold values are obtained:

TABLE 2: MAXIMUM THRESHOLDS FOR DIFFERENT VALUES OF WEIGHT

W	Maximum Threshold
1	5.0
2	4.5
3	4.0
4	3.5
5	3.0

An experiment has been done to investigate the performance of different thresholds. The result is shown in Figure 2. A ratio of the total Hamming Distance to the number of comparisons of records is plotted. Sequence 2.n means the threshold is being set to n. It is very clear that a significant decrease in the Hamming Distance is found when the threshold is smaller than 4. In addition Sequence 2.2 can approximate Sequence 1 very well under all three different values of the weights. This matches the theoretical result given above: if the weight is not greater than 5, a satisfactory result will be obtained if the threshold is not greater than 3.0.

As a threshold of 2 is very suitable for all the values of weights used in the experiments, the threshold of Sequence 2 will be fixed to have a value of 2 for the remaining experiments.

6.3. Performance of the sequences during Query Processing

6.3.1. Percentage reduction in Block Accesses during Query Processing

Our experiments have revealed that the percentage reduction in block accesses would be highest when the number of attributes in queries is around 3. When the number of attributes in queries is too small or too large, the percentage reduction is decreased.

This trend of percentage reduction is due to the distribution of the records matched. When there is only 1 attribute in each query, a large number of records in the file would be matched with the queries. Therefore whether the records are sequenced or not does not have much effect on the number of block accesses.

When the number of attributes in each query is large, the number of records in the file that match with the queries would be very limited. Therefore, even when using the sequencing algorithms that are quite efficient, the number of block accesses would not be greatly reduced.

The maximum value of the percentage reduction in accesses can be estimated by using statistical methods. The probability of a query matching a particular record is given by:

$$P(\text{matching}) = n/r \cdot \dots \cdot (n-x+1) / (r-x+1),$$

where, n = number of attributes in a record, x = number of attributes in the query and r = number of possible key-tems.

The probability of obtaining y records in a file that matches the query can be found with the help of this equation. It is also possible to estimate the percentage reduction in block accesses.

The expected number of block *accesses* in the unsequenced file when there are y matches is approximately equal to y if y is not greater than the number of blocks in the file. This is because the matched records may be distributed among all the blocks in

the file. If y is greater than the number of blocks in that file, the expected number of block accesses would be equal to the number of blocks in the file.

In the sequenced file, the estimation of number of block accesses could be done by making the assumption that sequencing will place all matched records as close as possible. Therefore the expected number of block accesses would be equal to $((y-1) \text{ div } \text{block_size}) + 1$.

The difference between these two expected values is the reduction in block accesses after sequencing. With this value, it is possible to approximate the expected percentage reduction in block accesses with different number of attributes in queries. It is given by the following equation:

$$\begin{aligned} & \sum_{y=0..N} E(\% \text{ reduction in block accesses} \mid y) P(y \text{ matches}) \\ &= \sum_{y=0..N} E(\% \text{ reduction in block accesses} \mid y) {}_N C_y p^y (1-p)^{N-y}, \end{aligned}$$

Where, N = no. of records in the file and $p = p(\text{match})$.

The results of the above estimation are summarized in table number 4.

The percentage reduction in block accesses in this table is much greater than the experimental values, as the estimation is based on the assumption of optimal sequencing which can never be attained even with Sequence 1. Although the estimated values are not directly comparable with the experimental ones, they still show a trend which is very similar to the experimental one: the maximum reduction is attained when the number of attributes in queries is around 3.

**TABLE 3: OPTIMAL PERCENTAGE REDUCTION IN BLOCK ACCESSES
WITH DIFFERENT NUMBER OF ATTRIBUTES IN QUERIES**

Number of Attribute in Query	% Reduction
1	49.55
2	75.87
3	88.83
4	88.96
5	87.22
6	81.21

6.4. Evaluating the key-term weighting scheme

The objective of the key term weighting scheme is to increase the likelihood to cluster the records containing important key terms together so as to reduce the number of block accesses during query processing.

The performance of the sequencing algorithms under the scheme is compared with their performance when rating all key terms with equal weight. The results are shown

in Table 4 and 5. The number of attributes in queries is 3, and the weight of one of the key terms is set to 3 or 5.

TABLE 4: AVERAGE NO.OF BLOCK ACCESSES
sequencing without weight
avg. no. of block accesses

block size	5	10	15	20
unsequenced	84.06	66.07	53.84	44.33
1	57.23	44.27	37.87	32.86
2	59.31	46.20	39.11	34.02
3	58.76	46.01	38.87	33.95

TABLE 5: AVERAGE NO. OF BLOCK ACCESSES WHEN THE WEIGHT OF THE HIGHER-WEIGHTED KEY TERM IS 5
sequencing with weight
avg. no. of block accesses

unsequenced	84.06	66.07	53.84	44.33
1	55.54	42.15	35.17	30.18
2	66.42	51.05	41.97	34.81
3	64.74	50.00	40.72	33.91

TABLE 6: AVERAGE NO.OF BLOCK ACCESSES WHEN NO WEIGHT IS USED
sequencing without weight
avg. no. of block accesses

unsequenced	82.86	65.33	53.57	44.08
1	56.60	44.53	37.60	33.08
2	59.14	46.07	38.70	33.92
3	58.90	46.36	39.22	34.12

TABLE 7: AVERAGE NO. OF BLOCK ACCESSES WHEN THE WEIGHT OF THE HIGHER-WEIGHTED KEY TERM IS 5
sequencing with weight
avg. no. of block accesses

unsequenced	82.86	65.33	53.57	44.08
1	53.49	40.08	32.78	28.29
2	69.52	51.24	40.62	33.28
3	69.38	51.46	40.54	33.09

As can be seen from the tables, the sequencing1 algorithm l's performance is

improved with the use of the key term weighting scheme; it conforms to the objective of the scheme.

The results of Sequence 2 and 3 were contradictory: the number of block accesses increases when weighting is involved during sequencing. Since the Hamming Distance between two records would be reduced if they contain the higher-weighted key term, it is obvious that the increment in total Hamming Distance would be much smaller with the use of the key term weighting scheme. Although both Sequence 2 and 3 can adequately cluster the records containing the higher-weighted key term together, due to the relatively small Hamming Distance between them, they cannot sequence the records within this set comprehensively. Under the insertion strategy of these two algorithms, insertion within this set of records would not be as satisfactory as within the other records since the increment in total Hamming Distance during insertion may always fall below the insertion threshold. Intra-set sequencing would therefore be affected. As a result, both Sequence 2 and 3 become less efficient when sequencing under the key term weighting scheme.

The difference between the number of block accesses with and without the use of the key term weighting scheme is decreasing gradually while the block size is increasing.

7. CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The characteristics of various file clustering and sequencing algorithms were discussed. Heuristic modifications of them were also introduced.

Simulations of Lowden's file sequencing algorithm (Sequence 1) and its two heuristic modifications, Sequence 2 and 3, have been performed. A key term weighting scheme has also been introduced, and its implication on query processing was compared with files without the association of key term weighting. Empirical results indicated that Sequence 2 will have the best performance when the threshold is set equal to 2. The results also showed that the heuristic modifications are less effective with the association of key term weighting. However, the efficiency of file sequencing is significantly improved over the original algorithm (Sequence 1). Therefore the trade-off of efficiency and effectiveness is once more shown.

In addition to experimental analysis, statistical techniques were also employed to estimate the Hamming Distance of various kinds of files. The total Hamming Distance of unsequenced files

A key term weighting scheme has been employed during sequencing. However, to reduce complexity of the analysis, only one of the available key terms was associated with a higher weight during analysis. Further analysis would be possible for investigating the effect of associating various magnitudes of weight to the key terms, which would surely be a more interesting and challenging task.

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DISTRIBUTION OF MICROORGANISMS IN SOILS OF VICTORIA LAND AND THEIR BIOSYNTHETIC CAPABILITIES

VICTORIA GESHEVA*

ABSTRACT

*The microfloras of soil samples from Terra Nova Bay and Edmonson Point, Antarctica were observed by dilutions spread plate methods. Variety of mesophilic and psychrophilic microorganisms was detected and isolated. Bacteria, actinomycetes, fungi and microalga occurred. Some fungi as *Penicillium*, *Aspergillus*, *Paecilomyces*, *Cladosporium*, *Mortierella*, *Candida*, *Rhodotorula* were determined. The actinomycetes were considered to genera *Streptomyces* and *Nocardia* by aminoacid composition of their cell walls. Screening of bacteria and actinomycetes for biologically active products was carried out. Singular cultures produced enzymes, antibiotics and glycolipids.*

Keywords: Antarctic Soils; Victoria Land, Actinomycetes; Microbial Diversity; Enzymes; Antibiotics.

1. INTRODUCTION

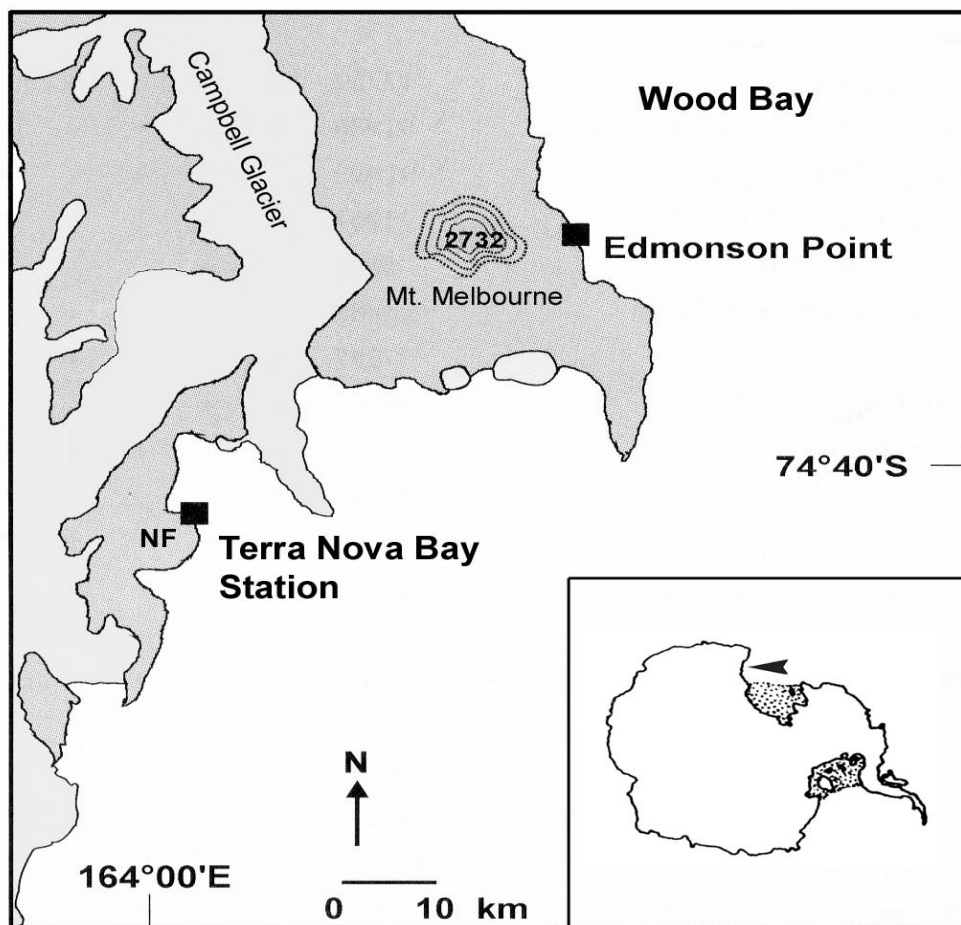
Victoria Land is a place of exceptional scientific attention because of its particular climatic conditions. This region possesses extensive ice-free geothermal areas with unique fauna, cryptogamic flora and microbiota (Fig.1). Interesting enough are the investigations devoted to Protozoa, Rotifera, Tardigrada and Collembola (Petz and Foissner, 1997; Valbonesi and Petz, 1998; Petz, 2001). The flora is presented by liverworts (*Cephaloziella exiliflora*), yellow-green moss (*Campilus puriformis*) which occur only here and lichen (Broady et al., 1987). The microflora comprises a range of unicellular and filamentous algae including Chlorophyta, Chrysophyta and cyanobacteria, realizing the cyanophacean nitrogen fixation (La Ferla et al., 1995). Ugolini and Starkey (1966), Broady et al. (1987), Del Frate and Caretta (1990), Onofri et al. (2000) determined some fungi in this region and found producers of enzymes.

The biological potential of bacteria in Terra Nova Bay has not been studied yet. In this paper the results of microbe distribution and biological potential of some microorganisms occurring in Victoria Land are presented.

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Acknowledgements: I would like to thank Dr. W. Petz for the soil samples, the soil descriptions and the map.

FIGURE 1: MAP OF VICTORIA LAND



2. MATERIALS AND METHODS

2.1. Soil samples

Three fell field soil samples were taken from 0-3 cm depth in Terra Nova Bay Station (Italy), northern Victoria Land, ($74^{\circ}41'S$, $164^{\circ}07'E$ and Edmonson Point ($74^{\circ}20'S$, $165^{\circ}07'E$), Antarctica. The samples were collected and described by Dr. W. Petz as follow:

Number 1: Terra Nova Bay. Parent material is Mt Abbot Granite.

Number 2: Terra Nova Bay.

Number 3: Edmonson Point. Parent materials are dark volcanic lavas and scoria.

2.2. Isolation and enrichment of microorganisms

The samples were treated by the dilution spread method described by Gesheva (2002). Cultivation was carried out at 4°C, 12°C and 25°C. The total number of microorganisms was calculated by plate counts and the results were treated statistically. Values of the statistical separate experiments were determined as a mean of five parallel assays \pm S.D.

2.3. Taxonomical grouping of isolates

The bacteria and fungi were isolated on appropriate media listed in Table 1. Growth temperatures, morphological and biochemical characteristics of the strains were studied according to Bergey's manual, Alexopoulos et al. (1966) and Larone (1995). Aminoacid composition of cell wall in actinomycetes has been assayed as described by Vasileva-Tonkova and Gesheva (2005).

2.4. Assays for antimicrobial and enzyme activities

Determinations for antimicrobial activities, α -amylase, protease, β -lactamase were carried out as it was described by Gesheva (2002). DN-ase and RN-ase were detected with DN-ase and RN-ase test agars. Keratinase or cellulose was determined after the growth on agar supplemented with leather hydrolyzate at concentration of 0.3 % (w/v) or a paper strip in mineral medium of Hutchinson.

3. RESULTS AND DISCUSSION

The amounts of bacteria and fungi are presented on Tables 1 and 2. The sample 1 shows the highest value of bacteria and fungi. The probe No.3 has low content of bacteria and fungi, actinomycetes, yeasts and single alga were detected. The typical actinomycetes consisted 47 % of total bacteria amount on mineral agar No. 1 at 28°C. Occurrence of two genera yeasts is not surprising because it is known that bacteria and yeasts serve as a food of protozoa. According to Valbonesi and Petz (1998) in Edmonson Point soils there are many species of Protozoa. Great diversity of mesophilic and psychrophilic fungi was detected in soil samples No.1-3 (Table 3). The majority of fungi were psychrophilic: *Alternaria*, *Aspergillus*, *Penicillium*, *Mucor*, *Rhodotorula*. Some of the fungi were chromogenic and contained a melanin which plays a protecting role against UV-radiation. *Cladosporium* and *Alternaria* were

TABLE 1: NUMBERS OF MICROORGANISMS IN SOIL SAMPLES FROM TERRA NOVA BAY

Medium	$\times 10^3$ CFU/g soil			
	28°C		12°C	
	Bacteria	Fungi	Bacteria	Fungi
Sample 1				
Meat extract pepton agar	21.0± 7.0	4.0±1.5	7.0±2.0	5.0±1.0
Czapek agar	1.1 ±0.1	9.5 ±3.1	5.0 ±2.0	30.0± 2.0
Küster agar	0.6 ±0.2	5.0 ±2.0	4.0 ±2.0	20.0± 4.0
Mineral agar No.1	3.3± 1.3	0.1±0.1	0.8±0.4	0.6 ±0.3
Maize extract agar No.6	4.1 ±0.2	0.4 ±0.2	3.5 ± 1.2	2.0 ±0.6
Oat meal agar	6.0 ±1.6	0.6±0.3	0.8±0.4	0.9 ±0.1
Sample 2				
Meat extract pepton agar	12.0 ±3.0	5.0±1.2	20.0 ±4.2	6.0±2.0
Czapek agar	16.7 ± 2.3	20 ±3.2	10.0 ±3.0	16.0± 1.0
Küster agar	1.6±0.4	6.5 ±0.5	0.3 ±0.02	4.0 ±0.8
Mineral agar No.1	2.0 ±0.5	13 ±1.6	10.0±3.2	15.0±4.6
Maize extract agar No.6	6.0 ±1.1	4.1±1.1	8.0 ±1.5	6.0±2.1
Oat meal agar	4.0±1.1	0.5±0.04	3.0±1.2	0.2± 0.03

TABLE 2: NUMBERS OF MICROORGANISMS IN SOILS SAMPLE FROM EDMONSON POINT

Medium	$\times 10^3$ CFU/g soil			
	28°C		12°C	
	Bacteria	Fungi	Bacteria	Fungi
Meat extract pepton agar	4.0± 0.6	0.1 ±0.01	0.5± 0.02	0.2± 0.01
Czapek agar	0.2 ±0.1	0.5 ±0.05	6.0± 1.4	10.0± 2.5
Küster agar	0.3 ±0.1	0.1 ±0.02	10.0 ±4.0	4.0 ±1.1
Mineral agar No.1	5.0± 0.5	0.1±0.03	2.0±0.7	4.6 ±0.3
Maize extract agar No.6	6.0 ±1.2	0.4 ±0.03	0.8 ±0.1	5.0± 0.3
Oat meal agar	1.0± 0.2	0.3± 0.01	0.1± 0.05	0.2 ±0.1

found in Edmonson Point similarly as Onofri et al. (2000). From soils in Terra Nova Bay *Penicillium*, *Aspergillus* and *Paecilomyces* were detected while Broady et al.

(1987) described the same genera in Mt. Melbourne. Ugolini and Starkey (1966) have reported about *Penicillium* in Mt. Erebus. Our results indicated that *Aspergillus* and *Penicillium* spp. are prevailed in Terra Nova and Edmonson Point. Similar results for dominance of two genera listed above were noted by Fletcher et al. (1985); Del Frate and Caretta (1990); Kerry (1990); Steiman et al. (1995); McRae and Seppelt (1999); Bradner et al. (2000) in other Antarctic regions.

TABLE 3: DISTRIBUTION OF FUNGI IN TERRA NOVA BAY AND EDMONSON POINT

TAXON	SAMPLE	
	Psychrophiles	Mesophiles
<i>Alternaria</i> sp.	3	
<i>Aspergillus</i> spp.	1, 2, 3	1, 2, 3
<i>Cladosporium</i> spp.	1, 2, 3	1, 2, 3
<i>Cladophialospora</i> sp.	3	
<i>Mortierella</i> spp.		1
<i>Mucor</i> sp.	2	
<i>Paecilomyces</i> sp.	1, 3	
<i>Penicillium</i> spp.	1, 2, 3	1, 2, 3
<i>Rhizotrichum</i> sp.		1
<i>Rhizopus</i> sp.	1, 3	
<i>Phialophora</i> sp.	2	
<i>Candida</i> spp.	1	3
<i>Rhodotorula</i> spp.	2	3
Nonidentified	1, 2, 3	1, 2, 3

The actinomycetes were rare in Antarctic soils (Boyd et al., 1966; Johnson et al., 1978; Greenfield, 1981, Gesheva, 2005). In soils of Mt Melbourne *Streptomyces coelicolor* and *Thermomonospora* were found (Broady et al., 1987). Actinomycetes detected in Terra Nova Bay and Edmonson Point, are signed to *Streptomyces* and *Nocardia* according to morphological, biochemical properties and amino acid composition in cell walls. The streptomycete strains had gray aerial and brown substrate mycelia. Some of actinomycetes and coryneform bacteria produced antibacterial and antifungal antibiotics (Table 4). Other strains formed extracellular enzymes or surfactants with glycolipid nature (Vasileva-Tonkova and Gesheva, 2004). Use of psychrophilic antarctic cultures may open new horizons in enzymology and biotechnology (Russell, 2000, Zechinnon et al. 2001).

TABLE 4: BIOLOGICAL POTENTIAL OF STRAINS ISOLATED FROM TERRA NOVA BAY AND EDMONSON POINT

Property	Coryneform bacteria	Streptomyces spp.
Antibiotic activity against:		
<i>Bacillus subtilis</i> ATCC 6633	3	5
<i>Sarcina lutea</i>	3	5
<i>Escherichia coli</i>	1	1
<i>Candida utilis</i>	2	3
<i>Cladosporium cladosporiodes</i>	2	3
Enzyme activity:		
α -amylase	4	12
protease	3	8
cellulase	2	5
DN-ase	1	3
RN-ase	1	2
Keratinase	2	4
β -lactamase	3	3
Production of glycolipids	3	3

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RADIATION SHIELDING ANALYSIS OF VVER-440 SPENT FUEL CASK

N. MIHAYLOV, M. MANOLOVA, S. BELOUSOV, KR. ILIEVA, and B. PETROV*

ABSTRACT

The modular code system SCALE-4.4 has been used for determination of characteristics of VVER-440 spent fuel assembly and for radiation shielding analysis of VVER-440 transport cask. The control module SAS2H has been applied for both determination of isotope inventory and neutron and gamma sources spectrum calculation. One- and two-dimensional radiation shielding analysis has been performed using the control modules SAS2H and SAS4, respectively. The obtained results for neutron dose rates have been analysed and compared with experimental data. As a result of the comparison, it may be concluded that the SCALE-4.4 code system is appropriate tool for radiation shielding analysis of VVER-440 spent fuel casks.

Keywords: Spent Fuel Cask; Radiation Shielding, Neutron Dose Rates; Dose Depending on Initial Enrichment; Isotope Inventory.

1. INTRODUCTION

The precision of modeling of the nuclide evolution in irradiated fuel is an important prerequisite for the accuracy of subsequent radiation shielding analyses. A related issue is the reducing nuclide inventory in irradiated fuel to a shorter list of important nuclides sufficient for predicting the radiation characteristics of typical storage and transport configurations. The choice of the SCALE code system as a tool for nuclide composition modelling is motivated by its wide applicability and the broad validation and verification experience in application of this system to various fuel designs.

In this paper, some results of radiation shielding analysis of VVER-440 spent fuel transport cask are presented. For a preliminary validation of SCALE4.4 for depletion calculations, SCALE Manual (1998), VVER-440 Post-Irradiation Examination data for fuel samples from Novovoronez NPP recently published in ISTC report, Jardine (2005), have been used. For the dose rates calculations, one- and two-dimensional geometry models have been applied. The necessary neutron and gamma sources and isotope inventory calculations for radiation shielding analysis have been carried out.

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The obtained results for neutron dose rates have been analysed and compared with experimental data.

2. METHODOLOGY

The modular code system SCALE-4.4 has been applied for determination of characteristics of VVER-440 spent fuel assembly and for radiation shielding analysis of VVER-440 spent fuel transport cask. The control module SAS2H has been used for determination of the spent fuel characteristics: neutron and gamma sources and isotope inventory, necessary for radiation shielding analysis. The neutron dose rates exterior to the cask have been calculated by the control modules SAS2H and SAS4. Also, by applying the axial power profile, the axial distribution of the isotope inventory at different cooling times has been determined.

Shielding Analysis Sequences (SAS2H and SAS4) are SCALE control modules developed for problem-dependent cross-section preparation and subsequent one- and two-dimensional shielding calculations, respectively.

The SAS2H control module provides a sequence that generates radiation source terms for spent fuel and subsequently utilizes these sources within a one-dimensional shielding analysis of a shipping cask. Using a prescribed reactor history and cooling time, the SAS2H module is able to determine the spent fuel characteristics (isotope inventory, heat generation, and radiation sources) and then subsequently compute the neutron dose rates at chosen distances from a specified shipping cask surface.

Six different functional modules are utilized by the SAS2H control module. The BONAMI module applies the Bondarenko method of resonance self-shielding for nuclides that have Bondarenko data included with their cross-sections. The NITAWL-II module performs the Nordheim resonance self-shielding corrections for nuclides that have resonance parameters included with their cross sections. For each time-dependent fuel composition, the XSDRNPM module performs 1-D discrete-ordinates neutron transport calculation based on various specified geometries of the reactor fuel assembly. The COUPLE module updates the cross-sections included on an ORIGEN-S nuclear data library with data from the cell-weighted cross-section library produced by the XSDRNPM module. The cross sections derived from a transport analysis at each time step are used in a point-depletion computation (via ORIGEN-S) that produces the burnup-dependent fuel composition. The ORIGEN-S module performs both nuclide generation and depletion calculations for the specified reactor fuel history. Also, this functional module computes the neutron and gamma sources generated by the fuel assembly. The XSDOSE module applies the angular flux at the surface of a shipping cask, as produced by XSDRNPM, to compute dose rates at specified detector positions outside the shipping cask.

