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THE SOLVENCY INDEX, ACCOUNTING STANDARDS AND THE EUROPEAN FUNDING OF BANKS IN GREECE

N. SIKIANAKIS* P. PAPADEAS** E. IMPRIKSI***

Abstract

To protect the global financial system, banking supervisory authorities have been led to establish a supervisory framework to examine the solvency of banks with reference to the management of risks related to their balance sheet assets and liabilities accounts. Thus, it becomes evident that the interest of the banking supervisory authorities is directed both to the expansion of the capital adequacy of banks against the overall risks that may occur locally and internationally, and at the wider disclosure of the corresponding comparable accounting information. This article investigates these prospectives for the banking system and the Greek economy.

JEL Classification: E58, G28, M41

Keywords: Bank Accounting, Capital Adequacy, IASB, Basel

1. Introduction

During the last decades, specific guiding principles have been established that should govern the relationship between the banking supervisory authorities and both internal and external auditors of banks, e.g. in cooperation with the International Federation of Accountants. Reports have also been issued which make recommendations to banks regarding the accounting treatment of their loans and the provisions they should make for potential bad debts (e.g. Sound Practices for Loan Accounting and Disclosure). Furthermore, position papers have been submitted expressing views on the content of some of the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards (Committee) Board (IASB).

The continued adoption of IFRS brings significant, in some cases, changes

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to banks' financial statements. These changes also affect the relevant supervisory indicators derived from accounting data and are linked to the decisions taken from time to time by the Basel I, II, III Committee. This is a set of modern rules that strengthens the regulatory framework for the operation of banks, for the effective supervision of the banking system, particularly with regard to the risks it undertakes and potentially faces.

Under Basel I, banks were required to meet a minimum capital requirement of 8% on an ongoing basis through the Solvency Ratio, which was initially calculated with the ratio of Regulatory Capital to credit risk-weighted assets (on and off balance sheet) as the denominator. In addition, Basel I, on the basis of market risk, had also provided for Tier 3 capital for the bank's short-term obligations, also referred to as "short-term unsecured debt".

Later, in Basel II, the minimum capital requirement remained at 8%, but the numerator of the fraction (regulatory capital) was partially differentiated due to the implementation of International (Accounting) Financial Reporting Standards, while the denominator of the fraction was significantly differentiated. The risk weighting methods were differentiated, the way of measuring credit risk was changed and an additional risk, the operational risk, was added.

Although the percentage contribution of operational risk is the smallest in the sum of banking risks, its occurrence can cause the bank's bankruptcy. In the last thirty years, the negative impact of operational risk was experienced by Barings Bank, National Westminster Bank, Orangeg County, Metallgesellschaft, Allfirst Financial, Household Finance, etc. This is a qualitative rather than quantitative risk that is difficult to measure compared to other risks.

In addition, Baverez (2012) refers to JP Morgan losing billions in the derivatives markets, Barclays being accused of manipulating Libor and Euribor, HSBC being accused of money laundering for the benefit of criminal or terrorist organisations and the near bankruptcy of Knight Capital following a \$440 million loss from a software error.

Finally, Basel III focuses its attention on both the quality of equity capital and the level of capital requirements in relation to risk-weighted assets. It is more closely related to Basel I, which placed greater emphasis on equity capital (numerator) than to Basel II, which placed greater emphasis on banking risks (denominator).

With "Basel III Core Tier 1" Capital have become "Common Equity Tier / CET1" and include only common shares and retained earnings to improve the capital structure in terms of consistency and transparency. Reserves, general provisions, subordinated debt and hybrid funds are aligned to "Tier 2" capital, while "Tier 3" capital is eliminated.

It should be clarified that off-balance sheet items –in addition to the Explanatory Notes to the Appendix– include foreign exchange forward transactions and financial derivatives whose value is derived from the price movements of other primary assets, the "underlying instruments". The Solvency Ratio shall be limited to underlying instruments in the form of interest rates and foreign exchange rates, whose credit risk corresponds to a minimum percentage of their nominal value and is related to the maturity of the contract in question.

The solvency ratio prescribed by the Basel rules can be supplemented by the CAMELS ratios, whose initials represent six ratios that have become globally accepted as the most widely used way of assessing banks. Their analysis is based on financial statement data and the respective reports of supervisors and auditors-accountants. Although they utilize International (Accounting) Financial Reporting Standards, the need for the analyst performing the evaluation to apply qualitative criteria also differentiates the CAMELS indicators from other evaluation models in that the choice of weighting factors is subjective. Table 1 shows the components of the CAMELS rating system.

Table 1. Components of the CAMELS rating system

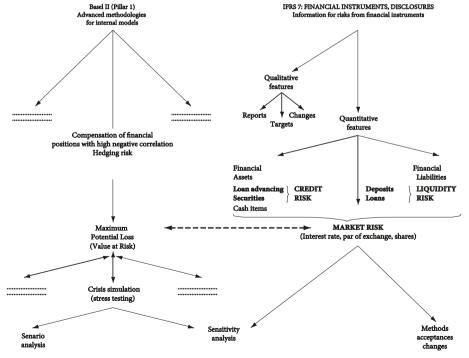
| | Ratios | | Weight coefficient |
|---|----------------------------|---|--------------------|
| С | Capital adequacy ratio | Regulatory capital Risk weighted Assets | 2,5 |
| A | Asset quality | $rac{	ext{Non-performing loans}}{	ext{Loans}}$ | 2 |
| M | Management | Administrative Excpencies Sales | 1,5 |
| Е | Earning | Net Profits Average Assets Net Profits Equity | 1 |
| L | Liquidity | Loans Current Assets Deposits Average Assets | 2 |
| S | Sensitivity to market risk | Total Securities Average Assets | 1 |

2. Financial Instrument Disclosures

In accordance to IFRS 7 "Financial Instruments: Disclosures" sets out the disclosures that should be included in the Explanatory Notes accompanying an entity's financial statements to enable users of those statements to evaluate the significance of each financial instrument to the entity's financial position and performance. Also, the objective of the Standard is to provide information about the nature and level of risks arising from the financial instruments held by the entity as well as the way in which these risks are managed. These are disclosures that, due to rapidly evolving international financial conditions, are linked to analytical quantified methods to provide for more complete information on banking and accounting matters.

In particular, the almost parallel decisions of the Basel and IASB banking supervisors (IFRS 7) to jointly address market risk are summarised in Figure 1.

Figure 1. Community directives (Pillar 1) and regulations (IFRS) for addressing market risk



The banking supervisory authorities link for the first time credit risk to the required Capital Adequacy Ratio (Solvency Ratio for the Bank of Greece) of each bank, prompted by the bankruptcies that had occurred in the last decades in US banks. Later, a new major trigger came from the failure of several mortgage banks in the US, resulting in banking supervisors extending their requirements to cover market risk through the Capital Adequacy Ratio, which includes additional risk weighting mainly from changes in interest rates and foreign exchange and equity prices.

However, as we can see in Figure 1, the main interactions of credit risk are correlated with the majority of financial assets, while those of market risk are correlated with the total financial assets and liabilities. Given that the supervision of market risk is becoming more complex, banking authorities allow it to be linked to the Value at Risk method, so that financial positions with a high negative correlation can be offset and the risk can be hedged. Figure 1 also shows that the decisions of the International Accounting Standards Board on the disclosure of market risk (IFRS 7) and the Basel decisions on the application of advanced methodologies, such as the interrelationship of Value at Risk with crisis simulation, contribute to the use of sensitivity analysis, which through its results can approach in a systematic way the decision-making on current and future problems of Bank accounting.

Finally, the bankruptcy of the major banks in the UK as well as major financial scandals were the main reasons for banking supervisors to extend their requirements to cover Operational Risk. This is the risk of damages arising either from the inadequacy or failure of internal processes, individuals and systems, or from external events, which also includes legal risk. It is included in the Basel decisions and its quantification will determine the additional Capital Requirements, but with current data it is difficult to measure it to reflect the Bank's actual exposure to Operational Risk. Obviously, the more sophisticated the methodology applied by each Bank to cover Operational Risk, the less capital it will retain and ensure more efficient use of its remaining available capital. This, however, required a considerable amount of time to put in place the necessary infrastructure, since for the coverage of Operational Risk the supervisory requirements are stringent both for external models (recording and analysis systems, documentation of activity categorisation, adequate internal control mechanisms) and internal models (adequate disclosure - Pillar 3). The banking supervisory authorities continue to strive to enforce the necessary measures to prevent misleading information to the investing public and the emergence of financial scandals such as Enron or Worldcom. For their part, there are banks that systematically try to conceal or reduce their actual debt obligations and, in Anglo-Saxon terminology, describe them as off-balance sheet finance or activities. In this way they try to avoid withholding sufficient funds to cover the corresponding risks and for this reason in 'Financial Instruments' the IASB has established, through IAS 39, the recognition and derecognition principles for on- or off-balance sheet financial instruments (§ 2.2).