The SAS4 control module performs a three-dimensional Monte Carlo shielding analysis of a nuclear fuel transport cask using an automated biasing procedure. Biasing parameters required by the Monte Carlo calculation are generated from results of a one-dimensional adjoint discrete-ordinates calculation. The SAS4 control module performs resonance self-shielding treatment with either the BONAMI or NITAWL-II functional module and cell weighting with the XSDRNPM functional module; then it carries out adjoint discrete-ordinates and Monte Carlo calculations, respectively, with the XSDRNPM and MORSE-SGC functional modules. MORSE-SGC performs a Monte Carlo simulation of the radiation transport through a cask and evaluates the dose rates exterior to the cask.

3. RESULTS

The neutron dose rate calculations have been performed for transport cask with 30 VVER-440 spent fuel assemblies, irradiated up to a burnup level of 30 MWd/kgU, at 3.6% initial enrichment of ^{235}U for cooling time $T_{\text{cool}} = 5$ years. The concentrations of actinides and fission products, and the neutron and gamma sources generated by a spent fuel assembly, which are needed for dose rates calculations, have been determined by the SAS2H control module. By the control modules SAS2H and SAS4, the neutron dose rates calculations of a transport cask have been performed.

The transport cask model in both x-y plane and y-z plane is presented in Fig. 1 and Fig. 2.

FIGURE 1: VVER-440 SPENT FUEL CASK. VISUALIZATION BY PICTURE, X-Y PLANE

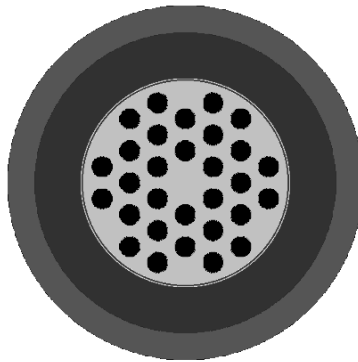
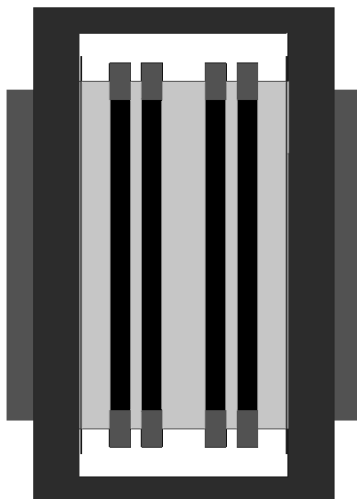


FIGURE 2: VVER-440 SPENT FUEL CASK. VISUALIZATION BY PICTURE, Y-Z PLANE



a. Spent fuel isotope inventory determination

Calculation and analysis of actinides and fission products concentrations at an initial enrichment of ^{235}U 3.6% for flat burnup 30 MWd/kgU at different cooling times: $T_{\text{cool}} = 0$ (discharge), 5 and 50 years of VVER-440 spent fuel assembly have been carried out. The comparison of the calculated and experimental results, Mihaylov, Manolova and Peeva (2006), shows that the concentrations of all nuclides are well predicted. On the basis of the calculated results and the comparison with the experimental data, it could be concluded that the SCALE 4.4 system can predict the spent fuel nuclide concentrations necessary for radiation shielding analysis reasonably well.

The isotope concentrations for axial burnup profile at $T_{\text{cool}} = 5$ years have been determined by the control module SAS2H on the basis of the CB3 benchmark problem, Markova (1998).

The obtained results have been used for radiation shielding analysis of a spent fuel cask. The necessary nuclide isotope inventory for determination of neutron and gamma sources have been used for further neutron dose rates calculations. They have also been used for criticality safety analysis with burnup credit implementation, Manolova, Prodanova, Strahilov, Mihaylov and Apostolov (2005). The list of

actinides and fission products whose concentrations have been calculated is as follows, Markova (1997): 12 major and minor actinides (U-235, U-234, U-236, U-238, Pu-238, Pu-239, Pu-240, Pu-241, Pu-242, Am-241, Am-243, Np-237) and 15 fission products (Mo-95, Tc-99, Ru-101, Rh-103, Ag-109, Cs-133, Nd-143, Nd-145, Sm-147, Sm-149, Sm-150, Sm-151, Sm-152, Eu-153 and Gd-155).

The isotope concentrations of actinides and fission products for flat burnup depending on the cooling time are presented in Fig. 4.

The axial dependence of isotope concentrations of actinides and fission products for $T_{cool} = 5$ years is presented in Fig. 5.

FIGURE 3: ISOTOPE CONCENTRATIONS AT $T_{COOL} = 5$ YEARS, DEPENDING ON THE INITIAL ENRICHMENT OF ^{235}U

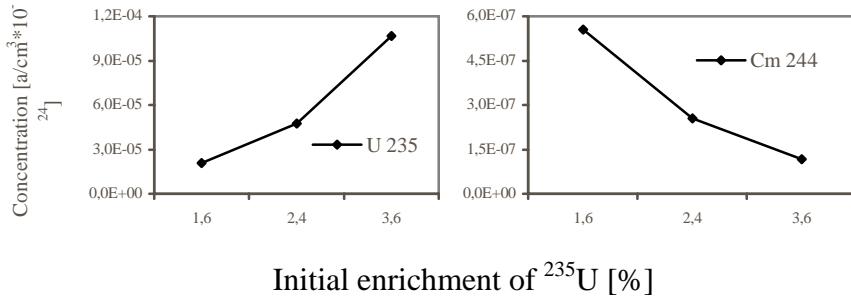


FIGURE 4: ISOTOPE CONCENTRATIONS FOR FLAT BURNUP DEPENDING ON THE COOLING TIME T_{COOL}

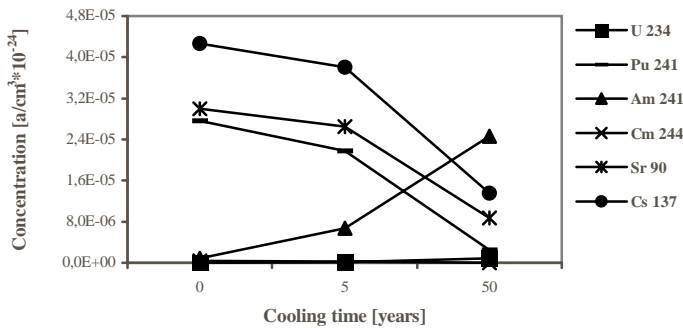
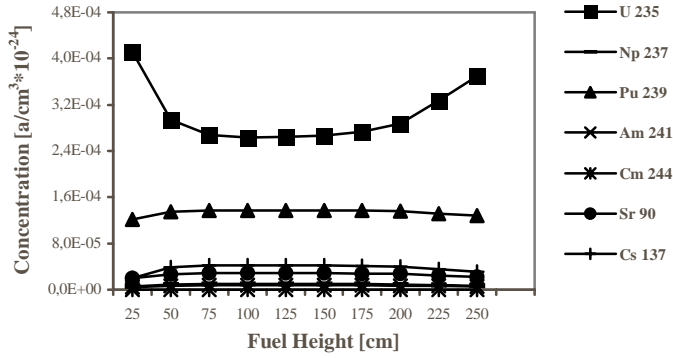


FIGURE 5: AXIAL DEPENDENCE OF ISOTOPE CONCENTRATIONS, $T_{\text{cool}} = 5$ YEARS



b. SAS2H one-dimensional calculations

By using the control module SAS2H, neutron dose rates calculations in radial direction of a transport cask with 30 spent fuel assemblies at 3.6% initial enrichment of ^{235}U have been performed. The neutron and gamma sources generated by the spent fuel assembly, which are needed for dose rates calculations, have also been determined by SAS2H.

In Table 1, the results for neutron dose rates at the surface of the cask are presented and compared with the experimental data, Safety Report (2005). The relative difference $\Delta D/D\%$ between calculated and measured neutron dose rates is less than 8%.

c. Neutron dose rate dependence on the initial enrichment

In Table 2, the neutron dose rate dependence on the initial enrichment of ^{235}U is presented. For these calculations, different enrichments have been applied: 1.6%, 2.4% and 3.6%. The dependence of the concentration of ^{235}U and ^{244}Cm at $T_{\text{cool}} = 5$ years on the initial enrichment of ^{235}U is shown in Fig. 3.

The obtained results show that with decrease of the initial enrichment of ^{235}U , the basic neutron source for spent fuel ^{244}Cm received by the ^{238}U chain increases, and the neutron dose rate also increases, respectively.

d. SAS4 two-dimensional calculations

Two-dimensional calculation in cylindrical geometry of neutron dose rates in radial and axial directions at 3.6% initial enrichment of ^{235}U has been performed by the control module SAS4.

The control module SAS2H has been used for preparation of the neutron and gamma sources spectrum, and the isotope inventory of the spent fuel assembly has been used for the neutron dose rates calculations performed by SAS4.

The results for neutron dose rates at the radial surface and at the top and bottom of the cask are presented in Table 3.

TABLE 1: COMPARISON OF CALCULATED AND EXPERIMENTAL RESULTS ON THE CASK SURFACE

<i>Results</i>	<i>Neutron dose rates [$\mu\text{S/h}$]</i>	$\Delta\text{D/D}$ [%]
<i>SAS2H</i>	57.984	- 7.43
<i>Experimental results</i>	62.640	---

TABLE 2: SAS2H CALCULATED RESULTS FOR DIFFERENT VALUES OF THE INITIAL ENRICHMENT OF ^{235}U , AT $T_{\text{COOL}} = 5$ YEARS

<i>Initial enrichment ^{235}U [%]</i>	<i>Neutron dose rates [$\mu\text{S/h}$]</i>
1.6	144.919
2.4	94.713
3.6	57.984

TABLE 3: SAS4 CALCULATED RESULTS

<i>Cask surface</i>	<i>Neutron dose rates [$\mu\text{S/h}$]</i>
Radial	60.970
Top	55.030
Bottom	49.520

4. CONCLUSION

Calculations of isotope inventory for flat burnup and for axial burnup profile at different cooling times have been performed. The obtained results have been used for radiation shielding analysis of a spent fuel cask. In addition, they have also been used for criticality safety analysis with burnup credit implementation.

The comparison of the calculated and experimental results shows that the concentrations of all nuclides are well predicted. On the basis of the calculated results and the comparison with the experimental data, it could be concluded that the SCALE 4.4 system can predict the spent fuel nuclide concentrations necessary for radiation shielding analysis reasonably well.

Based on the comparison of calculated and experimental results for neutron dose rates, it may be concluded that the SCALE-4.4 modular code system is an appropriate tool for radiation shielding analysis of VVER-440 spent fuel transport casks.

Future three-dimensional Monte Carlo shielding analysis of spent nuclear fuel performed by the SAS4 control module is required for more accurate calculations with the MARS (Multiple-Array System Using Combinatorial Geometry) functional module of the control module SAS4.

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CRITICAL ISSUES IN GOLF TOURISM DEVELOPMENT IN GREECE

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ABSTRACT

The tourism industry is changing. Tourists are becoming more demanding by seeking experiences rather than relaxation. Therefore, it is becoming more apparent that holiday destinations and resort companies need to consider the tourists' motivations for travel. This research study seeks to investigate the importance of segmenting markets, with particular attention to the sport tourism in Greece. The study also examines the benefits that the growth and expansion of golf tourism will bring to Greece. In the hospitality travel industry, psychographic segmentation is used effectively because it determines tourist categories in relation to the purposes of travelling. According to the results, there are millions of golfers around the world. Greece does meet all the criteria to be a popular golf destination and compete successfully with other Mediterranean countries. In addition, the country's overdependence on the "cheap" end of the global tourism market is compounded by its extreme "seasonality" characteristics. Therefore, developing golfing tourism could not only extend the tourism season but also contribute towards the development of quality tourism in Greece.

Keywords: Golf; Sport Tourism; Tourism Development, Greece.

1. INTRODUCTION

This research study investigates the golfing tourism in Greece and the benefits that its growth and expansion will bring to the country. It investigates the market segmentation with particular emphasis on the sport tourism. For this reason, secondary data from golf investment companies, such as JBR Hellas and INV golf investment, the Ministry of Tourism and other governmental and non governmental organisations was used to collect information related to the marketing segmentation and its techniques. Segmentation is a business tool used by organisations to target specific market groups and position themselves in a competitive way. An excellent example of the above is sport tourism that is an area of potential growth and already a number of Mediterranean countries are adapting their product offer to accommodate this. Sport tourism segments are the main focus for this study. For the purpose of this study, golf tourism will be investigated, as golf is an area of present and future development with

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many opportunities and challenges for everyone involved in the hospitality industry. As such, the importance of this study for all stakeholders in this industry is based on the critical question whether Greece should develop its product offer and target the golfing tourists or not.

2. MARKETING SEGMENTATION AND TOURISM MARKET MOTIVES

A number of organisations have recognised the need to develop new products and services by identifying and targeting new market segments in order to increase their competitiveness on an international level. The most effective way to achieve this is through marketing segmentation. The tourism market is characterised by many different groups of people with dissimilar needs and wants. The aim of marketing segmentation is to categorise these different groups' wants and needs into distinct groups of buyers who might require separate products and services, but also separate marketing mixes (Kotler *et al.*, 2003). Indeed, marketing segmentation is not only focused on market needs and wants, but also on breaking down the overall market into self-contained and relatively homogeneous subgroups of consumers, where each group possesses its own special requirements and characteristics (Bennett, 2001). Overall, marketing segmentation is a valuable tool that organisations use to select those groups of customers that their product and services are best fit for and also a way for them to improve the effectiveness of their marketing decision-making (Lancaster & Reynolds, 1995).

According to Kotler *et al.* (2003), there are four different ways to segment the tourism market. The first one is geographic segmentation, where the market is divided into different geographic units, such as nations, states, regions, counties, cities or neighborhoods. In 2007, Greece received almost 19 million tourists in total (General Secretariat of National Statistical Service of Greece, 2008), most of them travelling from Germany, the United Kingdom and France (Ikkos, 2003). Therefore, these three countries are the most important to Greece in terms of geographic segmentation.

Secondly is the demographic segmentation, which consists of dividing the market into groups based on demographic variables such as age, gender, family life cycle, income, occupation, education, religion, race and nationality (Kotler *et al.*, 2003).

Thirdly is the psychographic segmentation that divides buyers into different groups based on social class, lifestyle and personality characteristics. In the hospitality travel industry, psychographic segmentation is used prolifically, in terms of considering the motives that drive consumers in their purchasing decision (Kotler *et al.*, 2003). According to Halloway (2004), the main motives are: seek for relaxation, religious reasons, visiting friends and relatives, business, sports and health. The above tourism motive segments are important for hospitality organisations, because they determine the tourist categories in relation to the purposes of travelling and as such these organisations can develop facilities according to traveller requests. Thus,

countries like Greece need to investigate these motivations for travel in order to consider whether their country will be able to absorb and successfully satisfy the increasing number of tourists.

Last but not least is the behaviour segmentation. Buyers in this category are divided into groups based on their knowledge, attitudes, use or response to a product. Behaviour variables are the best starting point for building market segments (Kotler *et al.*, 2003).

On the whole, the tourism market has grown considerably (INVgolf Investment, 2003, 2004 and 2005) and many tourists have emerged seeking more than just a 'sun, sand and sea' holiday package. Sport tourism -a tourism segment that combines holidays with fitness and natural activities - is an area that should be considered as an expanding market offering great growth potential for all hospitality organisations. As a result of the above, numerous countries and large hospitality organisations, have already heavily invested in sports tourism, mainly due to their geographical location, such as ski resorts in France or Italy. The biggest factor in this significant growth is not only the changes in travellers' demographics and psychographic characteristics, but also the evolving behaviour of tourism consumers. An example of growing tourism destinations countries are Croatia and Greece, which now promote themselves as sport tourism destinations. More particular, Greece was the host country of the 2004 Summer Olympic Games, which were held in Athens, and that attracted millions of athletes, visitors and spectators. This event had a significant effect on Greece, as it increased its popularity and creditability as a first class sports tourism destination for demanding travellers (Hede, 2005). This can be succeeded by giving emphasis on hosting events of special interest, such as the golf and sailing sport events which can develop new forms of tourist activities (Mintel, 2004; Kotokolias, 2006).

3. DEFINE SPORT TOURISM, TOURISM SPORT AND SPORT TOURISTS

Focusing on the reasons why people travel for sport activities and events, sport tourism and tourism for sport have a different concept. More specifically, sport tourism considers a temporary visitor staying at a specific area, where an event occurred and whose primary purpose is to participate in a sport event, with the holidaying region being a secondary attraction. On the other hand, tourism for sport is when a specific group of tourists travels in a particular place, outside their usual environment, and participates in recreational sport activities as a secondary activity. Thereby, sport tourists are a group of people, or individuals, who travel in places outside or inside their usual environments, to participate actively or passively in recreational or fitness sport activities. As a result, hospitality organisations can be further segmented sport tourists according to their requirements and needs (Brent and Adair, 2004; Hinch & Higham, 2004). In addition, there are other classifications of sports tourism that the Greek government needs to take into account in order to

develop the country into one which accommodates golf tourists. In general, sport tourism classifications include consumers known as Sport Participation Tourism whose primary purpose is to participate in sport and the Sport Training category deals with tourists who wish to learn and improve their current sporting skills. Table 1 provides an up to date classification of sports tourism, together with a summary to clarify each segment.

4. GOLF SPORT ACTIVITY

Golf is considered to be one of the most delicate sports, which tops the list as the most potentially lucrative form of special tourism. It is a sport activity that has grown in popularity and is now played, both professionally and recreationally by people of every age, sex and race. The reason for its increasing popularity is based on the fact that it is a sport activity which combines pleasure, leisure and fitness. There are currently 61 million golfers around the world and 8 million of those live in Europe (Owners Direct, 2005; Business & Finance, 2004).

5. GOLF TOURIST SEGMENTATION

Demand for golf takes on various forms. 'A Golfer' cannot be characterised by homogeneous behavioural patterns and psychological structures. Indeed, there are many different segments of golfers who are looking for offers that suit their motivational needs. A breakdown of future golfers according to their motives, attitudes and behaviour reveals a variety of segments (Ikkos, 2003).

These segments are:

- ***Tradition Golfers in Clubs:*** These are mainly individuals that play golf in their leisure time and as part of their holiday activities. Most of them are looking for standard quality when it comes to the facilities of resort hotel and the golf courses. Tradition golfers may well spend the rest of their leisure time at the beach, marina, and casino or just simply enjoy the natural environment.
- ***Prestige-Oriented Golfers:*** Generally, prestige-oriented golfers are members of established golf clubs and they have high expectations with regards to the standards and quality of golf resorts and courses. A good example would be the Shadow Creek in Las Vegas and Valderrama in Spain.
- ***Convenience-Oriented Golfers:*** looking for convenience of the resort and golf with high standards of service and facilities. The leisure-time and the golf activities are the main expectation of these golfers target market.
- ***Sport-Oriented Golfers:*** Sport oriented golfers consider golf as a sport challenge. Normally, these kinds of golfers look for well design courses, high quality of service, high standards of accommodation and excellent quality golf facilities.

- **Smart Golfers:** Usually, people of this target group have very high expectations of the facilities and courses of the golf resorts destination. The term “value for money” and better golfing opportunities, is a very important concern for them. France is considered to be a country that satisfies this need by offering golfing packages which include three nights’ accommodation, meals and two rounds of golf for a minimum cost.

- **Golf Tourists:** In this target market, tourists consider their leisure vacation with playing golf, as a sport activity.

These are just some of the golf segments that Greece could consider if they wish to become a renowned golfing destination in Europe and especially in the Mediterranean area. Greece could consider the huge market opportunities with novices, newcomers and beginners by making golf accessible and fun, but also by providing excellent packages with “value of money” and superior golfing opportunities. According to Johnson (2005) “the harsh reality for Greece is that most of the existing golf courses are lacking in attractiveness and quality of auxiliary tourist services and most of the developments of new golf courses and resorts are trapped in the Greek bureaucracy and in the ineffective tourism policy and legislation” (Datamonitor, 2005).

Golf tourists may be individuals or groups, academy groups of novices, business groups, golf clubs and societies or just occasional golfers. On the basis of the above, the Greek Ministry of Tourism needs to distinguish measurable, substantial, actionable, and accessible segments of the potential tourist market in order to attract more golf tourists and become more competitive. The Greek Ministry of Tourism also needs to develop products and services to fit the needs of the target market. One of the most effective ways to remain competitive is to clearly position itself in the desired market segment and establish an effective brand strategy. Indeed, all golfers look for professionally organised and managed golf resorts in countries where the weather conditions in the winter months are suitable for playing golf. Greece offers a 12-month golf season, with great leisure and cultural activities throughout the country. As a result, Greece has all the prerequisites to become an attractive investment golf area and one of the most popular golfing destinations across Europe and Worldwide (GTC Golf & Tourism Consulting, 2006; Ikkos, 2003; Fairway, 2001).

6. GREEK TOURISM AND BENEFITS OF GOLF HOLIDAY TOURISM

During the last few years, Greek tourism has had a big increase in international tourist arrivals. It is estimated that the travel and tourism activity in Greece will grow by 4.1 per cent per each year, in real terms, from 2006 to 2015 (WTTC, 2005). However this increase will be mainly during the summer months as Greece is a popular destination for “sun holidays”. As a result, the country’s overdependence on the “cheap” end of the global tourism market is compounded by its extreme “seasonality” characteristics. As a result, this seasonality minimises the tourism period

and inactivates all available infrastructures in the winter months (Ikkos, 2003). Table 2 illustrates the large increase of the international tourist's arrival in Greece, since 2000.

Greece is clearly an underdeveloped country when it comes to attracting golf tourists and has already missed the opportunity to draw the attention of millions of golfers. In fact, even though Greece has on average 14 million international tourist arrivals per year, only 1.25 per cent (185,000) of them visited Greece for playing golf. Table 3 indicates the latent demand for playing golf in Greece, in comparison to incoming tourists in 2003. In addition, Greece has only 6 golf courses and resorts and has less than 1,500 Greek golf players. Portugal, on the other hand, is a country of similar size and economy with Greece and in 2006 it had 67 golf courses and resorts. Currently there are over 3,000 golf clubs in the UK (Intel, 2005). Other European countries have a large number of golf courses with France having over 548, Spain having over 266 and Italy having over 238 (The Business & Investment World of Greece, 2005). On the other side, Turkey has 9 golf courses and Cyprus only 3 professionally organised and managed golf resorts (INVgolf investment, 2005).

The above countries are the major competitors of Greece in the golfing tourism. The main reason behind this discrepancy is the fact that these countries are closer to European traditions and influences and the local population has been more receptive to the expansion of golf in recent years. Another reason is that the competition has already made conscious efforts to develop effective strategies associated with golf tourism and its development. In relation to these issues, Egford, President of Greek National Team Coach stated that "Greece's golf enthusiasts think it is for Greece to become a leader in golf tourism in Mediterranean area" (Ikkos, 2003; The Business & Investment World of Greece, 2005). Thus, the Greek Ministry of Tourism, through its strategic tourism plan tries to promote the development of a series of supportive tourism infrastructure, which will benefit the development of special forms of tourism like golf resorts and will relieve the intense seasonality that characterises the demand for Greece. Varnas President of the Cretan Golf club said that "golf tourism can save Greek Tourism from the quagmire of failing standards and revenues" (The Business & Investment World of Greece, 2005).

Similarly, Greece will receive many benefits from the growth of golf tourism. Golfing holidays is an industry that has grown in many countries all over the world in the last decade. The reason is that golfer tourists are high income tourists and tend to spend much more than regular tourists. Studies show that golfers are a very powerful and selective group of sportsmen-tourists, who spend an average of 40 per cent more than regular tourists. Overall, golf tourists look for a golf destination that combines the following: social events in and around the golf course, leisure opportunities, such as bars, restaurants, good weather, and good quality golf courses that include good upkeep and tee-times, price and accessibility. Golfers travel usually in the winter and spring months (during November to April), and this would have a positive effect on tourism growth in Greece.

As previously noted, Greek tourism is characterised with strong seasonality and thus holidays in Greece are mainly considered as a summer activity. As a result, most tourists arrivals concentrate in the two peak summer months of July and August. Indeed, 82 per cent of tourists visit Greece during the summer season. Table 5 illustrates the low percentage of tourist arrivals in Greece, during the winter season, in comparison to visitors to other European countries. Therefore, part of the Greek growth strategy would be to provide travel opportunities to extend the holiday season. In particular, golf tourism is a growing market that Greece has to consider as a new market segment. Golfers use to travel especially during the winter months, in destinations with year-round warm climate. As a result, Greece, with year round sun and mild climate is an ideally place for the golfers' off season holidays. The country has all the prerequisites for attracting golfers, but it needs to build new, modern and quality golf courses and resorts.