3. Adequacy of Bank Capital and Red Loans

In the last three years, bank bond issuance rates have multiplied compared to those prevailing before the recent geopolitical crisis. Also, spreads on issues by banks operating in Greece are at a significantly higher level than those by European banks and the Greek government. A key reason is that the four systemic banks have not completed the effort to clean up their balance sheets, which resulted in the market pricing them significantly higher than the Greek government. This is a problem that is already being addressed by significantly reducing Non Performing Exposures/NPEs (mainly "red loans") to total Assets. Figure 2 below shows that this effort was completed as of 31/12/2021 for Eurobank and National (Ethniki) bank.

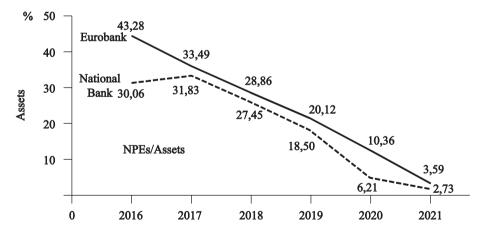


Figure 2. % of NPEs in Eurobank's and National Bank's Assets

In short, the Non Performing Exposures (NPEs) Ratios for the four systemic banks in the last six years are shown in Table 2.

| Banks | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|----------------------------|--------|--------|--------|--------|--------|--------|
| National Bank (Ethniki) | 39,00% | 38,10% | 40,30% | 31,70% | 15,00% | 6,90% |
| ALPHA Bank | 51,10% | 50,10% | 47,50% | 43,60% | 41,50% | 12,90% |
| Piraeus Bank | 52,20% | 52,60% | 49,30% | 48,20% | 34,60% | 12,90% |
| Eurobank | 48,60% | 45,40% | 40,90% | 35,30% | 15,10% | 8,00% |

Table 2. % NPEs of the four systemic banks

Thus, Eurobank and National Bank (Ethniki) managed to converge with the European banks (single digit percentage), while Alpha and Piraeus banks are approaching this target. Figure 3 shows their efforts to significantly reduce their NPEs/assets ratio over the last year.

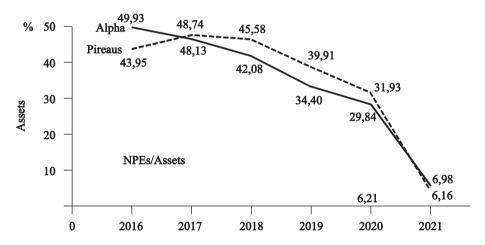


Figure 3. % of NPEs in Alphabank's and Piraeus' Assets

Overall, the leverage ratio in our country's banking system is satisfactory, due to the low exposure to leveraged loans, but the numerator (CET 1), although it exceeds the minimum required limits, lags behind the European average. Thus, the risk for highly leveraged and risky transactions may be low,

but the cost of risk still remains significant, mainly due to the ratio of red loans which have recently declined rapidly and significantly, as shown in Figure 4.

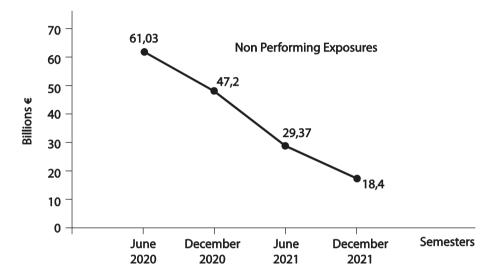


Figure 4. NPEs (in billion euro) of the four systemic banks

On the basis of IAS 12 and Law 4831/21, the four systemic banks have deferred tax assets that have earned the right to a refund of Deferred Tax Credits (DTC) of 15.525 billion euros. Of the total CET 1 amounting to EUR 25.092 billion, the DTC funds represent 62% for 2020. It is worth recalling that under IAS 12 and Law 4302/14, the possibility of offsetting 10 billion euros of losses from the haircut of their bonds by 27 billion euros, i.e. 37% for 2012 and 2013, had been given. In both previous periods, the Banks were in line with both the Basel and ECB financial resolutions to cover their capital adequacy levels and the applicable tax and accounting legislation to cover losses from the bond "haircut" and the "red loan" write-down respectively. As on 31/12/2021, the DTC/CET 1 ratio and the % CET participation are shown in Table 3.

| | National | Eurobank | Alpha | Piraeus |
|-----------|----------|----------|--------|---------|
| DTC/CET 1 | 85,9% | 70,2% | 62,1% | 100,1% |
| CET 1 | 14,08% | 12,74% | 13,38% | 11,12% |

Table 3. % DTC/CET 1 and CET1 of the four systemic banks

In most of the bank balance sheets, consolidation has been achieved, but constant vigilance is needed to monitor satisfactory capital adequacy ratios (Basel decisions), due to deferred taxes and red loans.

Apparently, the significant unwinding of a large volume of NPLs for 2021 has caused a large drop in net interest income, which is expected to improve as demand for business loans in the first half of 2022 was high and interest expenses were at historic lows.

4. Statistical processing / Banking system perspectives

Based on the numerical data of the four systemic banks on Assets, Equity (mainly CET1), DTC and NPEs, the Perason's correlation coefficient r was calculated in order to assess the correlation between these. The results for all pairs of correlated variables are given in Table 4.

Table 4. Correlation of Assets, CET1, DTC, NPEs of the four systemic banks

| | Assets | Equity | Deferred Tax Assets (Credits) | NPEs | DTC/CET1 | NPEs/E(%) |
|----------------------------------|--------|--------|----------------------------------|--------|----------|------------------|
| Assets | 1 | .211 | 032 | 283 | .427 | 456 [*] |
| Equity | | 1 | .761** | .827** | 583 | .754** |
| Deferred Tax Assets (Credits) | | | 1 | .283 | .123 | .244 |
| NPEs | | | | 1 | 620 | .975** |
| DTC/CET1 | | | | | 1 | 641 |
| NPEs/E(%) | | | | | | 1 |

^{*} Correlation is significant at the 0.05 level (2-tailed).

^{**} Correlation is significant at the 0.01 level (2-tailed).

Specifically, the values of the Pearson's correlation coefficient r are given, while the statistically significant coefficients are highlighted in bold and the statistical significance is indicated by one star (95%) or two stars (99%). The following statistically significant correlations are observed from an overview of the results:

- Between Equity (CET1) and DTC (Pearson's r= 0.761; p<0.01), i.e. there is a tendency for banks with high Equity (CET1) to have high DTC and vice versa.
- Between Equity (CET1) and NPEs (Pearson's r= 0.827; p<0.01), i.e. there is a very strong tendency for banks with high Equity (CET1) to have high NPEs and vice versa.
- Between Equity (CET1) and NPEs/E (Pearson's r= 0.754; p<0.01), i.e. there is a strong tendency for banks with high Equity (CET1) to have high NPEs/E and vice versa.

All of the above is also graphically depicted in the following multiple scatter dot matrix (Figure 5), where the above correlations, both statistically significant and not, are visually represented.

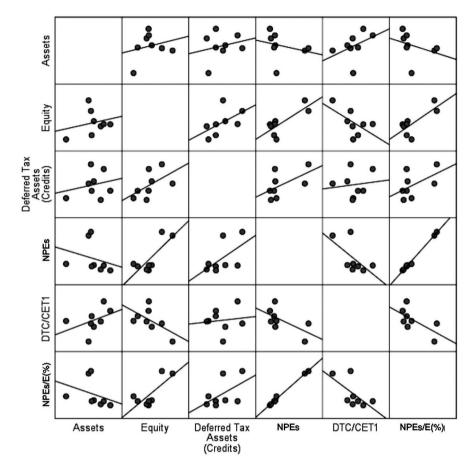


Figure 5. Multiple Scatter Dot Matrix of Correlations

At present, banks are directly affected by the arduous search for higher returns in a rising interest rate environment, but also indirectly by a combination of complex macroeconomic risks such as climate change, high inflation due to deterioration in supply chains and energy prices, cyber-attacks and startup (fintech) competition.

The European Central Bank has given a positive opinion since the second half of 2021 and has acknowledged the priority of non-performing loan write-offs in the balance sheets of banks in Greece, as well as the fact that the

regulation does not alter the framework provided for the deferred tax (IAS 12), both at European and national level.

The implementation of the opinion has renewed the possibility of creating Deferred Tax Credits (DTC) (Assets) which are decisive in the formation of Capital Adequacy (CET 1). As on 31/12/2021, the DTC/CET 1 participation by bank ranged from 62.1% to 100.1%. The recent regulation of the deferred tax issue with the possibility of 20-year amortization (rollover until 31/12/2035, 36...) increases the investability of Greek banks and combined with the rise in GDP and the expected investment grade, enhances the positive prospects for the banking system and the Greek economy.

Thus, CET 1 covers the minimum required thresholds, removes the risk of nationalisation of banks and provides the scope, at the macroeconomic level, for a prudent fiscal policy that should continue to optimise the conditions for European funding until 2027, with regard to the Common Agricultural Policy (22 billion euros), the double NSRF (27.6 billion euros) and the Recovery Fund (30.5 billion euros).

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THE IMPACT OF BUSINESS ENVIRONMENT IN THE DEVELOPMENT OF ACCOUNTING PRACTICES: A HISTORICAL APPROACH TO THE EVOLVEMENT OF FINANCIAL REPORTING IN GREECE

C. TZOVAS*

Abstract

This paper presents the structural characteristics of the industrial sector in Greece from the inception of Greek state up to twenty first century. In addition, it discusses the impact of those characteristics in the development of Financial Accounting in Greece focusing in the period before the adoption International Financial Reporting Standards. It is argued that the fundamental attributes of the Greek economic, financial, and business environment had formed a context within which Greek Accounting practices had been mainly tax-oriented with little regard for the informational needs of firms' stakeholders.

JEL Classification: M4, N1

Keywords: Accounting History; Business environment; Industry

1. Introduction

Understanding the factors that shape the broader economic, business, and political environment prevailing in a certain country can facilitate the comprehension of the business practices adopted by firms within that country (Nobes, 1991). In addition, it has been argued that a knowledge of firms' business practices can be helpful in explaining these firms' reporting policies and accounting choices (Nobes, 1991). Thus, the environmental factors prevailing in a country can be useful in explaining the accounting policies of firms operating in that country (Choi *et al.*, 1983). The purpose of this paper is to present and discuss the distinctive characteristics of the broader business and economic environment prevailing in Greece from the inception of Greek state up to twenty first century.

The paper is organized as follows: a review of the history of the development

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of the Greek manufacturing sector is provided in Section 2. In addition, the main macroeconomics trends prevailing in Greece over the past few decades are discussed along with the structural policies implemented by the Greek authorities in the same period; the influence of those policies on the industrialisation of the country and especially on the development of Greek manufacturing is examined. Section 3 is concerned with presenting the main characteristics of the Greek financial system. The structure of the banking system along with the role of the bank credit in the industrial development of the country's economy are examined. In addition, the role of the Stock Exchange along with recent developments in the capital markets are discussed. The ownership-structure of firms operating in Greece, their administrative characteristics and the prevailing managerial attitudes are discussed in Section 4. The paper concludes with Section 5 in which the information presented in the previous sections is synthesised so that the characteristics of the Greek environment that have affected the evolvement of financial reporting in Greece will emerge.

2. Historical review of the Greek industrial sector

Within this section an outline of the history of Greek industry from the emergence of the modem Greek state until twenty first century is provided. Such an analysis aims to show the factors that have influenced the development of Greek industry, and as a result, contribute to an understanding of the framework in which large Greek industrial firms operate. The developments which specifically refer to the course of the industrial sector have been connected with main economic trends, and more specifically with the macroeconomic and structural policies that were pursued by Greek administrations. When necessary, a link between developments of a economic nature and of broader political and international events has been made.

For the purposes of this presentation, the almost 200 years of the existence of Greece as an independent and sovereign state, has been divided into three periods. The first period covers the years from 1828, when the first independent Greek state emerged, until 1949, when the civil war that broke out in Greece after the liberation from the occupation forces of the axis powers and their allies in 1944, finished. The second period covers a twenty-five year period which started in 1949 and concluded in 1974 with the collapse of the military regime that came into power by the 1967 coup. The third period refers to the last thirty years¹.

2.1. The period 1828-1949

In 1828, after a seven-year struggle against Ottoman domination, an independent Greek State emerged. In the immediate post-revolutionary years, economic activity in the freed lands was not considerably modified compared to its state in the last decades of Ottoman domination. Economic activity was mainly concentrated in the agricultural sector, while the strong pre-Revolutionary trading activity gained a new impetus in the post-revolutionary years, especially in the import-export trade sector.

The industrial and manufacturing sector was basically non-existent and there was no serious industrial infrastructure. According to Vergopoulos (1975) the lack of industrial development in Greece in the first decades after the revolution can be partially explained by the structure of the agricultural activity in the same period. Due to the policies of the first post-revolutionary Greek governments regarding the liberated lands, the lands which were suitable for agricultural production were dominated by small landholdings. However, very small landholdings do not encourage substantial investment in the agricultural sector, since they preclude economies of scale in production which is a prerequisite for such investments. As a consequence, agricultural production never reached high levels, preventing the development of an industry which would have been specialised in the processing of agricultural products. At the same time, the high level of industrialisation in the countries of Western Europe meant that any effort undertaken within Greece for some form of industrial production could not withstand the competition of products from the economically developed countries of West² (Gregoriadies, 1975). The non-interventionist liberal policies that had been followed by the Greek governments of the corresponding period, did not enhance either the chances of success of any effort aimed at the development of industrial production within Greece (Mouzelis, 1978). An additional factor that can explain the non-development of industrial modes of production in the first decades after the war of independence was the reluctance of the economically dominant classes of that period to invest in risky industrial projects. Instead, they preferred to concentrate their activities in the relatively secure areas of trade –especially import-export trade- and finance (Evangelidou, 1975; and 1979).

In the last decades of the nineteenth century, and the first ones of the twentieth century, a number of developments took place which had a considerable impact on the structure of the economic activity of Greece. This period is characterised by the extensive economic penetration of Western European countries in the Balkans in general, and in Greece in particular (Stavrianos,

1958, as cited in Mouzelis, 1978). Companies from western countries, with the backing of their governments, made extensive investments in Greece, mainly by lending capital to the government and by direct investment in the railway construction programme (Nikolinakos, 1976). During the same period Greece, through a series of successful wars, mainly against the Ottoman Empire, managed to double its size and its population³. That development resulted in the creation of a unified and large internal market, which is a prerequisite for industrial and agricultural development (see, Mouzelis, 1978).

In the same period a dramatic increase in the extent of the government's intervention in the economic activity was observed. That constituted an important shift of policy, compared with the non-interventionist character of previous governmental policies. Successive governments in the last decades of the nineteenth and first decades of the twentieth century made serious efforts to improve the country's infrastructure – e.g. by expanding the existing roads and railway network and by building bridges and create harbours. At the same time, an attempt was made to modernise and rationalise the state administrative system and to improve the education system (see, Gregoriadis, 1975). Furthermore, the governments of the respective period made considerable efforts to attract investment from abroad, either by foreign companies or by wealthy Greeks living abroad who had the basis of their business operations there. More importantly, various protectionist measures —mainly increases in the tariffs on imported industrial and agricultural products—were taken, in order to assist the development of indigenous agriculture and industry (Vergopoulos, 1975). In addition, for the first time the state planned and implemented specific policies for each sector of the economy (Mouzelis, 1978). At the same time, the state attempted, and succeeded, in acquiring a firm control over the banking system, in order to enhance its ability to manage and control the economy (Mouzelis, 1986). Those developments meant that by the early 1920s a significant growth in industrial output had been achieved (Dertilis, 1976, as cited in Mouzelis, 1978). Thus, Mouzelis (1978) argues that although there is no serious industrial development in that period, the developments described earlier:

"..., led the Greek economy away from the agrarian stagnation of the previous period and created the necessary preconditions for the growth of industrial capitalism in the 1920s." (p. 17)

In 1922 an event which has affected every aspect of the Greek society and constitutes a turning point in the history of modern Greece, took place. In that year the Greek army which was undertaking a military campaign in Asia Minor (Turkey) was decisively defeated by nationalistic forces led by the Turkish General and founder of the modern Turkish state Kemal Ataturk⁴ After that

defeat no attempt has been ever made to expand the borders of Greece by force, and the definite and permanent borders of the state were set⁵.