The development of golf as a form of tourism is a process that takes time and a lot of money, but in Greece there is a big investment interest to create new golf resorts (Ikkos, 2003; Mintel Reports, 2004). As stated by Papadimitriou, Chairman of the Hellenic Centre for Investment (ELKE), "golf real estate and resorts have become major factors driving property development in the United States, Spain and Portugal" (Business & Finance, 2004). However, after years of benign neglect, golf in Greece is beginning to attract attention from the international investment community. According to Doulas, Deputy Economy and Finance, almost 40 Greek and international investor groups have submitted proposals to build golf courses and resorts in several places around the country. Thus, the Greek government is trying to make the process of getting licenses and permits easier, by hitting any bureaucratic obstacles and modernising land regulations. Also, the publisher and editor of *Golf and Tourism in Greece* magazine, Abravanel stated that "golf investment is reaching substantial levels in Greece. There are 11 planned resorts complexes totaling EUR 2 billion in budgeted outlays" (INVgolf, 2005).

Some new developments of golf courses and resorts still in progress are:

- Crete, Cavo Sidero, the UK's Loyalward Group is building on a EUR 750 million golf resort, promising two 18-hole courses.
- Crete, Matala, Belgan investors are planning a major integrated residential and leisure golf project.
- Peloponnesian Area of Pylos, a luxurious golf resort complex is being developed in this area.
- Pelion Area of Volos, a luxurious golf resort with 18-hole courses and a five star hotel.

Continuing with the benefits of golf tourism, studies have shown that golfers enjoy taking their family holidays in places where there are golf courses and tend to spend more than other tourists. Golf tourism contributes to the improvement of the infrastructure, recreation facilities and to the provision of high levels of standards and

services. In addition, Spiliotopoulos, Minister of Tourism in Greece, indicated that “golf tourism can become the main factor towards quality tourism in our country” (INVgolf Investment, 2007).

Greece has a great opportunity to attract millions of golfers from all over the world and especially from the European markets. Table 6 indicates that golf tourists will increase significantly by 2010 and reach approximately 82,400,000 million players. Greece, should take advantage of the golfers boost, not only to increase its tourism profits but also to raise its international golfer's arrival. However, Greece needs to develop new golf courses and resorts in spectacular locations all over the country and generate new advertisement and promotion campaigns, to get the attention of golfers. Apart from this, it needs to segment these markets effectively, according to their needs, wants and characteristics. Greece needs to improve the existing infrastructure and facilities, and enhance the quality of the tourism products and services. The 2004 Olympic Games helped Greece boost its economy of growth and improve its infrastructure activity, but the Greek government needs to do more in order to make Greece a world-class “golf destination”. Greece can be the destination for teeing off and not just for summer activities. It has all the prerequisites for a great game of golf to be played all year round,” as Papadimitriou, chairman of the Hellenic Centre for Investment, underlined (Business & Finance, 2004).

On the other side, the development of new golf courses and resorts, the improvement of the existing infrastructure and the selection of golf market segments, need the acquiescence and the leading of the Greek government. According to Doukas “the Greek government is committed to assist the development of new golf courses throughout the country as part of its tourism modernization drive”. Also, the minister said that “the government is forming a new inter-ministerial committee to facilitate investment in golf, because it is one of the most promising areas for growth in Greece”. At the same time, the Greek Prime Minister Karamanlis, during an internal cabinet in February 2005, decided to “do all that is needed to disentangle major investment projects from the maze of red tape and contradictory licensing legislation” (Johnson, 2005). Thus, Heilmann, founder and director of INVgolf magazine stated that “now is the perfect time for business people to consider Greece as a golf investment location. The new legislation, the interest by the government and the locations available today translate into unprecedented opportunities that will pay off handsomely” (INVgolf, 2006).

For the first time, the Greek Ministries of Tourism, Economy and Finance, Development and Physical Planning support local and foreign investors to invest in new hospitality projects that will contribute to improve the quality of Greek tourism and increase its stock of up market ancillary services to 45 golf courses. According to Andreadis, Chairman of Greek Association of Tourist Enterprises (SETE), “Greece should have at least 24 golf courses and resorts by 2010 to match Spain's corresponding population and resort location parameters” (International Reportsnet,

2005). Moreover, the Ministry has established a development plan for the Greek Tourism 2004 to 2010, and some of the main goals of it, is the development of golf tourism in Greece. In addition, the Ministry has established separate promotion and advertisement campaigns, concentrated to attract golfer's tourists (INVgolf Investment, 2005; Ikkos, 2003).

7. CONCLUSION AND RECOMMENDATIONS

Golf tourists represent a very powerful source of income; they are a selective group of people who are knowledgeable about the different golf destinations around the world. However, there is not one single golf market for a country or for a specific destination. There are many sub-markets and each one has its own characteristics and needs. Greece has all the prerequisites to attract all these market segments and be considered a world-class "golf destination". In the hospitality industry, tourist psychographic segmentation is an important part to select groups of people with similar holiday needs and similar characteristics. The growth of sports tourism over the last decades has become an increasingly important part of tourism development strategies around the world. The biggest factor of this growth is not only the changes in demographic and psychographic characteristics of travellers, but also the necessity for new alternative forms of holidays. As such, sport tourism is an alternative form of holidays which combines pleasure, leisure, nature and fitness.

Sport tourism has many market segments that each country possibly will attract as new tourists. In particular, golf tourism is a sport activity that has grown in popularity and is played both professionally and recreationally by millions of people around the world. Moreover, golf holidays, is an area that Greek hospitality organisations have to consider as a new market segment. Greece is clearly an underdeveloped country when it comes to attracting golf tourists because it has only 6 golf courses and resorts. However, Greece has all the prepositions and criterions to be a popular golf destination and also compete with other Mediterranean countries. Taking into consideration all the above, it is concluded that Greece and especially investment companies, should invest in golf holidays and activities. It is a great opportunity, because with the growth and expansion of golf tourism, Greece will increase its annual tourism income and minimise tourism seasonality. Overall, it is vital that new facilities and amenities are developed, at least 30 to 40 more golf courses and resort in a period of five to eight years. Last but not least, Greece needs to improve its accommodation and service standards, and also offer special golf value packages.

APPENDICES

TABLE 1: TOURISM MOTIVES

Tourism with Sport Content. Typically, in this category sport activities and opportunities are not the prime purpose of the tourism trip and may be not organised as a part of the holiday package.
Sports Participation Tourism is the category, where sport is the prime purpose of the trip. Also sport participation tourists, take part in sports events and it is and it refers to sport holiday.
Sport Training Category is much narrower than the other sports tourism types. It comprises, quite simply, sport tourism trips where the prime purpose is sport instruction or training.
Sport Events Category , refers to tourism where the prime purpose of this trip is to take part in sports events, either as a participants or a spectator.
Luxury Sports Tourism is not defined by reference to the nature of the sport involved in the trip. Rather it is the quality of the facilities and the luxurious nature of the accommodation and attendant facilities and services that define this type of sport tourism. Finally, in this type of sport tourism, classified the Golf, where consider luxury sport with quality in facilities and features.

Source: (Weed & Bull, 2004, pp. 123-124)

TABLE 2: ANNUAL TOURISTS ARRIVALS IN GREECE

2000	2001	2002	2003	2004	2005	2006	2007
13.568.000	14.679.000	14.919.000	14.785.000	14.267.420	15.938.131	17.283.910	18.754.593

Source: (General Secretariat of National Statistical Service of Greece, 2008)

TABLE 3: GOLF TOURISM DEMAND IN GREECE

Year: 2003 Country of Origin	Incoming Tourists to Greece	Latent Demand for Golf Tourism to Greece
Canada	49,383	8,296
Denmark	350,930	7,420
Germany	2,347,434	12,181
Japan	73,350	5,868
Netherlands	673,405	8,134
Norway	329,469	7,259
Sweden	502,683	29,795
United Kingdom	2,916,508	60,186
United States of America	199,737	18,975
Other Countries	-----	26,401
Total Number	-----	184,515

Source: (Ikkos, 2003)

TABLE 4: TOURISM ARRIVALS PER SEASON IN 2000

Countries	Winter Season (October to March)	Summer Season (April to September)
France	30 per cent	70 per cent
Germany	42 per cent	58 per cent
Great Britain	32 per cent	68 per cent
Malta	35 per cent	65 per cent
Norway	41 per cent	59 per cent
Spain	37 per cent	63 per cent
Turkey	31 per cent	69 per cent
Greece	18 per cent	82 per cent

Source: (Homendis, 2000)

TABLE 5: GOLFERS' PREDICTIONS

	2000	2010
United States of America	26,446,000	28,400,000
Europe	3,353,861	4,978,000
Worldwide	61,000,000	82,400,000

Source: (Ikkos, 2003)

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INSTITUTIONAL EXPLANATIONS OF BUDGETING CONTROL SYSTEMS: THE CASE OF CAVES IN GREECE

NIKOS D. KARTALIS*

ABSTRACT

The article uses the New Institutional Theory of Sociology (Di Maggio and Powell, 1983, 1991) to examine how the budgeting control systems inform decision making in the Greek show caves. The study focuses on four show caves selected out of the eight main shows caves operating in Greece. Three of the studied caves are owned by the local municipal council (one jointly with a prefectural council) and the fourth by the Anthropology Association of Greece. Data is gathered from multiple sources via questionnaires, semi-structured interviews, discussions and documentary evidence focusing on the role of accounting information in the day-to-day operation of the show caves.

Keywords: New Institutional Theory; Management Accounting; Budgeting; Case Study; Greek Show Caves.

1. INTRODUCTION

Scott (1987) argues that since the early period, institutional theory and research have developed rapidly and currently occupy a prominent place in the field of organizational analysis. Zucker (1977) and Powell and DiMaggio (1991) have written several papers in this field. Meyer and Rowan (1977) argue that one of the central problems in organizational theory is to describe the conditions that give rise to a rationalized formal structure. They argue also that as markets expand, the relational networks in a given domain become more complex and organizations in that domain must manage more internal and boundary-spanning interdependencies.

Size and technology (Woodward, 1965) increase the complexity of internal relations, and the division of labour among organizations increases boundary-spanning problems (Aiken and Hage, 1971; Freeman, 1973; Thompson, 1967). The result is that organizations are structured by phenomena in their environments and tend to become more isomorphic with them. Berger and Luckmann (1967) argue that organizations structurally reflect socially constructed reality. Organizations both deal with environments at their boundaries and imitate environmental elements in their structures. Meyer and Rowan (1977) argue that there are some myths which describe the

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elaboration of complex relational networks in society or some myths that describe specific structural elements. For example, laws, educational and credentialing systems and public opinion then make it necessary or advantageous for organizations to incorporate the new structures. Meyer and Rowan stated that the myths generated by particular organizational practices and diffused through relational networks have legitimacy based on the supposition that they are rationally effective.

Furthermore, Meyer and Rowan (1977) stated that there are many organizations which, in order to institutionalize their goals and structures, seek charters from collective authorities. First, powerful organizations force their immediate relational networks to adapt to their structures and relations, and second, powerful organizations attempt to build their goals and procedures directly into society as institutional rules.

Moreover, Meyer and Rowan (1977) stated that isomorphism has some crucial consequences for organizations: one, they incorporate elements which are legitimated externally, rather than in terms of efficiency; two, they employ external or ceremonial assessment criteria to define the value of structural elements; and three, dependence on externally fixed institutions reduces turbulence and maintains stability.

According to Meyer and Rowan, this enables the organization to remain successful by social definition, thus avoiding failure. Isomorphism in terms of institution identifies the process by which organizations tend to adopt the same practices and structures over time in response to common institutional pressures which may exist at the individual, organizational or organization field level.

This does not lead to radical changes in the organization field because isomorphism makes organizations seem identical without necessarily improving them. In order to maintain institutional legitimacy, organizations tend to adopt bureaucratization and other forms of standardization. DiMaggio and Powell (1983) suggest that governments, which often have ambiguous goals and unreliable performance measures, resort to legitimacy rituals to demonstrate social and economic fitness. In 1971, Silverman first attempted to introduce institutional arguments to the study of organizations. Reed (1985), however, argues that Silverman, in his subsequent work, shifts his focus to an ethnomethodological emphasis on the multiple meanings and rationalities associated with the participants' phenomenological accounts of their common situation. Moreover, in 1977 two influential articles by Meyer and Rowan and Zucker tried subsequently to introduce institutional arguments into organizational sociology with the micro-environmental perspective.

The other foundation work of the New Institutional Theory is the article by DiMaggio and Powell (1983). New Institutional Theory is based on the premise that organizations respond to pressures from their institutional environments and adopt structures or pressures that are socially accepted as the appropriate organizational choice. DiMaggio and Powell (1991) suggest that the term "New Institutionalism" rejects the previous model of rational-actor. Further, DiMaggio and Powell suggest the idea of an interest in institution as an independent variable and an interest in properties

of the supra-individual unit of analysis that cannot be reduced to aggregations or direct concentrations of individuals' attributes or motives.

New Institutionalism thus rejects the assumptions of methodological individualism and individual rationality. Furthermore, new institutional theorists believe that people live in a socially constructed world that is filled with meanings and rules that are taken for granted and as a result their actions are neither intentional nor conscious. Selznick (1996) notes also that corporate rationality derives from the actions of shareholders. Furthermore, he argues that what is rational for the shareholder is not necessarily rational for the enterprise. Indeed, institutional theory is a voice of resistance to the culture of short-sightedness exercised in the shareholder's rational choice. According to Scott (1987), the increased pressure on organizations for legitimacy, resources and survival results in such organizations yielding to institutional pressures for change.

2. RESEARCH METHOD

The article adopts a case study approach because of its ability to deal with a variety of evidence such as documents, artefacts, interviews and observations. A case study is an empirical inquiry that investigates a contemporary phenomenon within a real-life context where the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used (Yin, 1994). Yin (1994) argues that case study research represents the intersection of theory, structures and events. It is a scientific approach that attempts to ground theoretical concepts with reality. Yin (1994) identifies three types of uses of case study research. The first is the exploratory use which relates to pilot studies that can be used as a basis for formulating more precise questions or testable hypotheses. The second is a descriptive case study, which is an attempt to describe, for example, what happens when a new product is developed and launched on the market. The third type of case study is the explanatory approach, which attempts to find explanations for organizational practices.

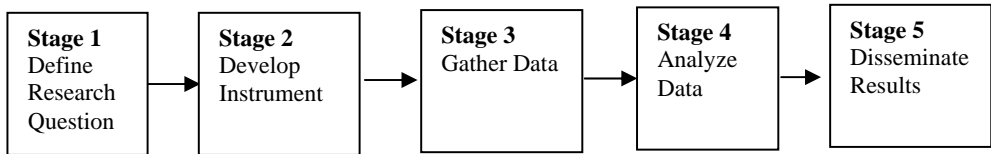
The case research process can be broken down into five critical stages as suggested by Yin (1994). The first stage of the research process involves defining the research question, which includes building a body of knowledge and developing theory. In the second stage, the researcher needs to develop measurement instruments to capture the data for future analysis. In the third stage the data are gathered, and in the fourth stage the data are analyzed. In the final stage the researcher disseminates the research findings or composes a case-study "report" (Figure 2.1).

Qualitative designs call for the persons most responsible for interpretations to be in the field, making observations, exercising subjective judgement, analyzing and synthesizing, all the while realizing their own consciousness. For mainstream quantitative researchers, these interpretations and judgement create problems of reliability, which is often judged by the ability of an experiment or study to be

replicated by another researcher who reaches identical conclusions. However, the identity and interpretation of the researcher need not affect the validity of the study.

Pre-understanding refers to such things as people's knowledge, insights and experience before they engage in a research project (Gummesson, 1991).

FIGURE 1: STAGES FOR CASE STUDY RESEARCH
(AFTER YIN, 1994)



Gummesson (1991) notes that an individual's pre-understanding is primarily influenced by five elements: (1) a knowledge of theories; (2) a knowledge of techniques; (3) a knowledge of institutional conditions; (4) an understanding of social patterns which encompasses a company's cultural value system of often tacit rules of cooperation, social intercourse, communication, etc; and (5) the personal attributes of the researcher, such as intuition, creativity, vitality and human understanding. While a lack of pre-understanding will cause the researcher to spend considerable time gathering basic information, pre-understanding can be a serious threat to the objectivity of a study as it introduces bias on the part of the researcher. Those who are able to balance on the razor's edge use their pre-understanding but are not its slave (Gummesson, 1991). It is essential that pre-understanding be subject to change, that the researchers be aware of their own paradigm, selective perception, and personal defence mechanisms; moreover, they must also take into account the fact that their own possible insecurity or other personality factors may influence their research (Gummesson, 1991).

In qualitative methods, including *case research*, coding represents another tool to support researchers during early analysis. Codes are especially useful tools for data reduction purposes and having a coding scheme in an appendix helps to facilitate a replication or an extension to a given *study* and allows the reader to see the logical link between the theoretical model and the codes.

Visual displays are an important part of qualitative analysis (Yin, 1994) and displaying data is a powerful means for discovering connections between coded segments (Crabtree and Miller, 1999). Data displays also transmit synthesized information to the reader, which can help demonstrate the chain of evidence and ultimately the findings.

3. BACKGROUND OF THE COMPANIES

Ballas and Venieris (1996) adopted a case study approach to investigate the role of management accounting practices in Greek companies. This method has the advantage of uncovering the actual processes of decision making and the role of management accounting information. In addition, the process of the interview allowed the researchers to explore broader issues about decision making and its context. While there are many caves in Greece, only a few have been exploited and only eight are opened all year round. Questionnaire data was collected from the four show cave companies which the in-depth case study focuses on. Limiting the case study to only four caves was necessary to provide an in-depth analysis of the underlying management accounting practices. The experience the researcher has as a manager of one of the show caves helped in the data gathering process. Thus while some questions were developed based on the literature, others were developed based on the researcher's personal experience.

To explore the role of management accounting in decision making in the caves, the research was divided into three phases:

1. Phase one included gathering background information about the organizations by means of a questionnaire (see Appendix 1).
2. Phase two consisted of gathering various documents with details of decision making, data about them, and discussion of them.
3. Phase three consisted of conducting semi-structured interviews with the managers of the show caves.

Phase 1: Background Information

Gaining access to the companies was not difficult because as a manager of one of the show caves the researcher was able to communicate easily with the managers of these companies, from the general manager down to junior managers. The questionnaires were designed in such a way as to include diverse questions to fully understand the parameters of the use of accounting information and decision making in the organizations. Some questions focused on the background of the employees, such as age, educational background, position at the company and number of people supervised, and these were directly addressed to the person being interviewed and the questionnaire filled in by the researcher. This was helpful because this meant that the questionnaire was filled in on time. At this particular stage of the study, the researcher had plenty of time to spend with each interviewee and was thus able to inquire into the operation of the company.

Phase 2: Documentary Evidence and Discussion

In the second phase of the study, the researcher gathered documents from the companies and also had conversations with individuals in all the organizations. First, the researcher visited different departments, had discussions with different individuals in various positions, and asked for various particulars that corresponded to different documents, particularly ones of some historic interest.

Second, the researcher focused on the procedures and processes of decision making and the role of accounting information. The answers given show that the person responsible for gathering information in the decision-making processes is the general manager in each of the four show cave companies. The aim of the questions and of the conversations generally was to gain an understanding of historic and other changes that have contributed to the development of the processes followed in decision making, as well as to the development of the companies. The discussions as well as the documents gathered helped the researcher comprehend the decision-making processes followed in the organizations. The purpose of gathering evidence of decision making processes was to get to know both the historic and the current processes used by managements in decision making and the underlying accounting practices that informed their decision making.

The organizational structures of the companies, as well as their goals and intentions, were also examined. Documents helped to support the answers of those questioned, as well as to throw light on matters left unclear in the discussions. The major problem at this point was that several documents were classified as confidential and therefore were not allowed off the company's premises. However, the researcher took notes of every relevant document.

Phase 3: Formal Interview

The third phase involved interviews with managers at various levels of decision making. A number of managers in each organization were interviewed (see Table 4.3), with each of the interviews lasting two hours on average. The interview questions concerned accounting information, such as budget, cost management and procedures followed in decision making. It was understood by the interviewees that the main thrust of the research was about decision making. The interaction between interviewer and interviewee at times led to results that could not have been predicted. Some flexibility in the asking of questions sometimes times led to the interview being extended, sometimes lasting over two hours. Many times during the interview interesting issues arose which the researcher had not thought of.

The interview questions were divided into eight categories:

1. *Interviewee's Background:* Questions were asked to gather personal data such as

age, sex, position in the company, position in a specific department, how many years the employee had been employed by the current company or had worked in a similar company, and last but not least, any degree and/or professional qualifications the employee had obtained. These kinds of questions helped the researcher to build up a background for each participant, allowing him to associate the decision-making process with the historic and professional orientation of every interviewee.

2. *Company background:* Questions related to both historic and recent data of the company, for example, the length of time that the company had been active in a particular sphere, its total turnover and net profit, its actual status, the number of its employees in permanent and/or seasonal positions. Other questions asked whether the company was active in a seasonal environment or not, and the number of accountants and economists employed by it. Others concerned the way in which the company's services were promoted, whether accounting information had influenced a specific promotion, and if there was a separate accounting system.
3. *Budget:* Questions were specifically related to the budget, asking about the interviewee's degree of participation in the formulation of the budget; whether there was a budget formulated every year; whether its implementation was supervised and who was responsible for its formulation and monitoring. Other questions asked whether the manager exerted influence over the budget, and if so to what extent; how frequently subordinates were consulted about the budget's formulation, and to what extent the company's performance had affected the budget's formulation.
4. *Role of budget:* Questions asked whether the budget was used as a bureaucratic tool or a management tool in the company; whether its formulation and use were compulsory; whether it was used as a planning tool; whether it was used to motivate the employees; and finally, whether it was used as a tool to evaluate the company's or the employees' performance. Open questions asked whether the interviewee had had the chance to voice his/her opinions about how he/she perceived the goal of the budget in the company.
5. *External factors impacting the budget and others:* Questions concerned any external influence on the preparation of the budget, specifically whether the mayor or the chairman of the board of directors had influenced its formulation; what were the principal problems in preparing the budget and the main advantages of drawing one up; how and how often were the budget and the employees' performance evaluated; who was responsible for performance evaluation; and whether there was a penalty to anyone who had not reached the performance goals.
6. *Role of accounting information:* Questions concerned the degree to which

accounting information influences decisions, such as invoice-related decisions; the design of new products or services; the engagement of new staff; or decisions concerning investments. Other sources of information affecting decision making, besides economic / accounting information, are also inquired into, for example, some questions concerned changes that had been made in the companies during the last few years and about the extent to which decision making was influenced by the board of directors.

7. *External factors impacting decision making:* Questions concerned the influence of external factors on decision making in general, for example, concerning pressure brought to bear by the mayor, other political institutions or banks; pressure from members of the board of directors or managers of other organizations, either out of antagonism or on behalf of customers; pressure by professional bodies; pressure designed to increase the community's or society's satisfaction with the company's management of the caves; pressure to copy other, successful organizations.

The research process started with the researcher making contact with the people he sought to interview by telephone, before meeting them in person. The personal interview followed the telephone contact, with the researcher setting the questions in context. The interview procedure was that interviewees would be given the questions beforehand in order to prepare themselves so they would be able to highlight some evidence. As a result of successive interviews, some of the questions were changed or new ones introduced – the more time elapsed in the research process, the more the environment became familiar, and so even more questions related to hidden aspects of the given company came to light. The only problem affecting the interview process was that no tape-recordings were able to be made as the participants wished to remain anonymous, and so the researcher had to make extensive notes during each interview. This led to some interviews going over time, with questions at times having to be repeated and interviewees' answers having to be clarified.

3.1. Selection of organizations

There are four major show caves in Greece, each run by a separate organization or "company". Three of the show cave companies are controlled by the municipalities (one jointly with the local prefecture) in which they are located and one is controlled by the Anthropology Association of Greece. The four companies are therefore largely public rather than private enterprises (although one or two operate as if they were private enterprises), with their respective "owners" making appointments to their boards of directors. The show cave companies have competitors, make their own decisions and are evaluated on their profitability. Most of the companies running show caves were established in the 1990s, with a few established three decades ago. Their average turnover is about €300,000 and their average net worth €135,000. The average

number of employees within the companies is 33, half of whom are casual employees. None of the companies operates only seasonally.

The research was conducted by a survey of four show cave companies, followed by intensive case studies of these. The four show cave companies selected for the case study attract over 60% of the total number of visitors to show caves in Greece. Three of the companies are controlled by municipal councils (one jointly with the local prefecture) and the fourth by the Anthropology Association.

In order to ensure confidentiality, the show cave companies are referred to as Alpha, Beta, Gamma and Delta. Table 1 provides some background of the companies.

TABLE 1: SHOW CAVE ORGANIZATIONS

Organi- zation	Ownership	Staff* No.	Annual Turnover (Euro)	Industry/ Tourism	Objective
Alpha	Municipality (80%) Prefecture (20%)	35	400,000	Service	Profit, socially responsible
Beta	Municipality	30	350,000	Ditto	ditto
Gamma	Anthropology Association	30	150,000	Ditto	ditto
Delta	Municipality	35	400,000	Ditto	ditto

*Staff is both full-time and permanent; however, most of the show caves also employ additional casual staff during the peak season.