One important consequence of this defeat was the arrival in Greece of about one million Greek refugees from Asia Minor. That population provided a cheap and skilled labour force that could be employed in industry. In addition, a considerable proportion of the refugees had developed entrepreneurial skills, since they had occupied important positions in industry, trade and finance in the Greek communities in Asia Minor. Furthermore, these refugees brought with them large savings, which, combined with the influx of extremely large amounts of foreign funds –international aid to the refugees, loans, investments– resulted in a enormous infusion of foreign funds (Nikolinakos, 1976). According to Sideris (1977) the Greek industry received a strong boost from this combination of cheap labour, entrepreneurial skills and abundant capital. All those developments took place within the context of an economy which in the previous decades –especially the decade 1910-1920– had substantially developed its infrastructure.

The pro-industry governmental policies that had been adopted in the previous period not only continued to be pursued, but they were intensified, since they included enormous state subsidies to big industry, large credit facilities, and indiscriminate tariff protection which enabled some big industrials firms to achieve an almost monopolistic status (Evangelidou, 1979). The combined effect of the previously mentioned factors meant that Greece achieved extremely high rates of industrial growth in the 1930s (Vergopoulos, 1978). Thus, by the late 1930s Greece had developed a substantial industrial base. At the same time, industrial capital strengthened its links with the banking capital, while the latter expanded in size and increased in its sophistication to an extent that was impressive, at least by the standards of other Balkan countries (Mouzelis, 1978).

Within the first one hundred years of the existence of Greece as an independent state, the Greek economy was transformed from a predominately agricultural one, to an economy which was industrialised to a considerable extent. In this first period, the foundations for structural policies regarding industry that have shaped the environment in which the Greek manufacturing sector has developed, were laid. In particular, the excessive protectionistic policies of Greek administrations fostered the development of oligopolistic—or even monopolistic—conditions in industry. Moreover, very close links were established during that period, between the large industrial concerns and the banking sector, which was becoming increasingly linked with the state. These developments have had a profound influence on the overall competitiveness

and development ability of Greek manufacturing companies⁶. In addition, these developments left their mark on the way that the manufacturing sector has been financed, and more generally, on the characteristics of the Greek business environment.

2.2. The period 1950-1974

In the years between 1940-1949 Greece experienced external aggression, enemy occupation and a civil war. The wars left Greece literally devastated. Industry was virtually non existent and much of the infrastructure was destroyed (Zolotas, 1965)⁷. Greece suffered from shortages of food as well as medical supplies and industrial products. These initial difficulties were largely overcome by a strong influx of foreign aid, loans and foreign investment projects (Candilis, 1968).

The major target of the economic policies followed by post-war governments was firstly to stabilise the economy and then to reconstruct the country. The outcome of these policies was that the Greek economy from early 1950s until the mid-1970s achieved impressively high rates of growth in almost all sectors (Tsoris, 1975). The real growth of the Greek economy, measured by the rate of increase in the Gross National Product (GNP hereafter) in real terms, was higher for the respective period than the European Economic Community (EEC hereafter) average. During this period the Greek economy recorded one of the highest rates of growth among the members of the Organisation for Economic Cooperation and Development (OECD, hereafter), second only to Japan (OECD, 1992).

One of the main objectives of the economic policies of Greek governments of this period was to shift the distribution of the GNP away from agricultural production and towards industrial production and services (Jouganatos, 1992), The two economic development plans introduced during the 1960s, had included among their stated objectives the further industrialisation of the country. They also aimed to achieve a higher rate of growth in the output of the industrial and service sectors compared to that of the agricultural sector (Candilis, 1968)⁸. The evidence suggests that these efforts were successful.

More specifically, while the contribution of agriculture to the GNP in the pre-war years was around 60 per cent, by the mid-1970s it was as low as 15-16 per cent (Krimpas, 1982, in Dahrendorf ed., 1982). In the same time the output of the industrial and service sectors increased from 23.2 per cent and 31.5 per cent respectively in 1950 to 45.5 per cent and per cent in 1974. The growth of the service sector for that period reflects a strong growth in the

tourism and shipping industries. In addition, the steady increase of the public sector throughout that period contributed to the further growth in service sector output (Mouzelis, 1978). The rate of increase in the gross fixed investment and in the industrial output of Greece was higher compared to the average for EEC Countries⁹. However, those high rates of industrial growth were mainly supported by a steep expansion of the construction sector, which was mostly due to the high demand for dwellings and buildings after the war (Zolotas, 1965; and Jouganatos, 1992). The growth of the tourist industry gave a further boost to the already large construction activity by encouraging investment in hotels and holiday complexes (Freris, 1986).

Despite the increase in the industrial output, the contribution of the manufacturing sector was modest. Indeed, the manufacturing sector demonstrated the slowest growth of all the industrial sectors (Mouzelis, 1978). For instance, while the share of the manufacturing sector in the total GNP in the 1950-1951 period was 17 per cent, the respective contribution in 1963 was only 18.7 per cent (Zolotas, 1965). Coutsoumaris (1963, as cited in Mouzelis, 1978) argues that in fact the contribution of the manufacturing sector in the total industrial sector was declining. More specifically, while in 1938 manufacturing output amounted toper cent of all industrial output, it declined to 79.7 per cent in 1948-1949 and to 73 per cent during the 1959-1960 period. In addition, the fixed investment in the manufacturing sector as a proportion of the total gross investment remained relatively stable, without showing any distinctive upward trend throughout that period. More importantly, in the basic capital goods sector –such as mechanical and metallurgical industries – which play a crucial role in the development of the economy as a whole, the growth in output and the increase in investment was only marginal (Freris, 1986).

Zolotas (1965) suggests that the lack of substantial development in the manufacturing sector that had been observed until the mid-sixties can be explained by the quantitative and qualitative inadequacies of entrepreneurship, the weaknesses of the administrative machine, and the shortage of an experienced labour force. Mouzelis (1978) attributes this underdevelopment of the manufacturing sector to the fact that Greek capital had been attracted to other activities—such as commerce or tourism— that could provide higher and easier profits with less risk. In addition, in the same period the shipping industry attracted a vast proportion of financial resources and as a result this industry assumed enormousproportions¹⁰. However, given that the shipping industry was—and continues to be—out of the control of the Greek state¹¹, it has constituted an escape route for Greek capital. Thus, the capital that could have been invested in manufacturing has been invested in the shipping industry

instead. The underdevelopment of the Greek capital markets during that period hindered any significant increase in the investment in the manufacturing sector. The higher rate of return on investment in housing, in comparison to the return offered by the various types of banks' deposits or other forms of financial investment, directed private investors' savings towards construction activities and away from financing industry (Papadakis, 1979, as cited in Freris, 1986)¹².

At the same time, the state, despite its increasingly dominant position in economic activity –mainly due to its control over the banking system, which had a dominant influence on the economy– did not pursue policies that could have reversed this unfavourable trend for Greek manufacturing with determination¹³. Instead, the state intensified its direct intervention in the economic activity, by adopting protectionist measures that directly or indirectly sheltered the domestic industry from external competition or certain industrial firms from internal competition. The credit policies employed by Greek banks, which were very reluctant to provide cheap credit to new and/or small firms, did not help in the development of the Greek manufacturing sector during that period (see, Halikias, 1978)¹⁴. Moreover, rules which regulated prices and profit margins were introduced (see, Mouzelis,1978; and Freris, 1986). According to Freris (1986) the Greek state:

"...saw itself more as a regulator than a leader, and hence its intervention lacked any element of dirigisme." (p. 158)

The role that Greek capital was unwilling or unable to play in the area of manufacturing was undertaken by foreign capital (Evangelidou, 1979). Thus at the beginning of 1960s substantial investments in key areas of manufacturing industry –e.g. metallurgy, chemicals– was made by foreign companies. The incentives and the privileges granted to those companies by the Greek governments of that period, played a substantial role in attracting foreign capital (see, Freris, 1986; Mouzelis, 1986). As a consequence, the industrial sector started to expand at faster rates. In addition, industrial activity shifted from the production of light consumer goods to the manufacturing of capital and durable goods (Mouzelis, 1978). An additional boost to the growth of the manufacturing sector was given by the expansionary monetary and credit policies implemented by the administration of the military regime that governed Greece in the period 1967-1974¹⁵. The increase in industrial output since the mid-1960s is reflected in the rate of increase of exports of industrial products and in the increase of the export of industrial products as a proportion of the total exports. Thus, while industrial export increased at an average rate of 10.8 per cent in the period 1950-1966, the respective rate for the period 1967-1974 was 22 per cent. Similarly, industrial exports increased as a percentage of total exports

of goods from 30.1 per cent in 1960 toper cent in 1966 to 61 per cent in 1972 (Jouganatos, 1992)¹⁶. To sum up, it can be argued that the period 1950-1974 was a time of significant growth for the Greek economy. The economic infrastructure was modernised and expanded and every sector of economic activity experienced a substantial expansion¹⁷. Despite this progress, for the previously mentioned reasons an indigenous manufacturing sector did not develop to a desirable extent. The consequences of the underdevelopment of the industrial sector became more evident in the following period when adverse economic conditions made the structural weakness of the Greek economic formation apparent.

2.3. The period 1975-2004

The democratically elected government that succeeded the military regime after its collapse in July 1974, had to tackle the stagflation that the Greek economy was experiencing, where very high inflation rates were accompanied by a fall in GNP and a collapse in investment¹⁸. The pursuit of expansionary fiscal and monetary policies, accompanied by international economic recovery, helped the Greek economy to recover considerably during the 1975-1979 period. GDP was growing on average by 5 per cent throughout that period, while exports and invisible receipts were increasing ¹⁹. However, the 1979 oil crisis stimulated anew recession that gradually reversed the recovery that had taken place in the previous years (Krimpas, 1982, in Dahrendorf ed., 1982). The rate of growth in GNP decreased from 4.2per cent in 1979 to 1.7 per cent in 1980, while in 1981 the GNP at constant factor prices decreased by 1.2 per cent. Similarly, the growth in industrial output was down, while the growth for manufacturing output was zero, and for the construction sector was negative²⁰. The administration responded to that crisis and the subsequent recession, by adopting expansionary fiscal policies (see, OECD, 1983; Jouganatos, 1992)²¹.

During the same period –especially after the second oil crisis– a slow-down in industrial output and a decline in investment in the manufacturing sector has been witnessed. Indicative, perhaps, of the difficulties that the Greek manufacturing sector faced during that period was the appearance during the late 1970s and early 1980s of "problematic" firms. "Problematic" firms were heavily-indebted²², big manufacturing companies which faced severe financial problems. Since they could not meet their financial obligations towards banks, banks were very reluctant to continue financing their activities (Tsoris, 1984). The total number of problematic firms were 200 and their debts accounted to some 190 billions GDR (Tsoris, 1984). It appears, however, that

Greek industry as a whole, and not only problematic firms, faced financial difficulties during the period 1975-1981. According to data reported by the Centre for Political Research and Training (1985, as cited in Kourvetakis and Dobratz, 1987) during the period 1975-1982 a 35-45 per cent of the Greek industries were reporting losses. The characteristics of the Greek manufacturing sector contributed to the poor prospects of those firms, by not rendering them strong enough to face the adverse international economic conditions and the increasing external competition that characterised the period. Decades of underinvestment and protectionism meant that a considerable number of Greek manufacturing firms were not adequately prepared to face increasing external competition. This competition became fierce during that period, due to the accession of Greece to the EEC²³, and the rising exporting power of Far East area countries. Furthermore, Greek industrial companies were heavily dependent on imported capital goods and raw materials. The international economic turmoil of 1970s resulted in a rapid rise in these products' prices, and as a consequence an increase in costs for Greek firms (Tsoris, 1984)²⁴.

Economic policies implemented during 1980s further aggravated the condition of the Greek economy (see, Alogoskoufis and Armagou, 1997). At the end of the 1980s the macroeconomic performance of the Greek economy was the worst in the OECD area, while the structure of the Greek economy was suffering due to major macroeconomic imbalances and microeconomic distortions (OECD, 1991)²⁵. It is widely accepted that the major factor behind the dramatic deterioration of the state of the Greek economy during 1980s was the sharp increase of the public sector deficit²⁶. Most of the deficit, though, was expended for financing expansionary fiscal policies (Sarandidis, 1997). Sharp increases in the public sector employees' wages were accompanied by a steep rise in public sector employment (OECD,1991)²⁷. However, the wages policy followed in the public sector affected wages demands in the private sector (OECD, 1990, and 1991; Kollintzas and Bitros, 1997). The expansionary fiscal policy led to a marked increase in the consumer spending. As a result, inflationary pressures intensified and the trade deficit further deteriorated, while external debt steadily increased throughout that period, so that by the late 1980s Greece was a heavily indebted country (OECD, 1991; Alogoskoufis and Armagou, 1997; Sarandidis, 1997).

In fact, the economic situation in the mid-1980s was so serious that in October 1985 the government decided to abandon the expansionary fiscal and monetary policies which had been followed up until then and to introduce an austerity/stabilisation programme. The main objective of this programme was to correct the structural imbalances in the Greek economy (OECD, 1987).

According to the OECD (1989), however, the stabilisation programme failed to achieve its main objective, because it did not attempt to deal with key deficiencies in the Greek economy. More specifically, no serious effort was made to transfer funds from public and private consumption towards the financing of investments, especially in the private sector, while other structural distortions of the Greek economic formation that hindered the development of Greek industry were not faced. Nevertheless, any progress that had been achieved was short-lived, since with the termination of the stabilisation period, the restrictive policies were relaxed and the macroeconomic condition reverted to its prostabilisation period situation (OECD, 1989).

The adverse economic development of that period influenced Greek industry in general and the manufacturing sector in particular. Indeed, according to the OECD (1992) the 1980s was a decade of de-industrialisation for the Greek economy. Most of 1980s witnessed a decline in manufacturing firms' profitability, a fall in manufacturing investment and a reduction in the growth of the potential output of the manufacturing sector (OECD, 1993). These negative trends were reflected both in the decrease of the manufacturing output as a proportion of GDP²⁸, the disappointing export performance of the manufacturing sector, and in the stagnation in the sectoral composition of output attributable to the manufacturing; a larger proportion of output was attributed to traditional low-technology industries, and only a very small share to high-technology ones (see, OECD, 1987, and 1993)²⁹.

The economic policies followed by the administration of that period played a key role in the decline in the performance of the manufacturing sector during the 1980s (OECD, 1987, and 1993). The financing of the constantly increasing public deficit, through the funds of the state-controlled banks³⁰ meant that funds which were necessary for financing the further expansion of the private sector, were not available, or were only offered at excessively high interest rates (OECD, 1987; 1989; and 1993)³¹. Furthermore, during the 1980s was intensified the policy, introduced in the previous decade, of extending bank credit from the large state-controlled banks, to ailing/problematic firms even when it was not justified on the basis of strict financial criteria, and while it was almost certain that there was no realistic prospect that those loans would be repaid (see, OECD, 1986; and 1995). In addition to the funds and grants that were provided for the financing of the activities of the heavily indebted firms, huge subsidies were supplied for the products of these firms (OECD, 1993)³². The continuing direct and indirect financing of these ailing firms not only diverted funds from potentially profitable firms, but also distorted healthy competition and the effectiveness of market mechanism, and hence the overall

economic efficiency of the country (OECD, 1989; and 1993). This was especially true in industries where heavily-subsided firms held a dominant position; the price formation process was influenced by the subsided firms at the expense of the non-subsided manufacturing firms (OECD, 1989).

Economic policies during the period 1990-1996 aimed to reverse the negative economic trends of the 1980s, and to correct the macroeconomic imbalances and the structural deficiencies of the Greek economy. The implementation of tight macroeconomic policies resulted in a gradual decrease in the public sector deficit, while the inflation rate went into constant decline from 1991 onwards. In 1995, for the first time since 1973, Greece witnessed a single-digit inflation rate of 9.3 per cent, while in 1996 the inflation rate fell to 8.6 per cent (see, OECD, 1996 and 1997; Alogoskoufis and Armagou, 1997). At the same time, the growth in GDP steadily increased reaching a level of 2.5 per cent in 1996, which was well above the EU average (see, Alogoskoufis and Armagou, 1997).