Overall, only a small number of the employees in any of the show cave companies are involved in the decision-making process in their respective organization. The number of employees so involved varies between 20% and 35%. In all four of the selected show case companies, Alpha, Beta, Gamma and Delta companies, decision making is the responsibility of managers at all levels: senior, middle and junior. The managers selected for the semi-structured interviews were all involved in the decision-making process in their respective organizations, and all were happy to participate in the research. All the participants were male and all were Greek nationals. Table 2 shows the number of senior, middle and junior managers interviewed.

The interview participants selected from each company include senior, middle and junior managers in both accounting and non-accounting positions. Table 3 shows the number of managers interviewed who were / were not involved in accounting.

TABLE 2: MANAGERS INTERVIEWED

Managers (by Seniority)	Companies				
	Alpha No.	Beta No.	Gamma No.	Delta No.	Total No.
Senior Managers	1	1	1	1	4
Middle Managers	4	4	4	2	14
Junior Managers	7	4	5	4	20
Total	12	9	10	7	38

**TABLE 3: MANAGERS INTERVIEWED:
INVOLVEMENT IN ACCOUNTING**

Managers (by Seniority)	Companies							
	Alpha No.		Beta No.		Gamma No.		Delta No.	
	Accounting		Accounting		Accounting		Accounting	
	Yes	No	Yes	No	Yes	No	Yes	No
Senior Managers	3	1	2	0	2	1	1	1
Middle Managers	2	1	2	1	1	2	1	1
Junior Managers	4	1	3	1	3	1	2	1
Total	9	3	7	2	6	4	4	3

4. CASE RESULTS

The task of initial budget planning is assigned to the general manager, who is responsible not only for the process of its development, but eventually also for monitoring its implementation. The general manager puts all proposals concerning investments, costs, invoicing and new activities to the board of directors, which usually adopts them. Alpha Company's general manager observed that the company's operations are affected by both internal and external factors. Management is not independent in its decision-making processes regarding budget development and control since its shareholders, i.e., the municipal and prefectural councils, directly influence its decisions via their representatives on the board of directors and indirectly via their power to change the board of directors. Municipal elections very often create

uncertainty for Alpha Company as changes in the municipal and prefectural councils usually result in changes to the composition of the board of directors. And since there is a legislative requirement that the board of directors be reappointed by the municipality every November, the influence of the municipality is self-evident. As one senior manager observed that, "Any change in members on the board of directors of the organization that follows a change in the municipality's administration leads to a change of influence in decision making at all levels". The results is about the influence of the institutional environment showed that other board members, specifically representatives of professional associations, are also likely to exert influence over the company's decision-making processes in the interests of their associations. There is also pressure from the banks for Alpha Company to perform better, and from the board of directors to increase its total profits. Moreover, there is pressure to emulate the successes of other organizations. Alpha Company's investment policies are also responsive to social pressures exerted in other ways, with significant direct influence exerted by public institutions. Since it is located in a small country town, the town's population is able to exert some influence directly on the members of the company's board.

All decision making is effectively in the hands of the board of directors, acting on proposals by the general manager, in accordance with the Municipal and Community Code that governs the operations of Beta Company. The Code also mandates the composition of the board of directors, comprising two municipal councillors, three representatives of trade unions and two representatives of professional associations.

The results for the questions in Appendix 1i concerning the influence of the institutional environment show that outside influence on Beta Company's management may also be exerted by municipal councillors who have no formal involvement with Beta Company since there is also always the possibility of them making suggestions for changes to the budget during the year. In addition, the decision-making process in Beta Company is also potentially influenced by truly external parties, such as one of the community groups active in the small town in which Beta Company is located. The importance of influence wielded by external parties, be they municipal council, trade unions, professional associations or community groups, cannot be overestimated.

The law enshrines the decision-making power of the board of directors, rather than that of the general manager, who is limited to making recommendations concerning the budget to the board and ultimately to executing its decisions, yet as one interviewee noted, "Most of the board members do not have any formal education in economics, and neither does the mayor. This makes their task of assessing the economic parameters of the budget quite difficult."

The board of directors conveys its budget proposals to the general manager, who monitors the monthly implementation of the budget and recommends the final form of next year's budget in November of each year to the board of directors for its ultimate

approval. Investment decisions are also made by the board in November, and these are included in relevant programmes in the next annual budget. However, under the Municipal and Communal Code, these programmes can be reconsidered at any time of the budget year. Every month the general manager considers proposals to vary the budget. Furthermore, the general manager regularly puts proposals to the board of directors concerning pricing of new services, investment programmes, hiring of staff and cost reduction programmes.

Gamma Company's decision-making processes are subject to both internal and external influences. The company is owned by the Anthropology Association of Greece and run by it via its nominees on the company's board of directors, all of whom, including its chairman, are members of the Anthropology Association. Given its emphasis on private sector economic criteria, Gamma Company is less inclined to acknowledge any social responsibilities to the local community. The results for the questions in Appendix 1i concerning the influence of the institutional environment show that external influences on decision making are exercised by local bodies, especially the municipal council, but also by trade unions and professional associations.

Gamma Company's decision-making processes reflect the fact that under the law the Anthropology Association has the final say on all proposals put forward by the board of directors. Moreover, since the chairman of the board is an anthropologist himself and a member of the Anthropology Association, he is likely to act in the interests of the Anthropology Association, as are the other board members. Gamma Company can thus at best be considered semi-autonomous.

The general manager plays a significant role in the decision-making processes concerning the budget and its implementation, but it is effectively one of implementing the decisions of the board. For example, the board forwards budget proposals to the general manager, who via his monitoring of the implementation of the budget is able to recommend a final draft of the new budget at the end of each year. The general manager's monitoring of the budget's implementation also makes it possible for him to propose changes to the budget each quarter, including new investments, and other measures, for example, to achieve a reduction of costs and changes to the pricing of services. Investment decisions may also be made by the chairman of the board.

Decision making in Delta Company is effectively in the hands of the board of directors, which votes on all proposals put to it by the general manager. The board consists of two municipal councillors, one of whom acts as its chairman, two representatives of local trade unions and three representatives of professional associations. The chairman of the board of directors is also a member of the local municipal council, and thus can be expected to represent the municipality on the board. As a result, Delta Company can only be considered semi-autonomous. In addition to the municipal council, the company's decision-making process is also

influenced by outside forces, such as the local trade unions, professional associations and other community groups that are active in the small town where the company has its offices.

The majority of directors do not hold any economic, managerial or accountancy degrees, so their task of assessing the economic parameters of the budget is quite difficult. Nevertheless, the law supports the decision-making power of the board of directors. Responsibility for implementing the budget and making recommendations for any changes throughout the year is assigned to the general manager, as it is in the three other show-cave companies.

6. DISCUSSION

The analysis of Alpha, Beta, Gamma and Delta companies revealed some very interesting aspects of institutional isomorphism in the management of the show cave companies.

6.1. Coercive isomorphism

Theory predicts that coercive isomorphism is found only when there are political influence and problems of legality. Coercive isomorphism concerns the ways in which organizations may be subject to external pressure from organizations upon which they are dependent or as a form of more general cultural expectations (Meyer and Scott, 1983). In such cases of formal or informal pressures on organizations, organizational change may be a direct response or obligation to a government demands.

In Alpha Company we find coercive isomorphism, which stems as much from official as from unofficial pressures by outside organizations that in turn are dependent on yet other organizations active in the community (Mizuchi and Fein, 1999). In particular, the influences on decision making and budget development identified in Alpha Company include pressure to follow the municipal regime, to make investments in the interests of the municipality, and generally to act in support of the public accounting system. These indications of outside influence correspond to those identified by DiMaggio and Powell (1983). The findings show that Alpha Company recommends that some investments be made in the municipality, although stating that it is not obliged to make them. These findings bear out the findings of Greenings and Gray (1994) and Meyer and Scott (1983).

A middle manager stated that many times the mayor tried to impose the municipal council's will on the show cave investment programs. This caused the company financial problems and lead to a drop in investment programs.

The implications of political influence being exercised by municipal councillors in the show cave company correspond to those identified by Carpenter and Feroz (2001) and Pfeffer (1981) as well with the findings of Papadakis and Barwise (2002).

Similar to Alpha Company, Beta Company also experiences coercive isomorphism, due to both official and unofficial pressures being exerted by other municipal organizations, which in turn are dependent on community organizations. The pressures exerted on Beta Company by the municipality have the potential to influence the final form of its budget through its processes of budget development and decision making, its investment decisions, employment policy and cost management.

The research findings are consistent with the findings by Covaleski and Dirsmith (1988), Mizuchi and Fein (1999) and Rao and Nielsen (1992), which show that pressure from public interest groups clearly appears to act as a coercive institutional force impelling firms to initiate or elaborate structural responses to issues.

6.2. Mimetic isomorphism

When organizations are not sure what to do, they very often look to a reference group, to kindred organizations, and emulate what they do in the same situation. Imitation is nowadays far more widespread in the decision making of companies than before the election in 2002. One example is the way in which prices are set for a company's services. It is known that at periods of uncertainty, or at periods when the achievement of goals is doubtful, companies imitate one another (March and Olsen, 1976).

Alpha Company imitated other companies when setting prices for its services, rather than taking into account its costs. A junior manager of Alpha Company stated that when the company started, no one had the requisite knowledge to set prices for its services and for this reason asked managers from other show cave companies what they charged. This was because the company was facing organizational problems and had failed to set clear goals, as was confirmed by its general manager, who stated that he attempted to set the prices of services by relying upon models created by other companies (Kimberly, 1980).

A company may issue staff and management regulations that have been copied from other, similar companies as long as they are based on the prevailing law. It was crucial for Alpha Company to follow other show cave companies, because it had been established in 1998 and thus been in existence for merely eight years at the time of this study. Especially in the early stages of its operation, Alpha Company relied heavily on imitating the organizational details of other show cave companies, such as a company's investment program, budget development, management regulations, company reports and regulations of services. Indeed, such imitation was made necessary by the inexperience of Alpha Company's board of directors, which wanted to minimize the possibility of failure. A middle manager of Alpha Company stated that many times it was obvious that no one from the board of directors could understand the economic issues facing the company. For this reason, the best way was to imitate other companies in order to succeed. The uncertainties felt by the board led

to the employment of a general manager with commercial experience, who was given a number of responsibilities and tasks, including to hire a team of accountants to ensure that the company acted in a commercially responsible manner.

The researcher analyzed the composition of the board of directors from the early stages of Alpha Company's operation and found that the majority of board members had neither the experience nor the knowledge required for the successful creation and development of the company. The first chairman of Alpha Company, for example, was a municipal councillor at the time of his appointment, but by occupation he was a high school teacher.

The information received in budget reports was evaluated by the general manager, who put recommendations based on them to the board of directors, which then made the required decisions. However, the inexperience of the General Manager in running a show cave company led him to copy other show cave companies' investment decisions. These findings are consistent with those by Cyert and March (1963) and March and Olsen (1976); those authors argue that uncertainty is also a powerful force that encourages imitation. A contributory factor, were the relationships with external associations and even individuals, such as university geology professors, who attempted to influence investment decisions. As a result, many decisions simply imitated companies that had been active in the exploitation of show caves for many years.

The above findings are also consistent with those by Palmer (1999), Greenwood and Hinings (1996) and Lomis (1995), which show that organizations adopt forms that are considered legitimate by other organizations in their field regardless of whether these will actually improve efficiency.

6.3. Normative isomorphism

The third factor in isomorphic organizational change is normative pressure. Institutional legitimacy is derived from the wider institutional environment, not from the local bureaucrats who may employ their own unique interpretations of proper procedure. Professional power not only shields decision makers from having others pass judgment on their decision but also "binds supervisors and subordinates to act in good faith" (Meyer and Rowan, 1977:343).

Alpha Company takes a normative attitude to its practices and procedures, i.e., they are essentially fixed. The company bases this stance on the fact that its schedule and structure are frequently mentioned in the public accounting system, as well as in the private sector accounting system. Besides, the company is obliged to implement the public accounting system.

A junior manager of Alpha Company stated that, "we are obliged to apply the public accounting system, which often is not as flexible as the private accounting system".

The company's management regulations are the same as those that also govern Beta and Delta companies, while Gamma Company has its own regulations. There is influence exerted upon all these companies by professional associations (Meyer and Rowan, 1977), of which their employees are members, and by the members of their boards of directors. These indications of normative isomorphism correspond to those identified by Palmer et al. (1993) and Scott (1987), who argue that normative isomorphism analyzes the major role of the profession within organizations.

The general manager of Alpha Company is under particular pressure because he is an economist and therefore promotes economic practices concerning the budget and decision making rather than practices which are primarily to discharge an alleged social responsibility, which are recommended by the mayor. Moreover, because the first board of directors was presided over by a municipal councillor who was a teacher at a state school, decision making was based on bureaucratic practices suitable for the development of a budget. This view of budget development, and of the budget itself, was in line with regulations rather than considering the budget a management tool.

Two middle managers stressed that "many times the chairman of the board tried to advocate more bureaucratic procedures for the development of the budget since this is typical in the public accounting system.

The second board of directors was presided over by the mayor, whose main aim was to shift funds from the company to the municipality, without taking into account the general manager's recommendations. This had been anticipated in the company's charter, and so the resulting pressure was not as great as it might have been. The last board of directors was mainly composed of people who used to be members of the local chamber of commerce, and they tended to make decisions in favour of professionals. As a result, the general manager came under pressure from various professional associations, for example, when a professor of geology proposed that priority should be given to research and to improving the protection of the show caves, the board sided with the outside expert and decided to protect the show caves as a matter of priority rather than to increase the number of tourists visiting it.

A senior manager stated that "the pressure of the geologists sometimes is crucial because many times there is a shift towards making investment decisions for the improvement of the show cave's protection or to explore the implementation of plans for new buildings".

In this way, decision making on issues such as evaluation of the company's performance, cost management, pricing and planning were affected more by the pressures brought to bear by outside professional than by the fact that the municipality was the majority owner of Alpha Company, holding 80% of shares vs. 20% held by the prefecture.

The management regulations that govern Beta Company are the same as those that govern Delta Company, while Gamma Company has its own regulations. There is influence exerted upon these companies by the professional associations to which the

company's employees belong, and by members of the board of directors. The general manager of Beta Company is under pressure deriving from the fact that he is an accountant and therefore promotes practices informed by economic and accounting concerns rather than practices informed by issues of social responsibility, the latter being preferred by the mayor.

7. CONCLUSION

The analysis of the case companies revealed some interesting aspects of institutional isomorphism in the management of the show caves as is the coercive, mimetic and normative where the findings show that in Alpha, Beta and Delta companies there is coercive isomorphism from unofficial pressures by outside organizations as is the pressure to follow the municipal regime, or in the case of Gamma company there is a pressure to follow political and legislative regimes. Furthermore the findings shows that the companies face mimetic isomorphism in terms of imitating other companies when setting prices (Alpha Company), or imitating other companies when facing organizational problems (Beta Company), or imitating other companies because the chairman of the board does not appreciate the economic information made available to him (Gamma Company), or when the company face uncertainty about future success (Delta Company).

In addition, the findings show that the case companies face normative isomorphism when the company is obliged to implement the public accounting system (Alpha Company), or influence by professional associations to which employees belong (Beta Company), or influence from professions (Gamma Company), or influence by outside professionals (Delta Company).

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AN EVALUATION AND PROPOSALS FOR THE SUCCESS FACTORS AND THE PROCESS OF INNOVATION

MARIOS CHARALAMBOUS*

ABSTRACT

The first part of the study was negotiated with the theoretical background of innovation and had presented its importance in achieving competitive advantage, in particular reference to the coffee sector. To review previous results, innovation is a powerful source of advantage as it gives the change to act against competitors (Tidd, et al, 1997). Innovation is necessary as customers' needs and demands are constantly changing and the main concept is to create ideas and then transform them into products and services that will improve the customer service, costs, quality and reliability and therefore to generate success (Henry, & Walker 1994). In a general approach, the results had shown that in the coffee sector, like any other service operation, innovation is a necessity and a vital aspect in order to survive from competition. Bear in mind that while coffee shops are increasing and sales are rising, competition is increasingly intense. Thus, the need for brand strength and differentiation is vital, with the effort to win consumer loyalty (Wiggin, 2002). After analyzing the importance of innovation, the study now aims to describe the nature of the designated sector and the key trends and developments. Afterward, it targets to discuss the factors that determine the success of innovation in the coffee sector. Finally the study seeks to present and discuss an appropriate process by which the coffee sector should carry out and manage its innovative activity.

Keywords: Innovation; Competition; Brand Differentiation; Trends and Developments; Process of the Innovation Activity.

1. INTRODUCTION

The coffee drinking boom that began in the 1990s created a whole industry and until recent years it has noted a phenomenal growth. The main reason of that growth is the desire by the population for a place to socialize (Wiggin, 2002). The following section discusses the growth of the coffee shop operations.

Nowadays the number of coffee shops is increasing greatly. More specifically and based on the Specialty Coffee Association of America (2005), an estimated 1,150 coffeehouses were operating in 1990, whereas by the end of 2005 they increased to 21,400. Based on their operation success, the two of the biggest coffee chains and the major competitors are considered to be Dunkin Donuts and Starbucks, with nearly 16,000 stores worldwide (Sanchez, 2006).

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1.1. Growth

The growth of the coffee sector is believed to be due to the *availability of sites, the willingness of operators to invest in these sites and the emergence of a café society*, (all contribute towards this growth). In 2002 the number of coffee shops repetition increased sensibly because of the lower rents of that time and operators took advantage of that (Wiggin, 2002). Despite that, sites are always available for the growth of the coffee shop operations, branded or not, and this is a great investment for operators.

To continue, the growth of the coffee operations is also driven by the consumers. People's lifestyle has been and still is beneficial to the coffee shop sector. The necessity to relax, socialize and change environment, give a reason for operations to be developed.

As demand is growing, operations take the advantage to become better, by being innovative and aiming to meet demands and follow trends. Many coffee operations provide new, moderated products, but also services that attract the interest of more and more consumers. Thus, innovative strategies certainly lead to profitability and success and taking into account today's facts, improvements and growth of the sector, all prove the role and importance of innovation.

Though, the most important factor is for operations to have in mind that customers' demands as well as trends are changing. As innovation helps operations in achieving success, the coffee shop operations are constantly taking this advantage to invest in new aspects and improve them based on the consumers' demands.

On the other hand and despite the massive expansion of coffee shop operations and sales, profits are often low and success is limited. To give a reason to this, a number of coffee shop operations are incapable of implementing innovative activities. Coffee shops with no success are those who are not innovative enough, do not work on new ideas and they are unable to achieve any competitive advantage.

After giving an overview of the nature and the growth of the coffee sector, the following section illustrates how the significance of new ideas generates sales and an overall success to the operations.

1.2. Innovation brings success

The question that occupies the study is "which are the factors that determine the success of innovation in the coffee sector?" Trying to come closer to this topic, firstly it is noted that there are many innovative ways through which an operation can achieve success, where many of them are being described below.

One of the most important innovative steps for the coffee shop operations is the one related to products and offerings. Taking in mind that consumers are increasingly

coming to expect a range of coffee styles, specialties and varieties, operations should work to meet those expectations on the best way possible. Being able to do this may be one of the ways for coffee chains to increase their profit margins.

The important factor is to offer something extra over competitors and to keep the product offer more interesting. Examples of this innovation to products are the offering of choices for coffee types, from strong to decaffeinated/standard, with milk or cream, cup size available, additional flavoring syrups, the option of iced or hot coffee, and a variety of selection on toppings.

Alternatives to coffee are also offered, such as chocolate drinks, a choice of teas or fruit juices to drink in or take away and in addition all drinks are often offered with a pastry or delicatessen sandwich. Last but not least, some coffee shop operations add liqueur coffees to their menu for late-night consumers.

These ideas drive the coffee operation to success as consumers are attracted not only to new offerings but also to the variety of the products offered. Also, the idea of broadening the product provision of a wider choice of food is working out. The aim of this idea was for coffee operations to “capture the lunchtime trade”. The results though are positive as more and more people, especially during working breaks, purchase both their lunch and their coffee in one place. The success and the achievement to manage the operation are noticeable, and the result lies to the increase of loyal consumers and desired sales.

Another thought of innovative activities, is that many coffee shops have launched the “home away from home” concept which involves the creation of a living-room atmosphere in their outlets, complete with sofas, low-rise tables, plants, newspapers and even sockets for notepad computers.

A real example of this concept is, among others, the Starbucks coffee chain, which refers to its stores as “the third place” in people’s life – the first is at home and the second is at work. The idea is to give to the customer the best experience and make him or her feel as comfortable as being at home.

Also the success of a coffee shop operation relies on its location. For instance a shop situated on a platform of a railway station has customers made up of commuters and other travelers who might not have many common demographic characteristics. In contrast a shop situated within a retail store will attract customers with more characteristics in common. Similarly a shop in a city centre will derive its custom from a mixture of shoppers, office workers and students (Wiggin, 2002).

In addition to the above, coffee shop chains are now selling beans directly to consumers in order “to thrive in today’s changed marketplace” an agricultural representative said. In particular, Colombia’s coffee growers undertake this process and sell their beans to the public. The Colombia’s coffee growers once more prove the importance of innovation and this late improvement made Colombia the world's second-largest producer after Brazil (Cowboy, 2001).

In general, innovative actions include all of the above and also the offering of free vouchers, designated cups, summer drinks, Italian heritage, delivery of free coffee to offices, free sampling, offers, discounts to encourage trial purchase, loyalty cards offered when refurbishments are taking place to encourage customers to come back when they re-open and unique service standards (Wiggin, 2002).

A last fact is the cooperation that the Starbucks Coffee Company has with the Alliance for Environment Innovation to include in-store tests of new environmentally preferable disposable coffee cups. The company believes that through this action, it will enhance its customers' coffee experience and will generate environmental benefits (www.environmentaldefense.org).

In reference to that, the company, through innovation manages to keep its reputation of being the leading retailer, roaster and brand of specialty coffee in the world. It invests such new ideas, which no others do, and so it gets the opportunity to maintain the success of its outlets.

As Howard Schultz (2005), Starbucks chairman says, *"You get more than the finest coffee when you visit a Starbucks—you get great people, first-rate music and a comfortable and upbeat meeting place. We establish the value of buying a product at Starbucks by our uncompromising quality and by building a personal relationship with each of our customers"* (www.starbucks.com).

1.3. Factors that affect success

Despite the fact that innovation brings success and helps operations in achieving competitive advantage, at the same time there are those factors that affect the development of coffee shops and some of them are shown below.

Technology plays an important role to the development and operation of the coffee sector, taking into account that inventions in technology happen all the time. Concerning this, operations in order to operate a large number of outlets effectively and profitably, they need a systems infrastructure in place to keep track of stocks, selling prices and cash flow.

There have been instances of companies at the bottom end of the market that have not invested sufficiently in this type of infrastructure, thereby making it difficult to sustain a large number of outlets. The major coffee chains have therefore invested in technology for linking points of sale (POS) into their supplies/stocks (Wiggin, 2002).

Another factor that has an effect on the success of coffee operations is the tremendous growth of competition. There is a great number of coffee-shops, independents or chains, all around the world serving millions of people every day and most of them are located in small distances within the same area (Sanchez, 2006).

Based on Wiggin (2002), currently there is a lower rate growth of coffee operations due to the fact that some parts of the country, particularly in London, have become very well covered by coffee shops and therefore the scope for further new

sites is considered to be less than it was several years ago. As a result of the lack of opportunities in Central London, most of the leading operators are looking to the suburbs of the capital, into other regions or even worldwide.

2. THE INNOVATION PROCESS

Part of the report is to introduce and discuss an appropriate process by which coffee operations in the coffee sector should carry out and manage their innovative activities. This sector tries to make that happen.

The success of innovation is never guaranteed. Real success lies in being able to repeat the trick of success – to manage the process consistently, so that success, whilst never guaranteed, is more likely. So, innovation management is about learning to find the most appropriate solution problem of consistently managing this process and doing so in the ways best suited to the particular circumstances in which the organization finds itself (Tidd, et al 1997).

2.1. The process

Once any operation decides that it must innovate to become or to remain competitive, it “should establish a rational, logical process to use it as guidance to the entire strategy” (Baldwin, 2006). Thus firstly it needs to pick a type of innovation process that is correct for the company. The result of this process could include a new product, a new service, or process or the re-invention of a current strategy concept.

So based on Tidd et al (1997) there are four phases, which make the innovation process and which they need to be managed:

1. Scan and search the environment
2. Selection
3. Obtain resources
4. Implement innovation
5. Review experience (success or failure)

As a first step in the innovation process, there is the necessity of the operations to scan the environment, both external and internal, to become aware of what is happening. In this way operations look at competitors and on changes that can be happening and so they take the advantage of identifying the arising opportunities and then to generate a set of ideas.