In addition, efforts to cure the structural distortions that hindered the development of the Greek economy, were undertaken. More specifically, since 1991 measures which aimed at enhancing the flexibility of the labour market have been introduced (OECD, 1993). Various measures which sought to liberate the financial system and free the banking system from state control contributed to an increase in the availability of funds for the private sector and to a relative decrease in the cost of capital (OECD, 1996)³³. A number of measures have been taken –admittedly under pressure from the EU– to deregulate the markets for services and goods and to encourage competition. Thus, since 1992, with a few exceptions, all controls on prices and profit margins have been lifted, while restrictions on freedom of entry and free competition between trades and professional organisations have been abolished (OECD, 1993). During the same period, a programme for the privatisation of public-sector companies and problematic/ailing firms that were under the direct or indirect state control has been initiated, in order to improve both the public finances and the development prospects of Greek industry (OECD, 1992). However, despite some early steps, the overall progress towards privatisation had not been particularly impressive (OECD, 1996; Hope, 1997)³⁴.

These measures have had some positive impact on economic activity in general, and on the manufacturing sector in particular. Structural policies adopted in the labour and financial markets have resulted in an improvement in the functioning of these markets and a decrease in labour and financial costs (OECD, 1996). Industrial output after years of steady decline showed some signs of growth in 1994 and 1995; in these years some improvement in profitability and investment was also witnessed (see, OECD, 1996).

However, in 1996 industrial output stagnated. Particular aspects of the overall economic strategy that had been followed until then contributed to the slow-down. The fact that inflationary pressures were mainly contained by exchange-rate measures, led to a substantial increase in industry's costs (Hassid, 1997; Kollintzas and Bitros, 1997; OECD, 1997). At the same time, the tax increases further increased firms' costs and aggravated their precarious financial position (Georgopoulos, 1997; Kollintzas and Bitros, 1997; Oikonomou, 1997). As far as the structural policies are concerned, despite some progress being made since 1990, it was generally accepted that there is a need for an acceleration in changes – especially in the areas of privatisation and modernisation of the public or quasi-public sector³⁵.

Within this section an attempt has been made to trace the historical development of the Greek industry, and to discuss certain factors that have influenced this development. From this review it can be concluded that Greece has not been able to develop a substantial indigenous industrial basis and as a result, foreign industrial companies filled the gap. Various factors have led towards that direction, while administrative policies seem to have played –directly and indirectly—a crucial role. The state by making use of its dominant position in economic activity, indirectly encouraged the expansion of service –especially tourism and shipping—and construction activities at the expense of the manufacturing sector. Furthermore, the marked rate of expansion of the public and semi-public sector caused serious macroeconomic imbalances that ultimately impeded the development of industry. The intense state intervention in practically every aspect of economic activity caused distortions in the functions of the products and service markets, induced severe rigidities in the labour market, and thus further aggravated industrial problems. At the same time, not only no serious efforts have been made towards advancing and modernising the financial system, but furthermore the banking system being kept under the tight state control did not promote the development of Greek manufacturing. On the contrary, fostering the development of oligopolistic/monopolistic conditions in the manufacturing sector hinder edits development prospects. Those developments have contributed to forming the present manufacturing sector's financing and business-environment characteristics, which are discussed in subsequent sections.

3. Financing the Greek manufacturing industry

Traditionally in Greece, as in most continental European countries, borrowed funds have been one of the main sources for financing business

operations – especially those derived from the banking system (see, Papas, 1993). Funds raised through the stock-exchange traditionally have constituted only a small proportion of the total financing of industry³⁶.

A number of reasons have been put forward to explain why equity funds have not been commonly utilized by Greek manufacturing firms as a source of financing. It seems that the ownership structure and the size of most Greek industrial firms have played a major role in this current state of affairs. In particular, almost all of the manufacturing firms in Greece –even the largest ones—are family owned or controlled. Major shareholders have been very reluctant to concede part of their control to outside investors; concerns over a reduction in dividends that could have resulted from issuing new shares to the public may have also prevent them from choosing the issue of stock³⁷. The public, on the other hand, has not been favourably predisposed towards acquiring shares in predominantly family-owned firms, since there has always been a doubt about whether the rights and interests of the minority shareholders are adequately protected against the combined equity stake of the family-member shareholders (see, OECD, 1986; Papas, 1993).

Moreover, the fact that many of the industrial firms in Greece are comparatively small in size has rendered the issue of shares to the public impracticable and unsound in economic terms, since the cost of such issuing them would have been excessive and the shares practically unmarketable (see, Halikias, 1978). The fact that most stock exchange investors have been -at least until recently- relatively unsophisticated and had exhibited a disposition towards speculative profits, instead of long-term dividends and/or capital gains, coupled with the fact that the exchange listing procedures were archaic, have further prevented the stock exchange from being a major source of financing for Greek industry (see, Papas, 1993). In addition, the almost oligopolistic conditions under which many of the largest industrial firms have been operating for decades did not induce them to raise equity capital which would have been necessary for carrying out essential expansions to preserve their competitive position (see, Halikias, 1978). Furthermore, the fact that large well-established industrial firms have for decades secured easy access to bank finance, at a comparatively low cost, did not prompt them to seek to raise funds by issuing shares to the public (Halikias, 1978; Tsoris, 1984). Finally, the attitude of Greek authorities towards the stock exchange –such as the brokerage commissions system and the insufficient prudential controls- further impeded the development of the equity market in Greece (OECD, 1995).

Within this context it is not surprising that Greek manufacturing firms have mainly utilized other sources of funds for financing their operations

and investments, rather than equity issues (see, Mouzelis, 1978)³⁸. Therefore, bank credit, in the form of private debt, has been the most widely used source of funds for Greek industry. Greek industrial firms very rarely -if ever- had issued public debt. However, banks despite their dominant position within the financial system, have not contributed to the extent that could have been feasible and/or desirable to the development of the manufacturing sector (OECD, 1995). The fact that the banking sector has been characterised by an oligopolistic structure which exhibits significant concentration among the large, almost exclusively, state-controlled banks seem to be one of the most important factors that had prevented the banking system from achieving a goal of helping to fund manufacturing growth (see, Papas, 1993; OECD, 1995)³⁹. More specifically, a complex web of regulations had imposed tight controls on banks abilities to allocate credits and set interest rates, reducing the scope of any competition in an already largely uncompetitive environment (see, OECD, 1986; and 1995)⁴⁰. Thus, banks' customers –among them industrial firms— were not able to reap the benefits of competition between banks—e.g. lower interest rates, innovative methods of financing, better services (OECD, 1986; and 1995). Furthermore, as mentioned earlier, the state administration, by making use of its dominant control on the banking system, was absorbing banks' funds –especially during the 1970s and 1980s– for financing its deficits, and expanding credit to the ailing and "problematic" firms⁴¹.

However, certain aspects of the financial behavior of banks had not particularly favored industrial development. In particular, the banks due to their strong links with the largest of industrial firms – which in many cases included an ownership of stock capital and active participation in the management - had provided to these firms with easy access to bank credit at a comparatively low cost, at the expense of other firms⁴². That possibility was very high when an applying firm -which did not have any privileged relationship with the bankwas competing with the existing clients of the banks and therefore might put their profits and their market position at risk⁴³. The oligopolistic structure of the Greek banking system had the effect of rationing smaller and in many cases more dynamic and efficient firms, or of forcing them to borrow funds at a very high cost (Halikias, 1978; OECD, 1986). Thus, the banks instead, of making use of their authority to encourage the large industrial firms to improve their competitiveness, by modernising their operations and management techniques, and exploiting new opportunities for development and expansion at home and abroad, indirectly had prevented them from doing so by effectively isolating them from any serious internal competition⁴⁴. Furthermore, the banks' lending decisions in many cases were not based on strict banking rules and

objective financial criteria, since the future prospects of the applying firms were not always included in the banks' considerations. Instead, the strong links between the banks and the companies, the personal patron-client relationships, and undoubtedly political factors—given that the largest banks are under direct state control—have in many cases heavily influenced banks decisions regarding loans⁴⁵. At the same time, very little—if any—pressure had been exerted on firms to reorganise and improve their competitiveness (Tsoris, 1984).

Likewise, the preference for short-term financing —even for the financing of long-term investments in fixed capital—had not promoted the development of Greek manufacturing industry. It seems that the greater profits, and fewer risks, which resulted from short-term financing, further encouraged banks in that direction ⁴⁶, while the formalities and conditions that were required for the lending of funds on a long-term basis, had not encouraged the expansion of long term financing (Halikias, 1978; Tsoris, 1984).

Tsoris (1984) argued that the overdependance of Greek manufacturing firms on shortterm financing could cause serious financial difficulties to those firms, when credit policies are tightened and/or adverse economic conditions prevailed. The continuous bank financing of industrial firms in these situations, had resulted in very high levels of gearing and because of high barriers of entry, reinforced the oligopolistic –in some cases even monopolistic – structure of the Greek manufacturing sector; in final analysis it had impeded the sectors competitiveness.

The phenomenon of the "problematic" firms possibly provides the clearest example of the dysfunctional effect that that financing behavior of both banks and firms had on the development of Greek manufacturing sector. The banks, either because of strong links with certain companies, or due to political factors, were extending credit to already heavily indebted –and in many cases loss-making-firms without pressing them to improve their performance and competitiveness. Furthermore, banks did not force them to reorganise and modernise their operations, and in many cases, denied the funds to finance investments which aimed to achieve such an objective (Tsoris, 1984). The firms financial decisions, on the other hand, favoured an expansion in bank borrowing –and in most cases on a shortterm basis– and further contributed to the deterioration of firms' financial positions. The adverse economic developments of the late 1970s and early 1980s, which induced rapid increases in labour costs, rising raw materials prices, and growing external competition, intensified financial troubles of firms to such an extent that even the large state-controlled banks were unable to deal with the problem (Tsoris, 1984; OECD, 1986)⁴⁷. Under those circumstances many firms were unable to service their debts, and thus the "problematic" companies appeared.

The structural distortions of the Greek financial system, and the dysfunctional implications that those distortions had for the development of Greek economy, prompted authorities to embark on a programme of systematic liberalisation of the financial markets since the late 1980s. Within the context of this programme, all constraint on interest rates and credit allocation were gradually abolished, along with almost all of the quantitative and qualitative credit controls, while the complex legislative framework that regulated bank operations were eliminated⁴⁸. As a result of those developments, the competition between banks and other financial intermediaries had intensified considerably, a development which had probably resulted in the introduction of new innovative financial services, the constant improvement in the existing services, and a moderate decrease in interest rates (OECD, 1995; Alexakis, 1997; Sallas, 1997). In addition, substantial progress had been witnessed in the securities markets, where changes in the institutional framework and technical improvements in the way transactions take place in the Athens Stock Exchange, have contributed in a marked increase both in transactions and in the number of the listed companies (OECD, 1995; Alexakis, 1997; Xanthakis, 1997)⁴⁹.

Those developments had unquestionably influenced the way that Greek manufacturing firms financed their activities and investments. The pressure of intensified competition forced the large state-controlled banks to adopt more orthodox financial criteria, and to stick more strictly to conventional banking rules. That change had resulted in a more efficient allocation of their credit, while the cost of capital fell. At the same time, the funds raised by the stock exchange seem to play an increasingly important role in the financing of the industrial firms.

However, the effect of those developments in the financial system should not be overestimated. In particular, despite the considerable increase in the number of the quoted companies during 1990s, very few of these firms were industrial companies; thus the number of the listed industrial firms remained comparatively low (OECD, 1993; and 1995). Furthermore, the state-controlled banks, were not completely exposed to the forces of competition, and continued to be less market-oriented, in the sense that their decisions were not totally driven by market considerations (OECD, 1997; Karamouzis, 1997; Makridakis *et al*, 1997). Furthermore, the huge borrowing requirements of the public sector continued to divert funds from the private sector in general, and manufacturing one in particular. Even the increased funds that had been made available by the new financial institutions, have been mainly directed towards financing the massive public deficits (OECD, 1995). Within this context, it was not perhaps surprising that two surveys had indicated that senior managers of

Greek firms had expressed their concerns regarding the availability of funds for investment and commented on the high interest rates which they faced for borrowing (Hassid, 1997; Markidakis *et al.*, 1997).

4. The ownership structure and the administrative characteristics of the Greek industrial firms

The ownership structure of Greek manufacturing companies is characterised by a very high level of concentration. The vast majority of industrial firms, can be classified into two main categories, on the basis of their ownership structure; the family-controlled firms; the subsidiaries of overseas firms. Until early 1990s, there had been a third category including the firms that were controlled by the large state-controlled banks (OECD, 1993; Makridakis *et al*, 1997). The firms with a wide spread ownership –i.e. no shareholder owns more than 4 per cent of the firm's share capital 50 – constituted only a small minority of the population 51. The findings of a recent study have indicated that 97 per cent of the chief executive officers of Greek companies believe that selling more than 50 per cent of their firms' share capital, was not one of firms' strategic objectives for the foreseeable future, while 92.5 per cent of the respondents were against selling even less than 50 per cent of firm's capital to the public (see, Makridakis *et al.*, 1997).

Traditionally, the large majority of the Greek industrial firms were family-owned or controlled, while the management of these firms is almost exclusively conducted by their founders and main owners or their descendants⁵². These firms are typically characterised by an excessive centralisation of power with an authoritarian type of administration, where almost all the decision making is conducted by the managers-owners and very little –if any– responsibility and authority is delegated to subordinate managers and/or employees⁵³. Management in many cases is not conducted on the basis of strictly rational criteria, since selection of employees, promotion and reward standards are not always based on standards of performance but on personal and/or family relationships, seniority and dedication to the owners⁵⁴.

Even though this type of corporate governance has proved to be relatively successful in many countries, clearly it has limitations (see, OECD, 1995; Makridakis *et al*, 1997). The reluctance of family members to relinquish the control of their firms not only has prevented them from issuing shares to the public, but has stopped them from developing international links with overseas firms – especially with the industrially developed countries, which is a prerequisite for companies from countries like Greece who trail behind the more

technological and developed business in other parts of the world. In addition, the way in which management is conducted in the Greek family-controlled firms, clearly hinders their ability to adjust to the continuously changing external environment, and as a consequence reduce their chances of expansion and development (OECD, 1993; Makridakis *et al*, 1997)⁵⁵.

Perhaps, the shortcomings of this particular type of managing business operations became more apparent when family-controlled companies' performance is compared with the performance of professionally-administrated firms, which are mainly subsidiaries of overseas multinational corporations, or with the small number of Greek firms which are directed by professional career managers. In comparison with the family-controlled firms, professionally managed companies are administrated in a more rational fashion; that is, recruitment, rewards and promotion are mainly dependent on performance-based criteria, while more advanced management techniques which encourage employees participation and initiative are adopted (Bourandas *et al*, 1990; Makridakis *et al*, 1997). However, in the case of Greek-owned professionally directed companies, certain aspects of the management methods employed by the more traditional Greek industrial corporations are not entirely absent (Bourandas *et al*, 1990; Makridakis *et al*, 1997).

Nevertheless, a comparison of sales, profits, and level of productivity of the firms managed by family members, with the corresponding performance of firms directed by professional managers, reveals that there is a significant differentiation in favour of the latter (see, Kourvetakis and Dobratz, 1987; and Markidakis *et al*, 1997)⁵⁶. Furthermore, substantial differences appear to exist with regard to the magnitude and the type of investment projects that the firms of the two groups undertake. More specifically, it appears that the family-controlled firms, in contrast with their professionally managed counterparts,not only commit less funds to investment, but the investments programmes they implement are mainly directed towards expansion rather than modernisation of industrial installations (see, Makridakis *et al*, 1997).

With regard to administrative efficiency and financial soundness, at the antipode of the professionally managed companies are the industrial concerns which were owned and administrated by the large state-controlled banks. These companies had accumulated huge loss and debts (OECD, 1993). Clearly the management of those firms by the banks have not contributed to the recovery, or reconstruction, of those firms. It should be pointed out that the corporate governance model under which banks own a substantial part of a firm's share capital, and actively participate in their administration has been proved to be quite effective both with respect to the performance of particular firms, and

with regard to the promotion of the overall industrial development at a national level (OECD, 1995). However, for reasons that have been explained in the previous section, the Greek banks have not fulfilled this function adequately. Moreover, when they were forced to take-over the management of many of the ailing and problematic firms, they were not totally equipped to administer these firms and lead them out of the financial and operational difficulties in which they founds themselves, since the executives of commercial banks had neither the expertise nor the experience for directing industrial firms (OECD, 1986). The constant intervention of the administrative —or more precisely, ruling party's—apparatus in the appointments of the management of these firms, on the basis of criteria which have little to do with merit, have further reduced any prospect of recovery (see, OECD, 1986 and 1995; Bourandas *et al*, 1990; Makridakis *et al*, 1997).