Secondly, operations “are called to select from the set of the potential triggers for innovation those things which offer the best chance of developing a competitive edge” (Tidd et al. 1997 p.14). Many new ideas are possible to be generated, but there is no

guaranteed that all can meet success. So, the operations need to select the one which can be implemented and therefore bring success.

After choosing their option, operations need to resource it – providing the resources to exploit it. Resources may include anything that is estimated to be used and help the innovation strategy to be processed. Extensive search though may be required in order to find the right resources.

Finally, operations have to implement the innovation process, by bringing the idea to the final launch, through various stages of development– as a new product or service in the external market place or a new process or method within the organization.

Except from that option, operations can reflect upon the previous phases and review experience of success and failure – in order to learn about how to manage the process better and to capture relevant knowledge from the experience.

Apart from that there are also some additional factors, based on Baldwin (2006) that the operation planning, to innovate should take in great consideration.

1. The operation should see where and how this process should be set up and look at the organizational structure, the organization's strengths and weaknesses, the culture within the company and the management team.
2. The time scale for the development process. If the development project is an extension or minor modification of an existing product or service, the time scale could well be a few months up to a year in length.
3. Any individual within the operation is encouraged to contribute to the process and so the result will be more effective and more productive.

Also, he adds that concerning the evaluation process there are some criteria that must be considered, two of which are mentioned below.

1. The potential profit impact on the company. Here there is the use of two assumptions: first that the company puts full efforts into making the idea work and second that the result of the idea is successful.
2. The possibility that the result will not be successfully implemented or that it will fail after being attempted. In this case the team, after having ideas on how to approach the problem should rank the solutions of the problem and select the best approach. It is suggested that, whenever feasible, the management team should try to validate its potential solutions with selected, trusted customers.

2.2. Conclusion

Based on the above analysis of the process that operations in the coffee sector can follow to be able to manage their innovative actions, it is obvious that, in general the benefit is that it gives the best and most appropriate result for the operations in this sector.

3. CONCLUSIONS

To conclude on the whole report, the process of innovation increases profitability, reduces costs, improves efficiency and productivity. Apart from that, it also delivers enhanced product or service customer as results of the process are linked to the desired outcome.

Besides, the significant changes that had been noted in the coffee sector since the coffee drinking boom, which began in the 1990s, and therefore the success of the sector nowadays, affirm the importance of the use of innovation.

However, the coffee shop operations should keep improving and continuously innovating, so as to remain successful for eternity.

Furthermore, it is suggested that any process undertaken by the operations needs to be worked out carefully and correctly in order for the desired results to be met. Innovation is truly a complex and hard work, but what matters is the result.

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IS THERE A DISTINCTIVELY EUROPEAN MODEL OF HUMAN RESOURCE MANAGEMENT OR ARE THE DIFFERENCES WITHIN EUROPE GREATER THAN THE SIMILARITIES?

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ABSTRACT

It is obvious that the effects of change brought by the European Union will affect different organizations in different ways. The strategy that will need to be adopted by a company already established in Europe, or a company expanding into Europe, or a domestic company that intends to protect its existing customer base, will be totally different. This paper examines the content and meaning of European HRM, by examining the recent models and developments of HRM in five major European countries. By investigating the differences and similarities in HRM practices in the UK, Denmark, France, Germany and Spain, the paper concludes that the differences in the HRM models within the EU are greater than the similarities.

Keywords: HRM; Europe; Social Charter; Denmark; France; Germany; Spain; UK.

1. INTRODUCTION

Human Resource Management is one of the most complex and challenging fields of endeavor. Not only must the firm's requirements for an effective work force be met, but also the Human Resource manager must be greatly concerned with the expectations of both employees and society in general. Society at large has proclaimed its human resources to have vital needs that move beyond a "work force" status. The employee is simultaneously an instrument of the firm, a human being, and a citizen.

Every organization has a Human Resource function whether or not a specific Human Resource manager has been so designated. Every organization must hire, train, pay, motivate, maintain, and ultimately separate employee. However, we need not to task far to identify challenging problems in the field of Human Resource Management. Many problems are caused by constant changes that occur both within and outside the firm. Along the many major changes that are occurring, the following five can illustrate the nature of the Human Resource Management challenge: (a) Changing mix of the work force, (b) Changing personal value of the work force, (c) Changing expectations of citizen-employees, (d) Changing levels of probability, and (e) Changing demands of government.

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Therefore, throughout this work, we will try to look beyond these challenges, by investigating the differences and similarities within Europe, concerning Human Resource Management.

Hence, this paper is divided into smaller parts; first we will try to identify the most important elements of Human Resource Management, then to examine the concept of Human Resource Management within Europe, and finally to examine whether or not the differences are greater than the similarities (European Model) within Europe.

2. THE CONCEPT OF HUMAN RESOURCE MANAGEMENT

The role of Human Resource Management has changed through time. At first, the dominant role was to satisfy top management in procuring and maintaining a work force that would be instrumental to organizational productivity. As knowledge expanded in executing this role, the manager began to understand the necessity for ascertaining and accommodating to the needs of human beings who constituted that work force. Managers constantly searched for that program which would support the accomplishment of both organizational and individual objectives.

Therefore, Human Resource Management requires a broad background in such fields as psychology, sociology, philosophy, economics and management. Hence, in this section we will try to identify and summarize the basic functions of Human Resource Management, as developed by many theorists throughout the last decades: Planning, Organizing, Directing, Controlling, Procurement, Development, Compensation, Integration, and Maintenance.

To conclude, the above functions were listed and included in this paper, to better understand their complexity, especially when Human Resource Management is required to act on these functions in a single market, such as the European Union.

Human Resource Management not only has to act upon these functions effectively and efficiently, but it has to integrate them with the different cultures, attitudes, beliefs, values, perceptions and behaviors of all the citizens of the European Union.

3. HUMAN RESOURCE MANAGEMENT IN THE EUROPEAN UNION

3.1. The Cultural impact of Europe

“Employers will have to aim at maintaining systems which are flexible enough to cater for different national salary levels... These systems will also need to be able to cope with more frequent moves and job changes... A sensible constructed and flexible policy will be essential” Richard Underwood (1989).

It is obvious that the effects of change brought by the European Union will affect different organizations in different ways. The strategy that will need to be adopted by a company already established in Europe, or a company expanding into Europe, or a

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domestic company that intends to protect its existing customer base, will be totally different.

Equally, Human Resource Managers would adopt different strategies and methods depending on the status of their companies. Thus, it is clear that a number of specific areas of concern are emerging that Human Resource Managers should take under consideration in the wider market. These areas can be: (a) Manager and staff mobility, (b) Executive pay and benefits, (c) Recruitment of managerial staff, and (d) Vocational, cultural and language training.

3.2. The European workforce; change and regulation

One of the most important documents regarding the workforce in the European Union was produced by its Commission on 1989, entitled “*Community Charter on the Fundamental Social Rights of Workers*”. The document’s main objective is to ensure the working and living conditions within the European Union, by setting out social rights, that the Community is committed to improve. The Charter specifies twelve areas of entitlement and encompassed a commitment to translate agreed and guiding principles into legal measures. These twelve areas are: Right of freedom of movement, Employment and remuneration, Improvement of living and working conditions, Right to social protection, Right to freedom of association, Right to vocational training, Right of men and women to equal treatment, Right to information, consultation and participation of workers, Protection of children and adolescents, Health protection and safety at the workplace, Rights of the elderly, Rights of the disabled.

3.3. Creating a European human resource management structure

First of all, for a manager to be successful in a European organization, four major attributes must exist. These attributes are: (a) the ability to work within a complex operational framework. An adaptable and cosmopolitan approach should be a minimum requirement, (b) an understanding of any change process, as it will be necessary to work in an environment in which decisions will not be necessarily based on facts, (c) the ability to operate across cultural boundaries. Good communication skills are required as it may be necessary to lead or manage cross-cultural groups, and (d) the willingness to accept a demanding lifestyle, involving frequent travel, relocation and other disruptions to family life.

Thus, the Human Resource Manager’s role and contribution is of a unique significance, since he has the responsibility to induct and develop these attributes to the current staff, or to recruit new managers and staff that possess these attributes.

Moreover, in designing the structure of the European management team, the Human Resource Manager must be capable of developing appropriate personnel systems. As previously mentioned, these systems should be carefully designed after a

thorough analysis of the current systems that exist both in the company as well as in the market.

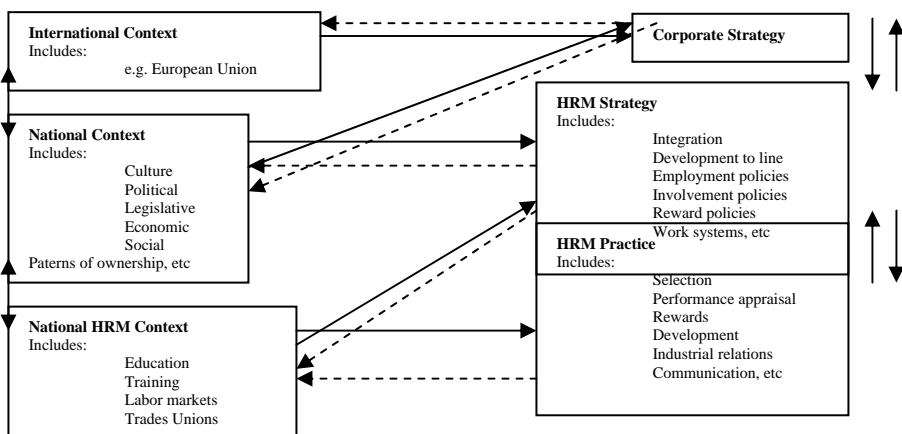
Although the personnel systems depend on the management style and areas of activity of the organization, in most of the situations we can include the following: (a) the development of common grading systems compatible with different countries, having always in mind the different pay levels and living costs of each country, (b) the development of a common merit review and appraisal system for the whole organization, (c) the development of a common job evaluation structure, and (d) the development of a non-cash benefits scheme.

4. HUMAN RESOURCE MANAGEMENT WITHIN EUROPE

“When ‘zooming in’ towards HR practices in specific European countries, it becomes clear that in all major functional areas there are significant differences between European countries” Chris Brewster (2004).

The above statement of Chris Brewster clearly identifies that there are significant differences in the concept of Human Resource Management within the European Union. However, we can identify that at least all members of the EU share the same attitudes towards Human Resource Management. However, the differences can be identified in terms of culture, values, and lifestyles as well as in the economic and political situations of each member-country of the European Union. In the following pages, we will try to examine the concept of Human Resource Management for some European Countries, like France, the UK, Germany, etc.

FIGURE 1: BREWSTER’S ‘EUROPEAN’ MODEL OF HRM



Source: Timothy Clark, 1996, *European Human Resource Management*, Blackwell Business

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4.1. Human resource management in Denmark

Danish companies require total functional flexibility thus they perceive Trade Unions and other societal committees as allies and partners to the fulfillment of this goal. Danish companies consider the involvement of these Unions as a necessity and a great advantage when decisions must be made concerning vital organizational changes.

Moreover, this point of view by Danish companies results in building relationships between employees and management and thus gain employee loyalty. They seek to meet employees' needs and requirements to provide them with a meaningful working life. Therefore, if the company provides them the above, these employees will become loyal, thus more effective and efficient in the work. The following statement confirms the above: "Denmark's relatively good cooperation means that the trade unions must work to render visible the new items which are to be bargained over and the new victories which can be won – and this will be one of the greatest challenges for the trade union movement in the new Millennium" Steen E Narvberg (1999).

To conclude on Danish companies, it is believed that they follow Gospel's model of Human Resource Management which covers three main areas: (a) Work Relations, (b) Employment Relations, and (c) Industrial Relations.

4.2. Human resource management in Germany

Unlike Denmark, employee-elected councils exist in Germany which are legally entitled to co-determination and consultation, and restrict the degree of managerial autonomy, with as an objective, the continuous improvement of working hours, training and disciplinary procedures.

Therefore, the Human Resource department in German companies is in general largely restricted to ensure that companies do not breach any of the regulations that constitute national employment law and agreements.

Hence, in the case of Germany, Human Resource Management has to cope with the burden of a comprehensive and detailed legislative regime, which in turn leads to a highly operative focus that is expected to inhibit the use of collaborative practices.

To conclude, we distinguish five approaches to contemporary Human Resource Management in Germany as found in European Human Resource Management, by Timothy Clark (1996). These are:

Focus on management:

Ackermann (1987), Berthel (1993) and Scholz (1995) represented an approach that traditional personnel issues are complemented by concerns with system design process and corporate culture. Hence, management of people is seen as a broad subject area in which the theories and ideas from a range of disciplines are relevant.

Focus on controlling:

The controlling-oriented approach developed by Wunderer and Kuhn (1993), points out that employees are a cost to companies, thus they have to be managed. Therefore, the strengths and weaknesses of the workforce must be continuously evaluated in order to meet the goals and objectives of organizations.

Focus on development:

The key issue of this approach is the continuous development and training of human resources in integration with the development of the organization as a whole. This learning approach leads to motivation, thus increase productivity, performance, efficiency and overall growth.

Focus on information:

According to this approach, employees need information regarding key-business issues, in order to allow them not only to perform more effectively, but also to participate and to assist management in organizational decision making.

Focus on planning/ administration:

This approach stretches the strengthening of relationships between the employer and the employees. This approach focuses on building relationships to avoid interference from trade unions and other employee organizations in one hand, and on the other hand to make employees perform better and work effectively.

In addition, the following graph is developed to define the four major approaches of Human Resource Management in Germany:

FIGURE 2: HUMAN RESOURCE MANAGEMENT APPROACHES IN GERMANY

<p>The Stuttgart Approach</p> <ul style="list-style-type: none"> • Personnel Development Strategy • Personnel Appraisal • Personnel Administration • Personnel Research 	<p>The Zurich Approach</p> <ul style="list-style-type: none"> • Structural Dimension • Corporate Culture • Corporate Policy
<p>The Mannheim Approach</p> <ul style="list-style-type: none"> • Personnel Policy • Personnel Planning • Recruitment • Personnel Assignment • Leadership • Compensation • Corporate Social Policy • Personnel Development • Personnel Administration 	<p>The Saarbrücken Approach</p> <ul style="list-style-type: none"> • Workforce Analysis • Personnel Recruitment Analysis • Internal and External Recruitment • Training and Development

Source: Timothy Clark, 1996, *European Human Resource Management*, Blackwell Business

4.3. Human resource management in France

French companies are characterized as hierarchical by Brunstein (1995), as well as being based on the principle of control with power concentrated at the top, as seen by Van der Klink and Mulder (1995).

In addition, no particular relationship exist between management and employees resulting from the reluctance of management to grant employees access to information about a variety of functional, operational and managerial matters. This lack of trust is defined by the role of trade unions which has traditionally been in strong opposition to corporate management as identified by Slomp (1995).

Therefore, the above facts resulted to the increased relative autonomy of French companies. Hence, employees should try to fit company structures and procedures without freely expressing their requirements, opinions or needs.

4.4. Human resource management in Spain

Similarly to France, institutional structures in Spain still remain weak, thereby granting management great autonomy, according to Lucio (1992). Moreover, we can identify that the existence of union with bargaining power and effectiveness varies between provinces and regions, according to their poor (or strong) financial and organizational resources.

As noted by Florez-Saborido, GonzalezRendon, and Alcaide-Castro (1995), “*this wide range of contractual arrangements generated a complex system, in which clear, common rules did not exist... The government followed a gradualist type strategy in introducing greater contractual freedom, but the process also produced unnecessary administrative complexity and legal insecurity for the employer*”. Hence, personnel practices in Spain have exhibited a reactive and highly operatively oriented character, with specialist personnel departments in possession of scarce resources and limited status.

Therefore, Spain is characterized by weak labor unions without any significant influence on work life and by substantial management autonomy. At the same time, the personnel function has traditionally been highly operatively oriented, lacking the opportunity to introduce collaborative human resource management practices.

4.5. Human resource management in The United Kingdom

The UK is characterized by Edwards et al. (1992), as unique in the European context because of the considerable increase in general managerial autonomy; this was a result of the radical changes in the employment legislation forced by the European Union.

Therefore, the UK Human Resource Management model emphasizes a great degree of organizational and managerial autonomy. In other words, this means that UK companies have absolute freedom regarding Human Resource practices, based mainly on the inexistence of relationships between management, employees and trade unions.

To conclude, Human Resource Management in the UK is interpreted by four very different views, as noted by *Timothy Clark's European Human Resource Management*: (a) A pragmatic view, (b) A purist view, (c) A processual view, and (d) A polemical view.

In summary, Human Resource Management in the UK supplies an authoritative theory of how organizations should work and how individuals must be managed, rewarded and directed.

5. CONCLUSIONS: DIFFERENCES VS SIMILARITIES

The European Union, particularly through the European Social Charter and its associated Social Action Program, is having an increasing legislative influence on Human Resource Management as identified by Brewster and Teague (1990). Half of the countries (an exception is the UK) are committed to a wider and deeper role for the European Union in this area, as Teague (1993) described.

Moreover, governments in Europe and the overall European Union tend to have more of a controlling (through legislation) and supporting (through finance) role in Human Resource Management, with the consequence that management is autonomous regarding Human Resource issues.

However, we should note that in terms of Human Resource Management, legislation, literature and perception, a European Model of Human Resource Management surely exists. However, significant factors are present that influence strategic decision making in Human Resource Management, like economic, political, social and technical factors. These factors include elements such as: Ownership and control, Organizational size and structure, Growth patterns of organizations, Industry and markets structure, Skills, Technology, Institutional framework, National education and training system, Culture.

In addition, European countries have differences towards trade unions and employee-management relations, which are identified as a significant element in designing a single European Model of Human Resource Management.

Moreover, throughout this assignment, we are able to identify the resistance of some member countries (such as the UK), to adopt a European Union social policy, in terms of trade union involvement and employee participation.

Furthermore, Brewster and Mayne (1992) examined a number of areas that show signs of convergence: Development in pay, Flexible working practices, Equality of opportunity, Training.

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TABLE 1: THE CENTRAL ELEMENTS OF HUMAN RESOURCE MANAGEMENT IN SEVEN EUROPEAN COUNTRIES

UNITED KINGDOM

1. A belief that the Human Resources of an organization are an important source of competitive advantage
2. A recognition of the importance of establishing a close two-way relationship between the HR strategy and the corporate strategy

FRANCE

1. A belief that the Human Resources of an organization are an important source of competitive advantage
2. A belief in the decentralization of responsibility for certain HR issues to the firm level
3. A recognition of the importance of:
 - a. the integration of the HR strategy with the corporate so that they are mutually consistent and supportive; and
 - b. the integration of various elements of the HR strategies themselves

SPAIN

1. A belief that the Human Resources of an organization are an important source of competitive advantage
2. HR skills and expertise within organizations are accorded to high status
3. HRM should be a high-status function with representation on the boards of directors
4. The HR function participates in the strategic planning process (i.e. 'external' integration)

GERMANY

1. A belief that the Human Resources of an organization are an important source of competitive advantage
2. A recognition of the importance of establishing a close two-way relationship between the HR strategy and the corporate strategy

DENMARK

1. A belief that the Human Resources of an organization are an important source of competitive advantage
2. A belief in the decentralization of responsibility for certain HR issues to the firm level
3. A number of policy goals designed to:
 - (a) enhance employee commitment;
 - (b) foster functional flexibility; and
 - (c) develop an internal labor market

SWEDEN

1. A belief that the Human Resources of an organization are an important source of competitive advantage
2. *Generally* it is a multi-disciplinary topic and therefore encompasses those aspects of industrial relations, occupational psychology, management and sociology which have traditionally focused on the employment relationship
3. *Specifically* it refers to:
 - (a) the decentralization of the employment relationship to the firm level
 - (b) the individualization of the employment relationship

THE NETHERLANDS

1. A belief that the Human Resources of an organization are an important source of competitive advantage
2. A recognition of the importance of establishing a close two-way relationship between the HR strategy and the corporate strategy
3. The decentralization of responsibility for HR issues to the firm and within this line management
4. A recognition of the importance of integrating the various elements of HR strategy

Source: Timothy Clark, 1996, European Human Resource Management, Blackwell Business

However, resistance exists in establishing and developing the above four elements by European Union members, basically because of cultural diversity, managerial autonomy and ethnocentrism.

Throughout this work, we can identify that country differences in the area of Human Resource Management do continue to exist. Despite the increasing common elements in the legislative framework of the European Union countries, differences in institutional terms still matter, such as the role of trade unions and work councils, and the level of safety and health regulations, as Brewster (2004) describes.

TABLE 2: COUNTRY CLUSTERS AND THEIR CULTURAL CHARACTERISTICS

1. More Developed Latin

(High power distance, high uncertainty avoidance, high individualism, medium masculinity)

Belgium
France
Argentina
Brazil
Spain

2. Less Developed Latin

(High power distance, high uncertainty avoidance, low individualism, whole range of masculinity)

Columbia
Mexico
Venezuela
Chile
Peru
Portugal
Yugoslavia

3. More Developed Asian

(Medium power distance, high uncertainty avoidance, medium individualism, high masculinity)

Japan

4. Less Developed Asian

(High power distance, low uncertainty avoidance, low individualism, medium masculinity)

Pakistan
Taiwan
Thailand
Hong Kong
India
Philippines
Singapore

5. Near Easter

(High power distance, high uncertainty avoidance, low

6. Germanic

(Lower power distance, high uncertainty avoidance,

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individualism, medium masculinity)

Greece

Iran

Turkey

medium individualism, high masculinity)

Austria

Israel

Germany

Switzerland

South Africa

Italy

6. Anglo

(Low power distance, low to medium uncertainty avoidance, high individualism, high masculinity)

Australia

Canada

UK

Ireland

New Zealand

USA

7. Nordic

(Low power distance, low to medium uncertainty avoidance, medium individualism, low masculinity)

Denmark

Finland

Netherlands

Norway

Sweden

Source: Timothy Clark, 1996, European Human Resource Management, Blackwell Business

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ASSESSMENT ISSUES REGARDING TOURISM PARTNERSHIPS, COMPETITIVENESS AND SUSTAINABILITY: THE CASE OF CYPRUS

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ABSTRACT

Undoubtedly, the tourism sector is the biggest industry worldwide, as it is the main source of the economic growth for many counties. Based on this, the current study, associates to cover issues regarding tourism policies and strategies in Cyprus. In more depth, it attempts to exemplify issues about partnership, competition and sustainability, their role and importance, and also to explain how these practices can be carried out so as to develop tourism. More intensively the study obtains theories regarding the terms, examines the elements though which these practices can be carried out and based on these, it finally attempts to investigate how these are being applied in the case of Cyprus. Regardless the current practices, through the integration, the study also highlights some of the main practices that need to be taken in action. Finally, the study concludes that the island of Cyprus has potentials and opportunities for further developments, regarding the tourism sector; what is needed is for tourism organizations, authorities, and tourism bearers to become normal players and acknowledge what is needed to be done in terms of improving the image of the island.

Keywords: Policy; Partnership; Competition; Sustainability; Innovation; Cyprus.

1. INTRODUCTION

Tourism plays a significant role in the economic development of many destinations. In particular, in small tourist destinations, tourism is the main and exclusive means of development and economic growth (Sharpley, 2003). Based on that, the tourism sector needs to be in continuous development and improvement in order for a destination to keep growing economically and also to survive from competition. Additionally, policy decision-making is an integral part for the tourism development as is the means of making changes happen were necessary. Nevertheless, while several issues are arising to the development of a destination, the study will concentrate on issues related to partnerships, competitiveness and sustainability. Based on the tourism development strategy of the island of Cyprus the study attempts to identify and evaluate the key policy interventions, related to these aspects that had and still are influencing the development of tourism in Cyprus.

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2. THE ISLAND OF CYPRUS

The tourism development of Cyprus counts years of success. Going back and examining the island's tourism and economic developments, it is asserted that, two distinct phases were occurred. The first phase, up to 1974, witnessed the beginning of the island's transformation into a major Mediterranean summer sun destination as the focus of tourism development shifted from the traditional hill resorts of The Troodos Mountains to the coastal resorts of Kyrenia and Famagusta. The second phase occurred after The Turkish invasion in 1974. During this period the Turkish attack had impacted the island's economy in general and the tourism sector in more specific. Many tourist facilities and services were lost, as a great number of existing accommodation as well as the island's international airport. As a result international tourist arrivals (47,000) had significantly decreased in 1975. Despite the problems of this period, the island managed to plan strategies for development and so from 1975 onwards it again witnessed remarkable growth (Press and Information Office, 2001).

Nowadays, Cyprus still works on continuous tourism developments and strategies, concerning tourism as the main source of beyond economic growth and development (Smid and Zwart, 2002). The Island hosts more than two million tourists every year, of whom 90% originate from European Countries; foreign exchange income amounts to approximately US\$1, 9 billion, which represents a contribution of approximately 20% to the Island's GDP. During the same period 613 tourist establishments were in operation. Additionally, the Tourism Sector comprises of 445 licensed travel agents with 162 branch offices, 2 940 licensed catering and entertainment establishments, 264 licensed tourist guides and a number of other tourist enterprises. The majority of them are small and medium size businesses (C.T.O., 2001).

3. THE TOURISM DEVELOPMENT STRATEGY IN CYPRUS

In the past, Cyprus had noted significant developments in the tourism sector and still gives efforts to remain competitive through continuous developments. In general tourism receipts which, in 1975, contributed just over 2% of GDP (Gross Domestic Product), currently reach the 20% of GDP (Ayers, 2000).

The Cyprus Tourism Organization (CTO), a Semi-Governmental organisation, under the Ministry of Commerce, Industry and Tourism, is the main responsible establishment for the tourism organisation and promotion. Hence, in response to the need of ongoing tourism developments, the CTO has drawn up a long-term Tourism Strategy Plan for the period of 2000-2010. Its vision is to reposition the island from a traditional sun and sea destination, to an area of upgraded quality and sustainability as well as to maximize the socio-economic benefits by increasing the tourist revenues. The main objectives of the Plan are, firstly to increase the tourist arrivals, therefore to increase their expenditure, to expand duration of stay and repeat tourism, as well as to

improve seasonality (CTO, 2006). The CTO through this strategy, attempts to respond to the problems of one-dimensional development, seasonality, high operational costs and the dependence upon leading tourism sectors, such as Tour Operators that Cyprus is currently facing.

Nevertheless, the most crucial part of the strategy is to examine the role of policy decision-making and intervention to successfully implement the tourism plan. In the case of Cyprus, several interventions in marketing, product development and in quality sector exist are further identified, so as for the island to take the opportunity and make known its identity and target those market segments, which will greatly contribute to the increase of revenues.

An additional strategy, which links with the tourism policy, is the economic development strategy, which was planned and prepared by the Planning Bureau, an independent directorate under the authority of the Ministry of Finance for the period of 2004-2006. The aim of the strategy is, firstly to upgrade the economic, social and other structures in order to follow the European Union's arrangement (after Cyprus accession in the European Union in May 2004). Additionally, the document aims to set the priorities of the Government in achieving economic and social development, both at the macro as well as the micro level. It highly aims to face the structural problems of the Cyprus economy in improving the competitiveness of the economy and the improvement of the standard of living (Violaris, 2003).

However, other figures that are impacted by the growth of tourism in Cyprus include construction, and related industries such as financial services, communications and transport, as well as the increasing number of arrivals and simultaneously the demand of producing a range of local products also influenced agriculture and manufacturing (Ayers, 2000).

4. PARTNERSHIPS

The examination of partnerships is wide in context. Researchers have noticed the increasingly use of partnerships in the tourism sector in order to achieve business and community goals (WTO, 2003). Based also on Augustyn and Knowles (2000), partnership has become a strategic tool for the development of tourism. The role of partnership is great as it generates benefits that contribute to the tourism development, gives the ability to tourism destinations and organizations to achieve business and community goals and also to gain competitive advantages (Kotler's et al, 1993). The key factor in the examination of partnerships though, is to identify its nature and performance, as well as to evaluate its effectiveness and efficiency within the tourism sector.

To start with, a partnership is believed to be a set of arrangements for tourism planning "that involve face-to face interventions between stakeholders who may be in the public, semi-public or private sectors" (Bramwell and Lane, 2000, p.1). Adding to

that, Wood and Gray (1991) support that collaboration happens when a group of independent stakeholders interact in the process of solving a problem domain, by using shared rules, norms and structures, to finally act or decide on issues related to that domain. Final definition refers to partnership as “the bond of two or more organizations which share resources in order to solve a problem or even to create such opportunities within the tourism sector, which can not be addressed individually” (Selin and Chavez, 1995, pp844-5)

Based on the above, commentators agree that partnerships involve the participation of several stakeholders, who work together in order to examine a common issue or a problem area and therefore to gather ideas and plan strategies for development and implementation. So it is important that each stakeholder's activity is to control the several resources, knowledge, expertise, constituency and capital (Kotler's et al, 1993). This is the evidence that shows the important rule that partnership plays in the tourism development.

Concerning the tourism industry, partnership can be seen as part of the government arrangements. Many commentators give emphasis to the role of the government's interventions in the tourism sector at international, national, regional and local level (Thomas and Thomas 2005; Hall 1996). Taking into account the types of partnership, Timothy (1998) argues that cooperation between government agencies is essential for the smooth development and operation of tourism. Further types of partnerships discussed are those between the administrative levels and the private and public-sector. In many cases, great attention is being paid to the cooperation of the public and the private sector. It is strongly asserted that partnerships between the public and the private sector require government approval, support and infrastructure development, so that tourism to be regulated, promoted and to promote the development of private projects. On the other hand the public sector depends on private investors for the provision of services and to finance the construction of tourism facilities (Timothy, 1998).

However, the success of the private and public sectors' partnership depends on several factors such as the leadership of the government – at the highest level - to support tourism proposals, the recognitions of the value of tourism, the engagement of major companies, for instance airlines, the active financial involvement of all parties of the destination, the goal-oriented approach to get things done, setting targets, measurements and monitoring, the involvement of local communities to provide knowledge and information of local cultures and environments, the long-term perspective-tourism planning and management, the concern of sustaining heritage, culture and environment (WTO, 2000).

In contrast Augustyn and Knowles (2000) give emphasis to the factors that make the tourism partnership to be successful. Firstly they assume that in order for a partnership to be successful, it requires an expert preparation, so as to be organized along horizontal lines and to involve both the public and the private sectors.

Afterwards joint efforts are established and finally great consideration is been taken in terms of time scale to make the partnership worth. Other factors that determine the success of a partnership are related to the objectives of a partnership agreement. Clear objectives in a long-term level, based on an extensive research are essential for the success of a partnership. Lastly, a partnership is sustained through monitoring, control and feedback.

To conclude, Bramwell and Lane (2000) had reviewed some potential benefits of partnership in the tourism planning:

- There may be involvement by a range of stakeholders, all of whom are affected by multiple issues of tourism development and may be well placed to introduce change and improvement.
- Decision-making power and control may diffuse to the multiple stakeholders that are affected by the issues, which is favorable for democracy.
- The involvement of several stakeholders may increase the social acceptance of policies, so that implementation and enforcement may be easier to effect.
- More constructive and less adversarial attitudes might result in consequence of working together.
- The parties who are directly affected by the issues may bring their knowledge, attitudes and other capacities to the policy-making process.
- A creative synergy may result from working together, perhaps leading to greater innovation and effectiveness.
- Partnerships can promote learning about the work, skills and potential of the other partners and also develop the group interaction and negotiating skills that help to make partnerships successful.
- Parties involved in policy making may have a greater commitment to putting the resulting policies into practice.
- There may be greater consideration of the diverse economic, environmental and social issues that affect the sustainable development of resources.
- There may be greater recognition of the importance of non-economic issues and interests if they are included in the collaborative framework, and this may strengthen the range of tourism products available.
- When multiple stakeholders are engaged in decision-making the resulting policies may be more flexible and also more sensitive to local circumstances and to changing conditions.
- Non-tourism activities may be encouraged, leading to a broadening of the economic, employment and societal base of a given community or region.

5. SUSTAINABILITY

Despite the above, there are also other issues that influence the development of destinations in terms of tourism. Some of these are the technological and socio-economical changes, as well as the changing demands of tourists; all these had led to the need for destinations to develop strategies for sustainability. To enlighten this issue, sustainability is similar to development and change and it comprises long-term decision-making and involves a need of intervention and planning (Swarbrooke, 1999).

Sustainability is commonly perceived to be related to environmental issues. However, theorists discuss that there are broader principles that refer to economic and socio-cultural aspects of tourism development. Its principles refer, except to the environmental, the economic and socio-cultural aspects of tourism development.

Among various perspectives and a wide range of literature for tourism sustainability, the study concentrates mostly on the environmental aspects. So, in this context sustainable tourism is the tourism who gives great attention to the protection of the environment and do not destroy the resources of the physical environment and the social fabric of the visited area (Swarbrooke, 1999).

The five aspects that comprise the environment are related to the natural resources (climate, air, water) and the natural environment (landscape, mountains, forests, rivers, and beaches), wildlife, farmed environment and finally the built environment (Swarbrooke, 1999). It is important to mention that the public sector intervenes and acts in the development of environmental sustainability by legislation and regulation, funding incentives, land use planning, developments and building control and provision of infrastructure.

Lastly, sustainable texts refer to the concept of de-marketing in order for destinations to sustain their tourist arrivals. De-marketing strategies are followed in order to discourage rather than attract tourists to visit destinations and this is mostly applicable from over-crowded destinations. Several aspects, like word of mouth, repeat and even business tourists, influence significantly undesired increase of arrivals in destinations which are already overcrowded. De-marketing helps such destinations to control their marketing mix, like for instance to minimize the promotion of the affected destinations or to raise prices, so as to put off undesired tourists (Swarbrooke, 1999).

6. COMPETITIVENESS

Competition between destinations becomes to be another issue regarding tourist destinations' development. As competition is vastly increasing, many destinations have noticed the need to develop strategies, aiming to improve their resources and thus remain competitive. Jackson (2006) reveals that competitive advantage can be

achieved through gains in productivity and innovation rather than to have economical effects in the destination.

Through the wide range of related to competition issues, innovation is often seen as a way and an opportunity for destinations in general to gain competitive advantage. It is asserted that innovation implies changes, growth and survival through competition as well as in the long-term it enhances profitability (Page, 2003). It is obvious that innovation can be a very effective tool for destinations who wish to overcome competition and to generate their own identity. However, the most important consideration is the examination of how innovative actions can be implemented.

In response to this, Page (2003) makes reference to a study, which identifies five principal types of innovation that apply to the tourism development. Based on these, innovation can be achieved through the introduction of new or even through the improvement of the quality of existing products and services and of new methods of production. Further, by the opening of new markets and the use of new sources of supply. Lastly the creation of a new type of industrial organization is perceived to be an innovative action.

7. THE POLICY INTERVENTIONS FOR THE TOURISM DEVELOPMENT IN CYPRUS

7.1. Introduction

In relation to all the above, at this point the study makes reference to the policy interventions (partnership, competitiveness and sustainability) for the tourism development, as this is being applied in Cyprus. At first hand, it should be noted that the tourism development strategy in Cyprus is currently in action and also more plans and projects are still in discussion (CTO, 2006). Additional policies for competitive benchmarking strategies will be conducted in order to compare Cyprus with other tourist destinations and so to work on gaining competitiveness.

7.2. Partnership

In the case of Cyprus, a number of government agencies contribute to the implementation of the tourism strategy plan. First of all the plan was approved by the government, a factor that shows the power of the government to participate in the tourism development of the island. The main government parties that are involved in the tourism plan include namely the Ministry of Commerce, Industry and Tourism, which controls the activities of the CTO, the Ministry of Finance, responsible for funding the tourism strategy and the Chamber of Commerce, all cooperating with the CTO in order to achieve the goals of the development strategy. Also several other

departments and intergovernmental agencies, such as communities and councils and the Institute of Tourism and Travel Research are involved and finally the partners of the private sector who support the plan are the local and regional business whereas the participants of the public sector include hotel associations and the hoteliers. Finally, the tourism Strategy Plan is supported by the Regional Tourism Strategies and Action Plans and this is a way through which regions take the advantage to expose their identity and uniqueness and this will finally contribute to the repositioning of Cyprus.

In his study, Sharpley (2003) mentions that, the CTO itself enjoys little statutory authority and, although it has the power to license and grade new accommodation facilities, it is not in the position to decide whether such facilities should be built in the first place. Conversely, various political groups, such as the trade unions and the Cyprus Hotels Association (CHA), are relatively powerful.

Based on the desire of repositioning Cyprus, each region is called to get involved and great its own vision for the tourists. The intervention of regions in the strategic development will include the production and offer of products that will make known the unique cultural characteristic of the island. In general the regions' stakeholders are required to develop their own strategies, which are expected to be focused on the preparation of product development and action plan especially in marketing yet they are going to be supported, financially and technically by the CTO.

Also, Cyprus in collaboration with specialist Tour Operators which control the greatest part of the tourist flow, will attempt to cover new areas by upgrading the existence of tour operator brochures or even introducing specialized programmes. At the same time proposals are suggested in order to develop alternative ways of travel planning and bookings rather than depending on tour operator's network, including the use of e-marketing and the creation of a system for destination management (CTO, 2006). The achievement will be to eliminate the dependence of the island's tourism upon the Tour Operators.

Of great importance is the accession of Cyprus to the European Union on 1 May 2004. Such a factor caused the transformation of its economic landscape, through significant economic and structural reforms. The European Union also contributes in the implementation of the tourism development plan, by supporting financially the construction and operation of infrastructure projects. In particular attention to the tourist sector, plans include the construction of new marinas, theme parks, football stadiums and the upgrading of the island's two international airports and ports (Press and Information Office, 2005).

Based on Cyprus accession to the EU in May 2004, air transport within Europe is supposed to become fully liberalization. At the same time the Government's restricting intervention in licensing charter flights to and from Cyprus from third countries will expectantly bring positive changes in the field of air transport (CTO, 2006). Such a factor will contribute to the increase of tourist arrivals not only for holidays but also tourists with special interests and business tourism will be attracted.

7.3. Competitiveness

As mentioned before, in order for Cyprus to overcome some problems, and therefore to gain competitive advantages, the CTO had drawn up Tourism Strategy Plan. The strategic effort for repositioning is supported by three component strategies: the Marketing Strategy, the Product Strategy and the Quality-Value Added Strategy.

The study supports that success or failure of a destination is determined by the range and the quality of the tourist product that it is offered and the most attractive product is the one that meets customers' expectations. Cyprus being a destination for Sun and Sea holidays has lost the advantage that it previously had (due to the high demand for Sun and Sea holidays at that time and the fact that it was a new destination). In order to continue to be competitive, the strategy for repositioning the island as a destination that offers a multifaceted tourist experience in a relatively small geographical space.

The policy therefore, which is also related to the marketing strategy is to diffuse the existing markets and segments and on the other hand to attract those market segments that will yield the most, by prioritizing those in respond to those that best serve the measurable targets of the strategy (CTO, 2006). By following this strategy, the parties involved are able to perform certain projects in providing the adequate products and services to the targeted market segments and meet their needs. The focus on certain segments will minimize the potential of over-producing resources for several markets as well as time and money will not be spent on unnecessary aspects. The intervention on achieving this is, among others the examination of the tourist demand on Cyprus through past and new statistical data. Therefore, timely, accurately and systematically regional and national stakeholders need to collect, process and utilize information and thus to monitor and evaluate the market intelligence.

In relation to this, for Cyprus to be innovative and therefore competitive, it plans to invest on developing existing products or even on introducing new products for the markets it wishes to attract. Based on the Tourism Development Strategy of Cyprus, the policy is to upgrade the existing products and also to develop new ones focusing on the priority target market segments.

The various aspects of the product will be developed with culture and the environment as the central points of reference, as they constitute the two main axes that will help Cyprus to bring out its identity and become a unique destination. The improvements of products will cover the needs of special interest, sports and agricultural-rural tourism.

Cyprus has the potential to develop a wide range of special interest products. After prioritizing its target market segments Cyprus will then aim to develop products which are determined by the motivation, the social and demographic features of each segment.

In addition to the above, the potential for developing each product was taken into account i.e. the availability of the required resources (Capital, Land and Infrastructure) for the development and successful implementation of the special products investment, the public sector, (including the local authorities) and the private sector alike are required to get involved. The involvement of these sectors will be motivated and encouraged through suggested incentive schemes (CTO, 2006).

7.4. Sustainability

The Plan for the Development of Rural Tourism has been drawn up in line with the National Development Plan 2004-2006 and the Single Programming Document Objective. The development does not only consist of accommodation infrastructure in restored traditional houses, but it also includes actions and measures towards the creation of an integrated tourist product for the countryside, enhanced by projects of cultural and environmental nature that are addressed to special interests and activities. more specifically, actions plans include the creation of new accommodation and the upgrade of existing agrotourism accommodation and traditional restaurants, and the promotion of other activities like exhibition areas, museums, workshops for traditional handicrafts and other activities, the support of units that manufacture local produce and the development of nature trails, cycling routes, theme and combined routes, theme museums, information centers.

As culture is one of the most supporting element of the repositioning effort and the major feature that enhances the wealth and value of the tourist experience for all customer segments, the Public Sector and in particular the Department of Antiquities, the Cultural Services, District Administrations, the Handicraft Centre as well as the Local Authorities are expected to invest heavily in this area. The CTO has included a motivated scheme for the development of cultural and other routes, new museums, information centers, workshops, and the organization of events like International Festivals, for example an Annual Film Festival, Opera and various other artistic, cultural and folklore events.

Intervention related to the environmental products include the strengthening of the regulatory framework for the protection of the environment, the introduction of environmental criteria in policy-making and project planning and design, the adoption of environment-friendly practices and the promotion/cultivation of environmental consciousness. The highest priorities in the planning programs of the CTO and other Government departments such as the Forestry Department and the Environmental Services Department are the development of nature tourism projects such as nature trails, routes, environmental centers, cycling routes, camping sites and the protection of salt-lakes and the local flora and fauna.

The needs of the targeted market segments were surveyed in order for plans to be introduced for the development of accommodation establishments. Priority was given

to the number of the market segments to which they appeal. The proposed intervention include the new types of accommodation that will be developed must fall into these categories and classes where a need for new beds was identified; these are the 3 to 5 star hotels, tourist villages, mixed use destination resorts, small units of character and agrotourism establishments, In order to better serve the targeted market segments, there is a need for the development of new types of accommodation such as mixed use destination resorts and small units of character, the existing accommodation must be upgraded and accommodation in lower categories must be encouraged either to upgrade to the priority categories and classes or withdraw from the market. To implement these strategic interventions, the review of the institutional framework that regulates the development and operation of tourist accommodation establishments is necessary. This must be done in order to determine the specifications for the new types of accommodation, to introduce qualitative criteria and to modernize the quantitative specifications, the classification system and the mechanisms for the approval of plans, and the introduction of Incentive Schemes towards the upgrade of hotel beds or their withdrawal from the bed supply.

8. CONCLUSIONS

The basic aim of this study was to exemplify practices regarding tourism development. More specifically it attempted to explain the role of carrying strategies related to partnerships, competitiveness and sustainability as practices for tourism development. Finally the study attempted to reveal how these practices are being applied in the case of the tourism development of Cyprus. Ultimately, the aim of the study was achieved through discussing empirical studies regarding the subject. Through this discussion, the study demonstrated the foremost of the practices and strategies undertaken in Cyprus in terms of tourism development. As far as the aforementioned current practices are concerned, they are in fact strong strategic tools, they are fitted with the existing image of the island and they are achieving the goals and objectives for developing the tourism industry. Although, challenges and opportunities in terms of development always exist; the matter is for the commentators to keep expert preparation and joint efforts, utilize and exploit what is available, but at the same time to be aligned with trends and improvements, adjust with tourist demands, and finally to make strategies worth. The aim and focus point of all these would be to achieve a satisfactory and effective development.

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BARRIERS TO INTERNATIONAL SUPPLY CHAIN COLLABORATION FOR SMALL CHINESE COSTUME JEWELLERY SUPPLIERS

YIANNIS POLYCHRONAKIS* and XIANG LI**

ABSTRACT

This article represents the first output of a research project in progress. The overarching aim of the research is to establish the barriers that the Chinese Jewellery small enterprises are faced with in their internationalisation attempts. This paper concentrates on the two primary objectives of the research: firstly to establish a framework that separately captures (and subsequently jointly discusses) the concepts of marketing and logistics in a small Business to Business context. Secondly to deploy that information in a second framework that captures the pertinent issues of international collaboration for joint supply chain development. The third and final objective of this research is to generate a framework that will ultimately enable the researchers to establish the barriers within the aforementioned context. This final framework is not discussed here but the preliminary literature findings are.

Keywords: International Supply Chain Development; SMEs; China; Collaboration.

1. INTRODUCTION

Firms remodel their supply chain to fully apprehend the benefits of shared information, business process benchmarking and advanced business planning (Trkman, et al., 2007). Also, globalisation influences the worldwide business environment where the synergies and differences between West and East have now become imperative issues (Li and Khalil, 2006). Thus, supplier firms around the globe engage collaboration to re-align the relationships with their (foreign) retail buyers and manufactures (Sheridan, et al., 2006), and to achieve “*the strategic management of product groups through trade partnerships, which in turn aims to maximise sales and profits by satisfying customer needs*” (IGD, 2000, p.1).

Other scholars point out that studies involving Small Medium Enterprises (SMEs) should draw more attention to the international implications; certain aspects of the world-class practices and performance in SMEs are different from those in larger organisations (Cagliano et al, 2001).

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In the past six years, as the fourth largest economy in the world (the People's Republic of China) started to encourage entrepreneurship in a wide variety of small-scale enterprises and welcome foreign trade and foreign investment (XinHua report, 2006), more and more Chinese Jewellery Suppliers are keen to go to the international market where there is huge demand for their products (China trade News, 2006).

When it comes to supply chain management (SCM) and implementation, major differences exist between industrial sectors (Wong, *et al.*, 2005). The fashion industry in particular has been referred to as “fast fashion”, where the implications of ineffective supply chain management can be catastrophic to local economies (Ferne et al., 2004).

Hence, the two main objectives pursued in this paper are as follows: firstly to establish a framework that separately captures (and subsequently jointly discusses) the concepts of marketing and logistics in a small Business to Business context. Secondly to deploy that information in a second framework that captures the pertinent issues of international collaboration for joint supply chain development. Ultimately, the purpose of the research is to produce and test a third framework that reflects the synthesis of the previous two and consequently expands in addressing the barriers faced by the Chinese small enterprises when attempting to collaborate with other businesses (in a business to business context) in the international business arena. The last section of this paper provides an overview of the preliminary literature findings. These findings will ultimately enable the construction of the third framework that captures the barriers as they are derived from the relevant literature and subsequently test them within 20 case study organisations. These organisations are all small enterprises based in the Zhejiang province in the Southeast of China.

2. BACKGROUND

Supply Chain Management (SCM) is a key activity for any business. The likelihood of a small business succeeding, in part at least, depends on the extent to which it is able to manage the relationships it has with those organisations which form the immediate supply chain. A supply chain is regarded as the alignment of organisations to bring products or services to market (Lambert *et al.*, 1998). Thus, *“supply chain management represents one of the most significant paradigm shifts of modern business management by recognizing that individual businesses no longer compete as solely autonomous entities, but rather as supply chains”* (Chen and Paulraj, 2004, p.136). Also, with the developing information technology each member of a supply chain continually needs to review the way to manage relationships with their business partners (Cassivi, 2006). Conceptually, there is a need to develop a model for successful supply chain operation for SMEs, building on the models derived from the marketing and logistics literature.

Also, competition drives businesses to become globalised (Lynch, 1997). Hence, globalisation essentially becomes a “necessary” trend for business as “*it signifies the shrinking of the world where people, services and goods are available to each other across the globe through a variety of means and in increasingly immediate ways*” (Edwards and Usher, 2000, p.13). Moreover, “*supply chain often is the part of a firm that is mostly affected by changes in such international environments*” (Edmund *et al.*, 2001, p.823). The SCM approach has been increasingly identified by many small organizations as an opportunity to improve their competitive capability and achieve their goal of better customer care and increased profitability (Chin *et al.*, 2004). Thus, one way of achieving this is through collaborations in supply chains. Collaboration has been considered as a very effective and efficient method for leveraging the small business (Polychronakis and Syntetos, 2007a)

According to Udin *et al.* (2006), collaborative SCM can be defined as a condition in which all parties in the supply chain are dynamically working together, towards objectives by sharing information, knowledge, risk and profits, which possibly involve consideration of how other partners operate and make decisions. Although the importance of international supply chain collaboration has been noticed, “*adopting a global perspective is often difficult because the individual member has been trained to work as a single entity only guided by local perspective and often exhibits opportunistic behaviour*” (Simatupang and Sridharan, 2002, p.16). Consequently, a model is needed in part to reflect the dramatic changes in increased global competition, to guide organisations in SCM and to enable them to improve international collaboration.

Collaboration in supply chain activities is significant in any advanced or developing economy, and particularly for SMEs which may often be vulnerable to failure after a relatively short operating period. This issue is particularly significant in one of the world’s largest and fastest growing economies, the People’s Republic of China (Prasad, 2004).

Currently in China, ‘*the principal economic target is to double the 2000 per-capita GDP by 2010*’ (China Report, 2006, p.218) and, to achieve this goal, China is seeking development by relying on its own strength, following the policy of opening-up the economy to market forces, and involves widespread global economic and technological cooperation, and the outgrowth shares with all other countries (China Report, 2006). SMEs have similar to the above mentioned, international problems and start to cooperate with foreign firms when buying and when, in particular, selling abroad (Ruzzier, *et al.*, 2006).

This paper considers the issue of collaboration in SCM by focusing on small Chinese businesses. At present, in comparison with big or state-owned enterprises, undersized Chinese small suppliers are more sensitive to any internal and external influences, when they are attempting to generate partnerships in international supply

chains. This is “*due to their lack of size, limited resources and multiple competitors*” (Ottesen and Gronhaug, 2007, p.36).

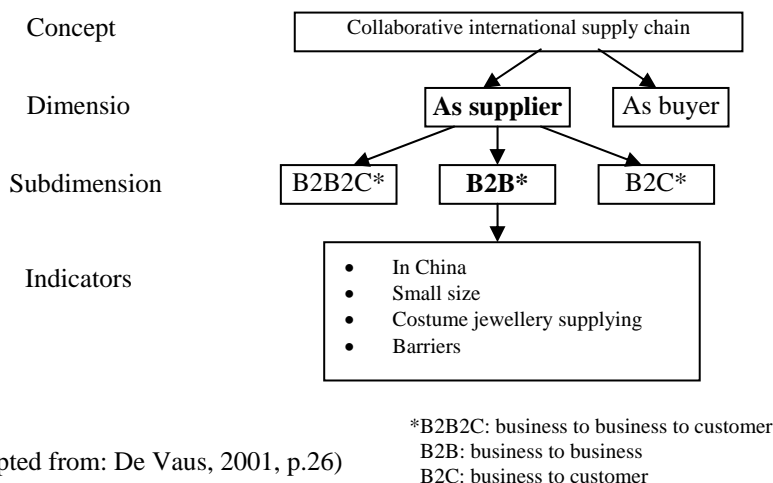
Having said that, jewellery consumption in the west as a sort of fashion expenditure, is getting more associated with people’s daily life, as more people pay attention to their image (Beaudoin *et al*, 2003). Individuals and society use fashion to communicate their taste and lifestyle. Therefore, in certain cases, the design of the item is viewed as more important than the value of the material (Barnard, 1996, and Cholachatpinyo *et al*, 2002). As part of the light industry sector, jewellery business sector has very fast growth rates. This industry is characterised by low-value material and high-value on manpower involvement, therefore, costume jewellery manufacturing is the type of industry that is currently heavily supported by the Chinese Government. This is evident in an official report-XinHuaShe report, published by the Chinese government (XinHuaShe Report, 2006). The selling volume of Chinese-made jewellery in 2005 was about £10.7 billion, and total amount of import and export was £3 billion. Currently, in China, there are more than 5000 jewellery manufacturers, and more than 2 millions people are employed in this industry. The annual selling volume in jewellery business increases by 10% per year for the past 6 years. Chinese jewellery suppliers are keen to find appropriate ways to satisfy the international market (CLII, 2006).

Thron *et al*. (2006) have pointed out that for different products, companies or industries, the framework of SCM may differ from one to another, thus, individual studies in novel contexts are necessary to throw some light on the above. Arguably, focus on SCM for small businesses in the light industry sector in the rapidly growing Chinese economy is not well-covered in the literature. This is particularly true in the context of the costume jewellery industry.

This paper is dimensioned as shown in figure 1, where the authors arrow-down the research to the collaborative international SCM. Ultimately, the research focuses on establishing the barriers that small Chinese suppliers are faced with when attempting to collaborate with their international partners. The findings of that will be the theme of one of our forthcoming papers.

FIGURE 1: RESEARCH FOCUS

Paper focus



(Adopted from: De Vaus, 2001, p.26)

3. LITERATURE REVIEW

The following literature provides the theoretical underpinning for the two generated frameworks proposed in this paper. It addresses in detail the pertinent literature on SCM, business globalisation, international supply chain collaboration and reports on the current state of the Chinese small jewellery producers.

3.1. Supply Chain Management

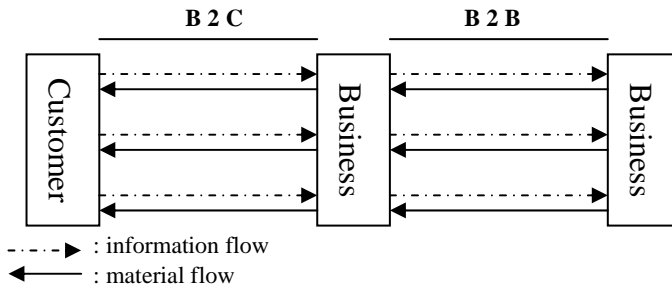
“A supply chain consists of all stages involved, directly or indirectly, in fulfilling a customer request. The supply chain not only includes the manufacturer and suppliers, but also transporters, warehouses, retailers, and customers themselves” (Thomas, 2002, p.1). It is regarded as a package of arm’s length and closer relationships linking suppliers and buyers (Erridge and Greer, 2002; Polychronakis and Syntetos, 2007b).

3.1.1. Business to business to customer (B2B2C) supply chain

Christopher (2005) and Handfield and Nichols (1999) describe the notion of a supply chain of interconnecting activities with a flow of materials and associated information from supplier to end user that has been developed as part of a move towards the customer led operation. As shown on figure 2, SCM has the potential of

contributing to the competitiveness of those enterprises within the supply network if properly managed and implemented.

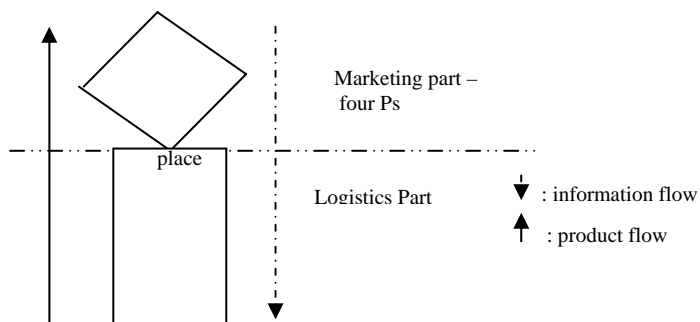
FIGURE 2: B2B2C



3.1.2. The marketing and logistics interface

A company's supply chain is an integral part of its approach to the markets it serves. The supply chain needs to respond to market requirements and do so in a way that supports the company's business strategy.

FIGURE 3: MARKETING AND LOGISTICS IN SUPPLY CHAIN



As shown on Figure 3, “place”, which is one element from Marketing 4Ps (people, promotion, price and place) is the point which marketing management and logistics

join together as supply chain and support the right product, in the right place at the right time (Christopher, 2005). Framework A joins the tasks of marketing and logistics, in a B2B2C context.

Step 1: Starting with “Marketing research” and new product launch

New-product or business development is an integrated innovation (Kotler and Armstrong, 2006). Consequently, to create successful new products or business, a company must understand its consumers, markets, and competitors and develop products that deliver superior value to customers. Strong new-product planning and a systematic new-product development process should cover idea generation, idea screening, concept development and testing, marketing strategy business, analysis product development, test marketing and commercialisation (Kotler and Armstrong, 2006).

Step 2: Capability analysis (environment analysis)

When the initial product or business is decided, understanding internal strengths and weaknesses is essential. It lets firms realise its resources, capabilities and core competencies. PEST (Political, Economic, Social and Technological) analysis and SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis help to identify the main opportunities and threats in the target market, and how to overcome the main weaknesses (Bangs 2002).

Step 3: Splitting in-house and out-house business

Outsourcing is also an important task though the core business is the firm's concern to gain competitive advantage. The word “outsourcing” defines the process of transferring the responsibility for a specific business function from an employee group to a non-employee group (Zhu, *et al.*, 2001). “*The greatest advantage of outsourcing, in both high- and average- performing companies, is the sharpening of focus on the core competences of the organisation*” (Kakabadse and Kakabadse, 2002, p.85; Franceschini, *et al.*, 2003).

Step 4: Relationship management

The strategic procedure of relationship management is replacing the function of purchasing (Cousins, 2002, Polychronakis, *et. al.*, 2006, Polychronakis, *et. al.*, 2005a). Thus, after defining core business and outsourcing projects, internal and external relationship management in the supply chain should be considered in detail, such as which type of strategic relationships should be set, cooperation, co-existence, co-competition or competition, how to maintain the relationship, what added value could be created by this cooperation, and so on.

Step 5: Producing procedure and Transportation

With the achievement of precedent tasks, enhanced SCM capabilities can create efficiencies and cost savings across a wide range of business processes, from marketing and product design groups all the way through to the “accounts receivable” department. It must be conducted between enterprises, since optimising entire supply

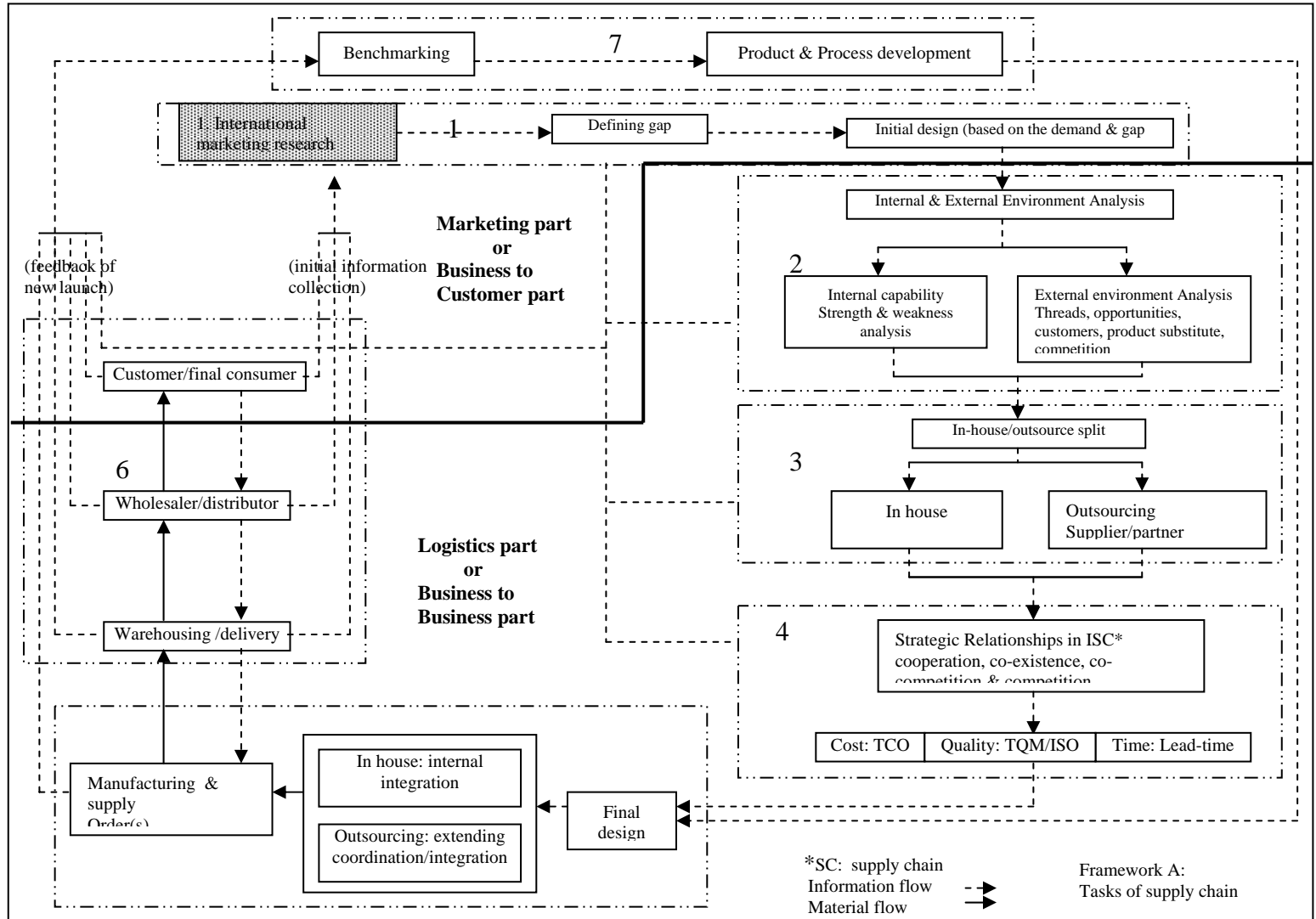
chains will require a level of information sharing and collaboration among enterprises previously unknown in most business (Sahay, 2003).

Step 6: Marketing

In this stage for logistics the task is to deliver; but for marketing is also to collect feedback and information from the market. One of the major changes is that marketing - from having focused initially on gaining new customers - is now more preoccupied with retaining existing customers. It is possible to propose that marketing as a business function follows a life cycle (Shaw, 2000).

Step 7: Benchmarking and further development

Benchmarking should be considered based on the whole process and all the internal and external parts, then recognising the existing problems and providing innovation (Ribeiro and Cabral, 2006). By accomplishing the above process, the developed design and business strategy will be able to function, which in turn leads to stronger customer loyalty and higher profits.



3.2. International business

The term 'globalization' has been coined to represent the ways in which markets have converged throughout the world and the ways in which production poles have shifted geographically to satisfy global consumers (Hines, 2004).

As global markets grow increasingly efficient, competition no longer takes place between individual businesses, but between entire supply chains. Collaboration can provide the competitive edge that enables all the business partners in a supply chain to prevail and grow (Sahay, 2003).

3.3. Collaboration

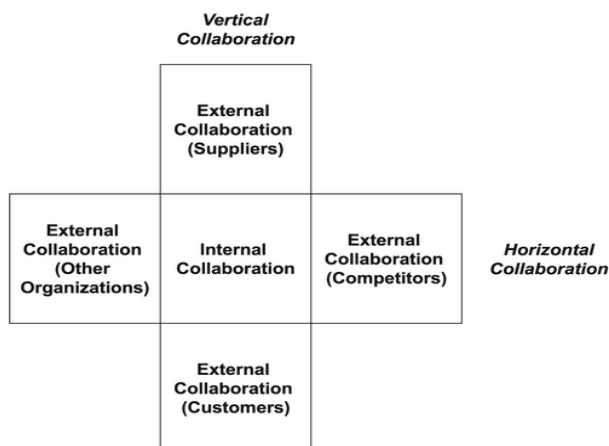
There are many driving forces for collaboration in supply chains. For example, the innovative nature of products, the length of the life cycle and the duration of retail trends in the industries, the longer more complex supply chains and the general movement to offshore production are only some of the associations that move supply chains in to that direction. Global markets and more competition is likely to move supply chains towards a more universal participation where final retailers and upstream suppliers will be more willing to collaborate in an effort to cut costs (Polychronakis and Syntetos, 2007b; Fliedner, 2003).

3.3.1. Forms of collaboration in the supply chain

There are a variety of forms of potential supply chain collaboration, which can be divided into two main generic categories (see figure 4). Vertically, collaboration includes external customers, internally (across functions), and with external suppliers. Horizontally, it include collaboration with competitors and with other external non-competitors (Simatupang and Sridharan, 2002; Barratt, 2004).

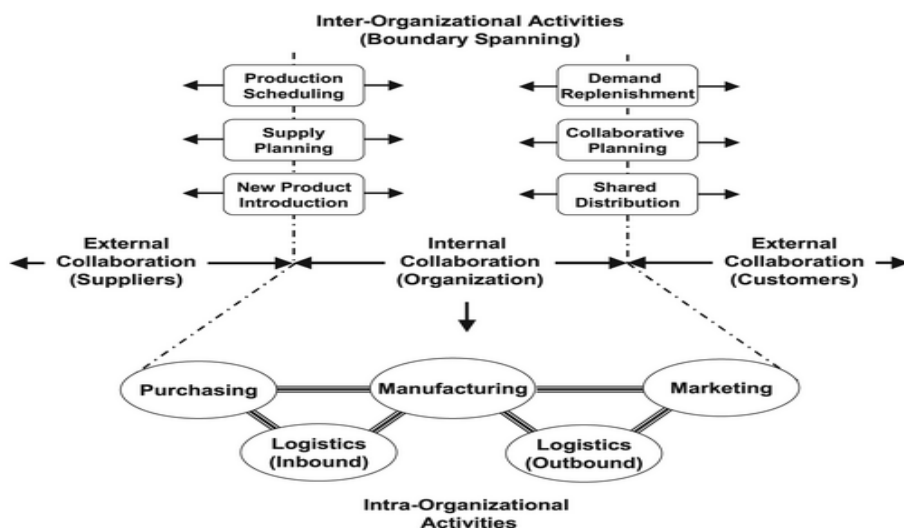
In terms of external collaboration, figure 5 presents a number of potential opportunities for vertical supply chain collaboration such as customer relationship management (CRM), collaborative demand planning (which in turn includes Collaborative Planning, Forecasting and Replenishment-CPFR), demand replenishment, and shared distribution (Barratt, 2004).

FIGURE 4: THE SCOPE OF COLLABORATION



Source: (Barratt, 2004, p.32)

FIGURE 5: THE SCOPE OF VERTICAL COLLABORATION



Source: (Barratt, 2004, p.34)

3.3.2. Collaborative Planning, Forecasting and Replenishment (CPFR)

FIGURE 6: 2004 VICS CPFR MODEL

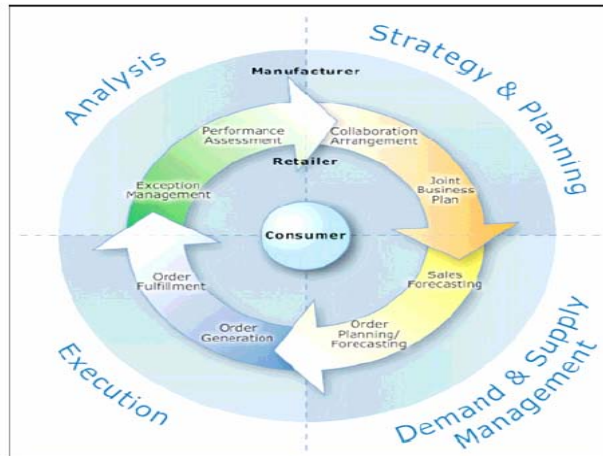


Figure 1: 2004 VICS CPFR Model

Source: (Oracle, 2005, p.3)

Explained by Oracle (2005), the latest CPFR model (Figure 6) highlights the collaboration as a continuous cyclic activity where the focus is on collecting and sharing the determinants of supply chain performance that measure success.

The important tasks which are covered by the current CPFR are:

1. Collaborative Planning – all parties should enthusiastically integrate each other to get ready to respond variable requirements from the market.
2. Collaborative Forecasting – retailers and suppliers in channels with high volume adapt their demand planning processes to incorporate feedback from trading partners.
3. Collaborative Replenishment – retailers and suppliers that have relied on continuous replenishment planning (CRP) or vendor-managed inventory (VMI) are evolving to collaborative inventory management. (Oracle, 2005, p.4)

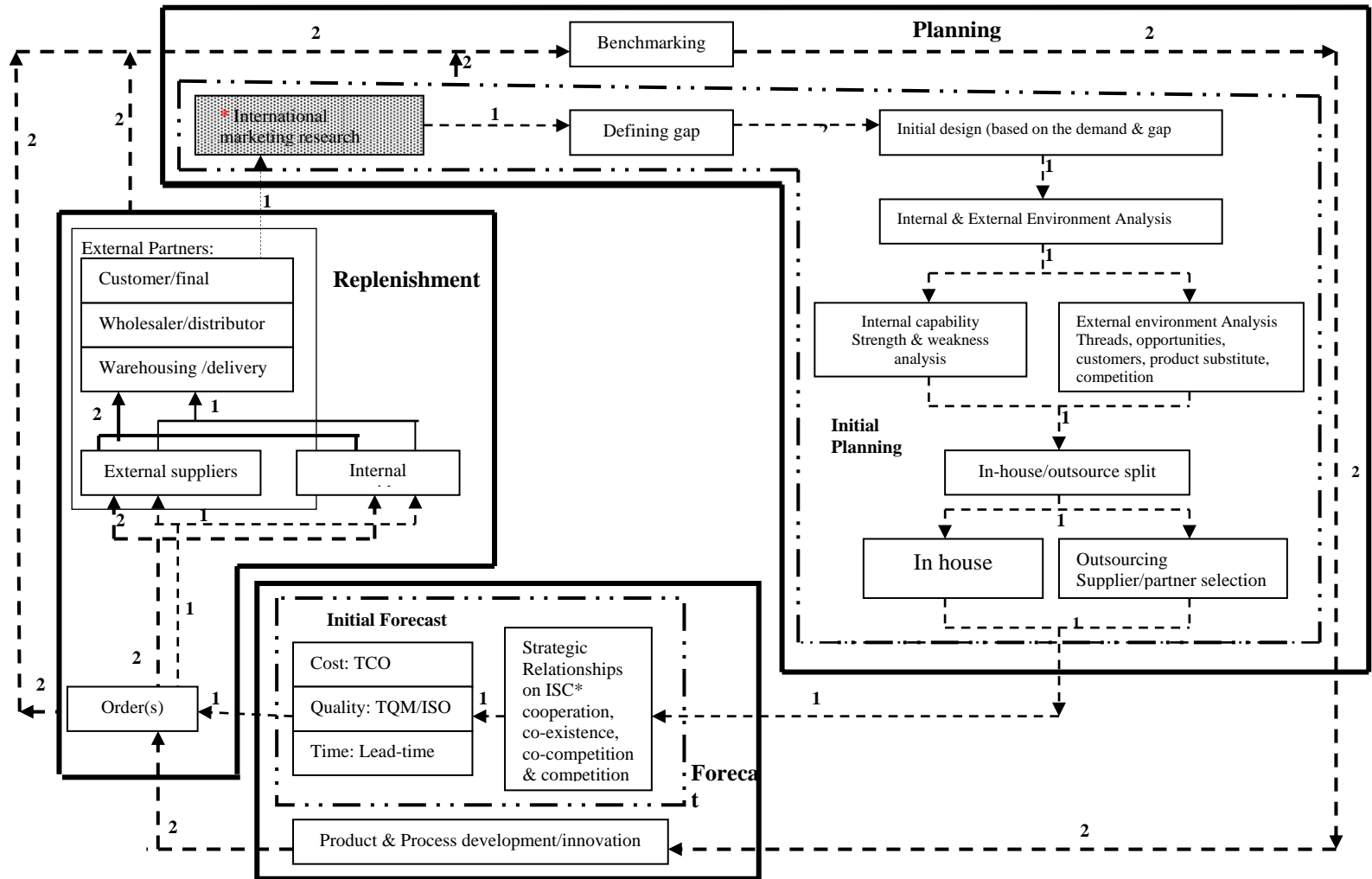
3.3.3. Framework B

The previously mentioned literature addresses CPFR and the development of Framework A. In this section of the paper we deal with the rationale behind the development of Framework B. Steps 1 to 3 provide an overview of the three main stages as they appear in Framework B.

Technology is important, but appropriate information flow is essential: *“the efficient information flow between partners is identified as the key to improving the time, quality and cost factors. Meeting the customer objectives satisfactorily depends on co-ordination of information that helps produce highest quality, low cost and minimum time to service”* (Titus and Bröchner, 2005, p.78).

1. For the Collaborative Planning, all parties should enthusiastically integrate with each other to define and meet market requirements. Thus, accurate understanding of market demand, and own and potential partners' capability, become essential identifications. Task 1 to task 3 in Framework A are fulfilling these requirements.
2. Collaborative Forecasting encourages the integration of feedback from each party such that it enhances their own planning processes – see Task 4 and the initial part of Task 5
3. Collaborative Replenishment employs continuous replenishment planning (CRP) or integrated inventory management techniques, which are leading to collaborative inventory management – see the later part of Task 5 and Task 6 in Framework A

As is highlighted by the latest CPFR in figure 6, endless cyclical improvement is crucial to improve customer satisfaction. Companies can only achieve improved market share by keeping modifying and adjusting their business strategy and improve their products. Then benchmarking is essential and becomes an effective approach to achieve both previous performance and further improvement objectives. Collaborative benchmarking provides motivation for supply chain collaboration in order to improve overall supply chain performance (Horvath, 2001; Simatupang and Sribharan, 2002), and further improvements that in turn contribute to both individual and mutual benefits (Simatupang and Sridharan, 2004). Hence, benchmarking can be regarded as an integral part of the planning and development stages. In that respect, product and process innovation can be decided by considering the new items on cost, quality and time management through the whole chain.



*:Begin of the International supply chain - - - -> : Information flow -> : Material flow 1: first time 2: second time

Framework B

4. BARRIERS FOR CHINESE SMALL SUPPLIERS

4.1. The Chinese Context

China has become a major player in outsourcing/offshore sourcing production and assembly for products supplied to local markets of western firms (Hong, et al., 2006). This has forced China to change its traditional way of doing business. In China, as Yang and Xu (2006) state, SMEs are the main driving force of economic and social development. The Chinese economy has undergone four major stages of change namely the “early stage” (1949-1957), “growth and fluctuation” (1958-1963), “innovative transformation” (1978-1996) and “rapid growth” (1997 onwards) (Sun, 2003). *The scale of the “rapid growth” phase can be illustrated by SMEs statistics. In 2003, SMEs accounted for 98.9% of the total number of businesses in China, and made up 65.6, 63.3, 54 and 77.3 per cent of gross industrial output value, sales revenues, total profits, and employment respectively* (China Statistics Press, 2004, in Yang and Xu, 2006, p.174).

4.2. Problems that small Chinese costume jewellery suppliers face

This section of the paper provides a summary overview of the preliminary findings as we have identified them in the relevant literature.

The main problems are generally generated from differences in the business environment, physical characteristics, climate, infrastructure, population, economic strength, political systems, and cultures (Waters, 2003). These differences create numerous problems, for example Gibb (2000a, b) points out that *“the transfer process from developed to developing countries includes substantial elements of implicit and explicit transfer of ideologies and culture* (Gibb, 2006, p.267).” This in turn leads to problems with language, concept understanding, agency involvement, and so on (Gibb, 2006).

Gaps specific to the Chinese small enterprises include embryonic international outsourcing, nascent logistics system, un-globalised relationship management, knowledge transfer inefficiencies, lead-times, responsiveness and innovation, quality and cost, trust and sharing. (Wiley, et al., 2006, Lin and Miller, 2003, Li-Hua, R. and Khalil, T.M, 2006, and Hong, et al., 2006)

Other problems pertinent to the Chinese small business globalisation attempts originate from the fact that although small enterprises are widely regarded as agents of innovation, economic growth, and wealth creation, nevertheless as China opens its gate to foreign business, many gaps are created in the small business sector development in such areas as financing, management skills, motivated skilled labour, supply chain and subcontracting networks (Poutziouris, et al., 2002).

Compared to large firms, small enterprises in China have problems of both internal financial resource constraints and difficulties to involve external finances (Yao, 2003), government policy restrictions, and triangle debts that represent a type of debt collection situation where three or more firms are involved (Tang and Zhang, 2002, Tang, *et al.*, 2007). Other specific problems on internationalisation attempts (under a regime of strong official influence) include lack of capability on international market research or overall lack of international marketing skills (Bamforth and Brookes, 2002, Siu, 2005 and Li and Matlay, 2006). Furthermore, with labour-intensive production methods, low capitalization and a low level of computerization, adding value to the raw material and overall product quality are also low (Chen and Shih, 2004).

5. CONCLUSIONS AND EXTENSIONS

It is true that *“from time to time researchers do explore new grounds with the changing dynamics that occur in the same field”* (Cavana *et al.*, 2001, p.108 and Sekaran, 2003, p.119). For modern small enterprises success in capturing sales opportunities and to satisfy customer needs in terms of speed, location and product variability, it is highly dependant on their supply chain capabilities (Council of Logistics Management, 2004). In this scenario, strategic alliances (including their business partners and competitors), core competencies and information technologies are the key weapons to achieve flexibility and responsiveness (Gunasekaran and Ngai, 2005). Members in the supply chain are forced to rethink the way they manage their business (Cassivi, 2006). To that end the first major contribution of this research paper is framework A that portray how marketing and logistics fits in the organisational context within a “process map” rationale.

Moreover, the various customer tastes and concerns, fast developments in technology and business globalisation remodel today's small businesses (Hsu and Wang, 2004). Effective collaboration between units in a supply chain plays a crucial role, as it supports firms to concentrate on their core activities and ultimately outsource the rest. It also allows enterprises to focus on the innovation, flexibility, and lead-time and permits them to concentrate on the sources of competitive advantage necessary for survival in global competition (Fisher, 1997; Lee, 2002, Simatupang, *et al.*, 2004). With that in mind the second major contribution of this paper is framework B which captures all the elements of collaboration in the modern international supply chain.

To summarise this paper contributes to the current body of knowledge on SCM by focusing on a specific problem in a specific industry within China, namely the costume jewellery industry. Based on the relevant literature we have generated an initial framework that brings logistics and marketing together in fitting the organisational context. Following that we have produced a second framework that

addresses collaboration pertinent issues. We are currently in the process of developing a final framework that captures the specific barriers for international supply chain collaboration for Chinese small businesses. To that end we have provided in section 4 of this paper some preliminary findings based on the review of the related literature. As previously mentioned we are looking at testing this final framework within a sample of 20 small enterprises in order to further review, evaluate and finalise it. Further results of our work will follow in a future publication.

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THEORY AND EVIDENCE FROM ENTREPRENEURSHIP AND RURAL GROWTH

GEORGE M. KORRES* and GEORGE O. TSOBANOGLOU**

ABSTRACT

The importance of entrepreneurial activities for economic growth has been emphasized by economic literature. Much of the recent work on economic growth can be viewed as refining the basic economic insights of classical economists. The recent debate on the determinants of output growth has concentrated mainly on the role of knowledge typically produced by a specific sector of the economy, and furthermore in the role of entrepreneurship and the implications on economic growth. In the past, public policy has tended to focus on rural areas as a block, treating them homogeneous with uniform problems and opportunities. However, the unit of analysis and intervention has been dramatically changed and such an approach no longer reflects the present development of rural areas. Rural policy has seen significant developments in the last two decades. This paper aims to review and analyze the entrepreneurship and rural policy and its effects on rural and economic growth.

Keywords: Entrepreneurship; Rural; Economic Growth; Competitiveness.

1. ENTREPRENEURSHIP AND ECONOMIC GROWTH

An entrepreneur is an individual who assumes the financial risk of developing or managing a new venture, where the venture is based on a new idea or an innovative way of performing a task. The “entrepreneurial spirit” is something that has long been associated with the driving force behind economic progress and growth. Joseph Schumpeter (1950) stated that the key to the success of markets lies in the spirits of entrepreneurs who persist in developing new products and technologies, and succeed at ultimately reducing production costs.

The last two decades have witnessed a wealth of studies analyzing the *determinants* of entrepreneurship. While some of these studies are theoretical (Holmes and Schmitz, 1990), others are empirical (Evans and Leighton, 1990). The *consequences* of entrepreneurship, in terms of economic performance, have also generated an extensive literature. However, this literature has generally been restricted to two units of observations – that of the establishment or firm, and that of the region.

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Noticeably absent are studies linking the impact of entrepreneurship on performance for the unit of observation of the country. A large literature has emerged analyzing the impact of entrepreneurship on economic performance at the level of the firm or establishment.

Non-agricultural sector is economic activity in urban or semi-urban areas. People who live in these areas are involved in industrial enterprises, both at the production and managerial level and also in various service sectors, such as trade and tourism. Although the norms and regulations vary from country to country, the firms of the urban sector (or otherwise the *formal-sector*) receive the benefits of state economic support. Usually, the firms in this sector operate under the accepted rules and regulations imposed by government. The workers of these firms belong to a union and collective bargaining between firms and workers is not uncommon. The firms are required to pay minimum wages and to conform to certain standards such as, safety, pension schemes and so on. These firms pay taxes and may receive infrastructural facilities, such as the access to subsidized electricity, and may have access to foreign exchange quotas or the right to import certain inputs. In contrast, the agricultural sector (or otherwise the *informal sector*) usually has small-scale organizations and lower basic infrastructure. This sector usually does not adhere to norms of minimum wages, retirement plans or unemployment compensation. Usually, firms do not pay taxes and they receive little government support. People in agriculture are often very poor and they face high levels of risk, while the primary occupation in the agricultural sector is farming.

Explanations for economic growth have generally been restricted to the realm of macroeconomics (Romer, 1990; Krugman, 1991). However, a different scholarly tradition linking growth to industrial organization dates back at least to Schumpeter (1934). According to this tradition, performance, measured in terms of economic growth, is shaped by the degree to which the industry *structure* utilizes scarce resources most efficiently.

Brock and Evans (1986) argue that the shift away from large firms is not confined to manufacturing industries and provide four more reasons why this shift has occurred:

- the increase of labour supply leading to lower real wages and coinciding with an increasing level of education;
- changes in consumer tastes;
- relaxation of (entry) regulations; and
- the fact that we are in a period of creative destruction.

Loveman and Sengenberger (1991) stress the influence of two trends of industrial restructuring: that of decentralization and vertical disintegration and that of the formation of new business communities. These intermediate forms of market coordination flourish owing to declining costs of transaction. Furthermore, they emphasize the role of public and private policies promoting the small business sector.

Acs (1992) was among the first to discuss them. Acs distinguishes four consequences of the increased importance of small firms:

- entrepreneurship
- routes of innovation
- industry dynamics and
- job generation

Acs claims are that small firms play an important role in the economy serving as agents of change by their entrepreneurial activity, being the source of considerable innovative activity, stimulating industry evolution and creating an important share of the newly generated jobs. The role of small firms in the job creation process remains controversial. The re-evaluation of the role of small firms is related to a renewed attention to the role of entrepreneurship in firms.

Entrepreneurship has to do with activities of individual persons. The concept of economic growth is relevant at levels of firms, regions, industries and nations. Entrepreneurship is not synonymous with small business. Certainly, small firms are an outstanding vehicle for individuals to channel their entrepreneurial ambitions. The small firm is an extension of the individual in charge (Lumpkin and Dess, 1996, p. 138). Schumpeterian entrepreneurs are found mostly in small firms. They own and direct independent firms that are innovative and creatively destroy existing market structures. Schumpeter emphasizes the role of the entrepreneur as the prime cause of economic development. He describes how the innovating entrepreneur challenges incumbent firms by introducing new inventions that make current technologies and products obsolete. Managerial business owners, entrepreneurs in a formal sense, are to be found in the large majority of small firms. Recently, the conceptual link between entrepreneurship and economic growth has received renewed interest by economists. The finding that increased entrepreneurial activity leads to greater economic growth is now well founded at both the national and local level. The purpose of this article is to provide a survey of what is known about the links between entrepreneurial activity and rural economic growth.

2. RURAL POLICY AND THE GROWTH PROCESS

An examination of rural policy requires an understanding of the unique conditions in rural places that justify separate national policies. There are several characteristics of rural areas that make them relatively unique and therefore justify special policies. Most are relatively low population densities, which create fewer organizational resources for most activities. Population density also makes it difficult to achieve economies of scale in the provision of services and therefore cause many costs to be higher and require people and organizations to be less specialized. Of course, the exception is the heavy specialization of many rural areas on single natural resource

oriented industries, like agriculture, mining and energy. These industries often have had profound effects on rural areas because they have concentrated resources in a few hands and contributed to the concentration of economic and political power and therefore weakened democratic and civic institutions.

A major subject of rural policy related to the basic infrastructure is the remote areas. Usually, rural policy in remote areas should provide services to meet the demand of users and also to enhance the whole basic infrastructure and to improve the quality of life. Due to isolation of the remote areas, rural policy in these areas should directly affect remote areas which will gain more from the upgrading of basic infrastructure, as for example from roads and telecommunications. However the indirect effect of rural policy on particular remote areas, such as on employment, education and training, are not so strong due to luckiness of skilled labor and the low level of investment and of basic infrastructure.

The existing patterns of supporting economic activity in rural areas focus predominantly on agriculture and food processing. The role in supporting entrepreneurship in rural areas lies in the hands of local governments in order to enhance the growth process and the results expected from supporting entrepreneurship are:

- an increase in overall employment;
- increase in employment outside of agriculture;
- increase in demand;
- increase in the value of investments;
- a larger tax base and, as a result, an increase in the revenue collected by local authorities;
- diversification of economic activity and thus a lower dependence on market volatility;
- strengthening and an expansion of existing enterprises;
- an increase in the number of investors; and
- an increase in the number of enterprises.

3. POLICIES FOR ENTREPRENEURSHIP AND RURAL GROWTH

There are various dimensions to thinking about entrepreneurship and enterprise policies that we need to take into account when defining the scope of the policies that this paper is concerned with. In this regard, we may distinguish between on the one hand policies to encourage and support entrepreneurship, such as entrepreneurship policies which include the promotion of an entrepreneurial culture, entrepreneurship education, and policies to help individuals through the nascent and initial stages of starting a business (Stevenson & Lundstrom, 2002) and on the other hand, more traditional enterprise support policies concerned with the growth, survival and

competitiveness of existing SMEs. There are many different factors which can influence the level of entrepreneurship within a rural economy, not least the specificities of the social, cultural and political context including national level policies with regards to, for example, market openness, privatization, and legal and taxation regimes (Glancey & McQuaid, 2001; Morrison, 2000; Reynolds et al., 2002). However, we focus here upon those entrepreneurship policies which are directly concerned with building-up the entrepreneurial capacity of rural regions. These include:

- (i) Policies concerned with building the entrepreneurial capacity of rural regions such as those seeking to influence the attitudes and motivations of individuals towards entrepreneurship and providing opportunities for the acquisition of business and management skills via the education and training process;
- (ii) Policies concerned with targeting potential sources of entrepreneurs, such as those aimed at attracting in-migrants with entrepreneurial skills and ambitions or those initiatives aimed at increasing the proportion of entrepreneurs from “under-represented” groups such as young people or women;
- (iii) Policies concerned with supporting the process of starting new business ventures, including pre-start-up advice and appraisal of the “business idea” as well as assistance with the various aspects of setting up a new business.

More generally, enterprise support policies are primarily concerned with improving the competitiveness and viability of existing SMEs with a view to increasing their chances of survival and growth. These include:

- (i) Policies concerned with generic support to rural businesses, such as those concerned with providing advice on different aspects of running a business, such as business planning, marketing, exporting, use of information and communication technology.
- (ii) Policies aimed at providing specialist support to enterprises in particular sectors, such as those initiatives concerned with helping farmers;
- (iii) Policies concerned with providing an infrastructure which is supportive of enterprise formation and development in rural regions.

4. EVIDENCE FROM RURAL POLICY AND ENTREPRENEURSHIP ACTIVITIES

The great differences among rural people and places in most countries make it hard to discover national policies that fit all of these places. Isolated rural areas will generally exist at considerable distance from urban centers. These communities will be those that survived a period of significant rural consolidation. Population will be stable or declining. Income levels will be significantly lower and income growth will lag behind the national average. The basic infrastructure in these communities, including transportation and telecommunication infrastructures, will be typically less

(at least one generation behind) than that of urban and growing rural areas. The policy orientation is closely related to the main socio-economic factors, the basic priorities and the emerging needs. The main macroeconomic and social factors in relation to the rural policy are presented on the following Figures 1-4. In particular, Figure 1 illustrates the enterprises with less than 20 persons engaged as a percentage of the total number of enterprises for a number of countries in 2005. Whereas Figures 2 and 3 illustrate the labour productivity in total manufacturing in value added per person employed as a percentage of annual rate and in total market services, respectively.

FIGURE 1: ENTERPRISES WITH LESS THAN 20 PERSONS ENGAGED (AS A PERCENTAGE OF TOTAL NUMBER OF ENTERPRISES), 2005.

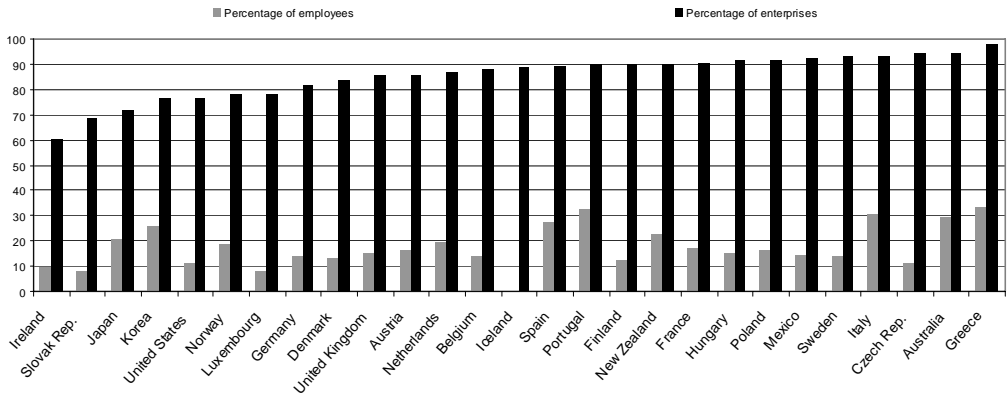
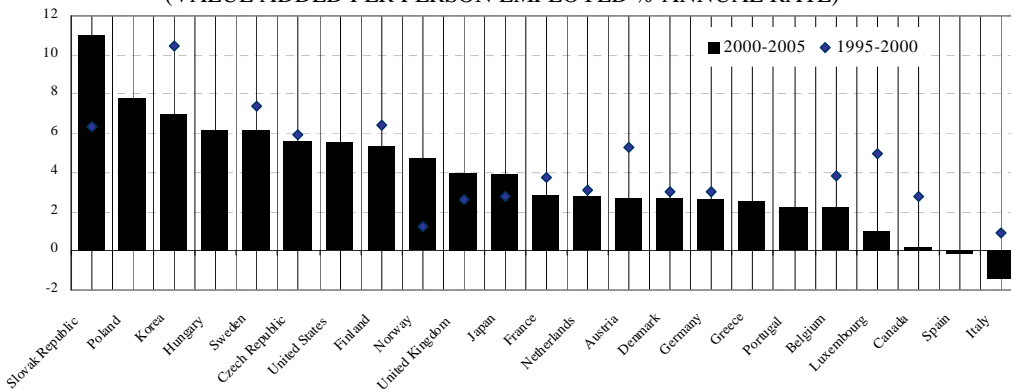
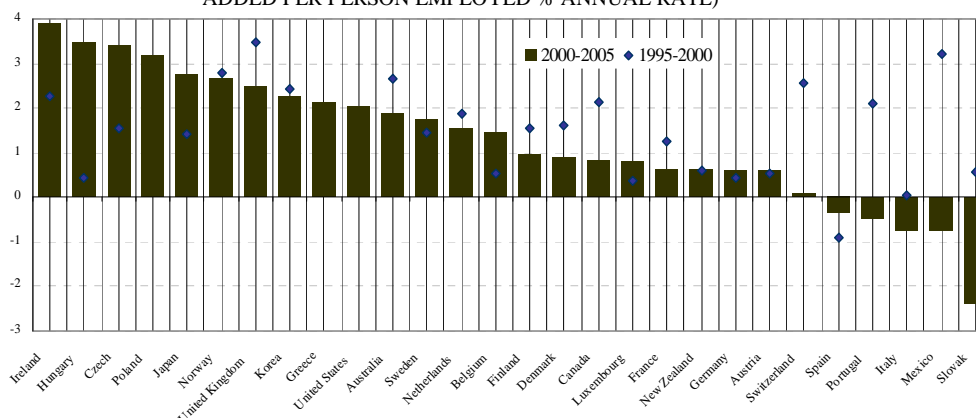


FIGURE 2: LABOUR PRODUCTIVITY IN TOTAL MANUFACTURING (VALUE ADDED PER PERSON EMPLOYED % ANNUAL RATE)



However, “macroeconomic policies”, dealing for instance with national growth, stable prices and financial system, as well as “structural policies”, concerning for example the efficiency of markets, will not be sufficient to deal with new and more intense rural problems.

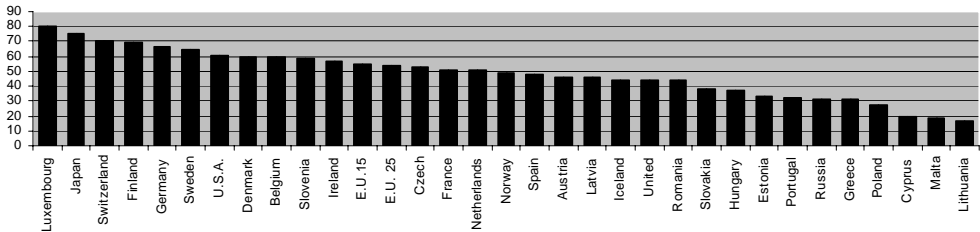
FIGURE 3: LABOUR PRODUCTIVITY IN TOTAL MARKET SERVICES (VALUE ADDED PER PERSON EMPLOYED % ANNUAL RATE)



In rural areas, economies of scale are more likely to be achieved internally to firms and consequently firms are becoming increasingly larger and larger. Evidence from the agricultural sector is the emergence of supply chains, whereas in urban areas small to medium firms can cluster to capture the benefits of agglomeration economies, as the saving due to proximity to a diverse labor force, specialized producer services and high-quality public services.

Unequal distributions of wealth and income have created rural poverty, which is likely to be different from urban poverty. In urban areas more poor people are single-parent heads or households. In rural areas, they are more likely to be the working poor. Therefore, employment and training programs are likely to do more for rural than urban poverty.

FIGURE 4: R&D EXPENDITURES FINANCED BY BUSINESS SECTOR AS A PERCENTAGE OF E.U.-25, 2005.



Improved rural development has often been associated with greater capital investment, the application of science to production, better economic organization, and in some cases effective urbanization. The notion is that infrastructure is public capital investment that will make private capital investment more productive. The expectation is that improved water, better electricity, lower cost transportation, and augmented information infrastructure in rural areas can allow firms to be more productive and to operate at lower costs. Figure 4 illustrates the research expenditures financed by the business-sector as a percentage for EU-25.

The resulting productivity gains are expected to increase overall economic activity. A range of tools can potentially be used to make rural areas more economically vital. The challenge for policymakers, functioning with limited resources at their disposal, is to select the mechanisms that are most efficient for stimulating rural economies. In this way, infrastructure is best seen as one of the competing means for enhancing rural economic development. For instance, water, electricity, telecommunications and other infrastructure are obviously imperative to business development. During the last two decades rural policy focusing on the following points:

- There was an attempt to pursue strategic investments and to develop new activities for basic infrastructure.
- There was more attention to public investment and to support local enterprises, local entrepreneurship, and innovation, as well as assure social cohesion.
- There was a clearer planning for exploitation of local resources and to develop the comparative advantage.
- There was support on sectoral policies aiming to enhance the inter- and -intra linkages effects at sectoral, local and regional levels.
- Finally, there was an effort to increase the decentralization of administration and policy and furthermore to increase the partnership between public and private sectors, in order to improve and to increase the necessary basic infrastructure of the rural regions.

5. CONCLUSIONS

We expect a framework relating entrepreneurial activity to economic growth to hinge on at least four elements.

- *First*, on the literature identifying the micro-economic foundations of growth emphasizing the role of knowledge externalities in the growth process (Romer, 1986 and 1994).
- *Second*, it should identify intermediate linkages.
- *Third*, it should deal with dual causality in the relation between entrepreneurial activity and growth.

The main factors that are favourable to entrepreneurship and investment in rural areas are:

- *Loyalty of employees*: Because it is difficult to find a job and work alternatives are scarce, having a job is highly appreciated.
- *Lower crime rates*: The safety of running a business is an important factor that investors take into consideration before making an investment decision.
- *Ease of adopting new consumer behavioural patterns*. Entrepreneurial and market-oriented attitudes are slowly adopted by people in rural areas. It is not the case with consumer behavioural patterns.
- *Clean environment*: Clean air, low noise levels, and unpolluted water are advantages.
- *Easier control of employees*: Lower levels of education and a smaller number of work alternatives make it easier for employers to control workers.
- *Lower prices of land*: Lower land prices can attract investors willing to build an enterprise.
- *Lower wages*: The cost of living is substantially lower in rural areas than elsewhere and wages can also be relatively lower.
- *Negligent role of trade unions*: Although workers have a right to form trade unions, they seldom make use of that right in rural areas.

The main factors that are unfavourable to entrepreneurship and investment in rural areas are:

- *Low population density*: Because of low population density, human settlements are far from one another, and communication is slow.
- *Low demand per square kilometre*: Market potential, which denotes the volume of goods sold in an area, is one of the basic measures used in marketing.
- *Large distances*: As a result of low population density, human settlements are scattered over a large area. Large distances increase the cost of transportation and reduce the frequency of supply deliveries.
- *Lack of an entrepreneurial tradition*: Entrepreneurship coming up with new ideas and innovations, and actively trying to overcome obstacles and difficulties.

- *Low level of education:* The level of education can heavily influence a company's decision about where to invest.
- *Lack of models for successful business ventures:* Instances of successful business undertakings are an enormous encouragement for other people to do the same. In rural areas, however, such examples of successful entrepreneurship in rural areas undertakings are rare.
- *Problems with infrastructure:* Underdeveloped infrastructure can scare off potential investors.

Entrepreneurship generates growth because it serves as a vehicle for innovation and change. One of the central goals of public policy common among all modern economies is the generation of growth and the creation of employment. Much of the policy debate to generate growth and jobs has relied on a macro-economic framework and focused on the traditional macro-economic policy instruments. The survey of this article suggests that a different, less traditional instrument for generating growth and employment plays an important role – policies that generate and promote entrepreneurship (OECD, 1998). Empirical evidence surveyed in this chapter suggests that those countries that have experienced an increase in entrepreneurial activity have also enjoyed higher rates of growth. Experience also suggests that an approach which actively involves rural communities, enterprises, and economic development agencies is most likely to work best, although regional level economic development organisations are probably in the best position to achieve the level of integration between different interests and agencies which will be required.

Based on the increasing awareness of the role of entrepreneurs in driving economic growth, state and local economic development efforts have been more heavily directed toward promoting entrepreneurship. These development efforts have mainly focused on reducing the financial constraints that entrepreneurs face either through preferential loans to new businesses, as those supported by the Small Business Administration, or preferential tax treatment for new or small businesses. One such policy that has recently gained popularity is to devote public resources toward attracting and building a larger amount of venture capital to encourage entrepreneurial activity. This development strategy is largely based on casual observation that areas with larger amounts of entrepreneurial activity generally tend to also have a larger amount of venture capital.

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