5. Synthesis and Conclusions

This paper presents the main structural characteristics of the business, financial and economic environment within which Greek manufacturing firms had operated for decades. It has sought to provide a framework, within which the development of accounting in Greece can be investigated and analysed.

The above investigation indicates that the ownership structure of the vast majority-of Greek industrial firms has been highly concentrated in the hands of a very limited number of owners. In most cases owners occupied important posts within their firm's organisational structure —e.g. chief officials, and members of the board of directors— and they are actively involved in their companies' administration. Given that firms' owners can directly, and effectively, monitor and motivate their subordinate managers the need to employ incentive schemes, to motivate hired managers, is less urgent. Furthermore, managers in such firms can communicate information regarding their performance directly to their superiors owner-managers, without using financial statements. For these reasons, it can be hypothesised that the ownership-structure of most Greek industrial corporations, contribute to the adoption of an aggressive tax-reducing strategy.

The type of financing employed by companies in the Greek manufacturing sector has affected the evolvement of financial reporting. Traditionally, most Greek industrial firms have avoided to raise equity funds. Thus, the significance of accounting figures as a mean of conveying information to a wider range of external users, (i.e. potential future investors, investment analysts), might have not be particularly high. Consequently, a reduction in the level

of reported profits that usually accompanies a tax-reducing strategy may not constitute a source of pressing consideration for firms' management.

The financial structure of industrial firms operating in Greece mighthave influenced the balance between tax benefits and non-tax costs. When capital providers are relatively few and maintain a close relationship with a firm, they have more direct assess to whatever accounting information they need for their decision making. Publicly reported financial data thus becomes less crucial for these investors. Greek banks not only constitute the main source of funds for Greek industry but have also developed a long-lasting close relationship with many manufacturing concerns. In certain cases they have owned some of the share capital. Thus, they have had the ability, or even the authority, to directly obtain any relevant financial information, by-passing any reliance on publicly disclosed data. Furthermore, the large state-controlled banks, were supposed to tend to not entirely base their loan selection decisions on strictly objective and rational financial criteria. Consequently, the importance of public accounting information might have further diminished. As a consequence, a tax-reducing strategy was not likely to give rise to important financial-accounting costs since financial accounting information may have not constituted a particularly important informational input for debt-capital providers. Moreover, the close relationship between banks and companies meant, that a violation of a debt covenant might not have had such dramatic repercussions for a firm; again the financial-accounting costs of a tax reducing strategy may not had been so significant. In addition, the fact that Greek firms very rarely issued public debt might have further diminished the importance of the non-tax consequences of an aggressive tax planning policy. The cost of renegotiating the covenants of private debt is not particularly high. Thus, a firm, in order to avoid technical violation, can renegotiate the debt covenants, without having to resort to managing reported figures through a selective choice of appropriate reporting methods. In other words, when a firm's debt capital is private, the non-tax costs related with an accounting-policy choice may not be that significant for that particular firm.

Yet, despite the financial structure of most Greek firms, the possibility that some significant non-tax costs could have arisen should not be immediately disregarded. The fact that large industrial concerns in Greece had strong links with the banking sector, and the fact that those banks did not base their credit-selection decisions on strict economic criteria, could have indirectly contributed to the advent of significant non-tax costs. Despite the fact that economic criteria did not always play a crucial role in banks' credit decisions, most companies would be required to meet some official criteria based on

accounting numbers when making a loan application. If the applying firm had a long-standing close link with a particular bank, the possibility could not be completely ruled out that the bank's official would have tolerated some "adjusting" of accounting figures, so that the firm would be able to comply with the relevant terms. Thus, a tendency of a firm to influence accounting figures through the choice of an appropriate depreciation method, might have actually been reinforced.

Historically, the development of the Greek manufacturing sector has been marked by intervention by the Greek state authorities. This intervention has been predominately favorable for large industrial concerns. The introduction of protectionist measures sheltering large firms from competition, and the preferable financing of these firms by the large state-controlled banks, indicate that large industrial concerns, far from facing the type of political costs that have been identified in the accounting literature (see, Watts and Zimmerman, 1986), may actually enjoy important political benefits. This state of affairs can have important consequences regarding accounting policy decisions of large firms. Since large corporations do not face political costs, they do not have any particular motive for adopting income-decreasing options in order to report lower profits, and thus for reducing their political exposure. On the other hand, due to their size, they may enjoy political benefits in the form of the introduction of accounting standards, which may permit them to reduce their taxable income, by implementing an appropriate tax-reducing strategy. Such a strategy may not necessarily include only the choice of income-decreasing options; accounting policies, which at first sight, seem to have an income increasing effect, may be adopted as well.

The overall picture that emerges from the information being provided within this section with regard to the structural characteristics of the Greek industrial sector suggests that for most of the industrial firms operating in Greece, the non-tax costs related with firm's ownership structure, might have not been significant enough to compel them to deviate from a tax reducing policy. On the other hand, whether a firm was listed or not and its leverage characteristics were more likely to give rise to significant non-tax costs.

Notes

1. For this chronological division both economic and political criteria have been employed. Despite the feet that alternative chronological divisions can be used - sec, Mouzelis, (1978), pp. 3-25; and Evangelidou, (1979), pp. 177-186. - for the purposes of this study the above mentioned division has been

considered adequate; in each individual period a distinct phase of the development of the Greek manufacturing sector took place.

- 2. For instance, the shipbuilding industry which was relatively developed in the pre-Revolutionary period, faced a serious crisis in the middle of the nineteenth century with the introduction of the steamboats to maritime transport (Leon, 1972, as cited in Mouzelis, 1978).
- 3. For more details concerning the major political and military events of this period in Greece and more generally in the Balkans see Clogg, (1992), pp. 49-99.
- 4. For a detailed account of this campaign see Llewellyn-Smith, (1973), A more concise presentation is provided in Clogg, (1992).
- 5. In 1947 the Dodekanisa Islands, laying in the south-east of Aegean sea, were incorporated in Greek territory. Until 1947 these islands were under Italian occupation.
 - 6. See subsequent sections.
- 7. For a detailed presentation of the state of Greek economy in the War years and in the subsequent Civil War years see Candilis, (1968), pp. 11-51.
- 8. For a more detailed description of the economic plans of this period see, Candilis, (1968), pp. 168- 179; and Jouganatos, (1992), pp. 19-28.
- 9. For a detailed analysis of the major macroeconomics trends in Greece for the respective period see, Tsoris, (1984), pp. 17-37; and Jouganatos, (1992), pp. 9-55.
- 10. By the mid-1970s Greece had one of the largest merchant fleets in the world.
- 11. Shipping companies can very easily move to another country, if the state attempts to tax their profits or to apply any other restriction.
- 12. The preference for investing in housing was further reinforced by social developments occurring during that period, and certain structural characteristic of Greek social formation (Skouras, 1984).
- 13. It should be pointed out, however, that the sate made significant direct investments in that period in order to create the necessary economic and industrial infrastructure (Krimpas, 1982, in Dahrendorf,. For instance, while the state's direct investment in the economy amounted to about 4.7percent of the GNP in 1957, it rose to 9.2 per cent in 1970 (Mouzelis, 1978).
- 14. For a more detailed discussion regarding the impact played by financing policy in the course of Greek industry during that period see the subsequent section.
- 15. For a detailed account of the political events of this period see, Mouzelis, (1978, 1986); Woodhouse, (1985); Kourvetakis & Dobratz, (1987); and Clogg, (1992). For a detailed description and discussion of the economic policies implemented by the military regime see Jouganatos, (1992), pp. 55-92.

16. Considerable discussion has been developed regarding the implications that direct foreign investment in the manufacturing sector had for the long terms prospects for economic development in Greece. It has been argued that although some growth in the industrial investment and output have been achieved due to foreign investments, little has really changed regarding the development prospects for Greek industry. It has been argued that the high degree of concentration in the sectors in which the foreign investments mainly took place, and the dominant position of the foreign firms in those sectors meant that the overall competition in the economy was reduced (see, Photopoulos, 1980). At the same time, it appears those investments did not have any serious impact on employment and exports, while they resulted in a substantial expansion in imports (see, Negreponti-Delivani, 1981; and V. Papandreou, 1981). According to Freris (1986), however, even if these arguments regarding the effect on the Greek economy of foreign investment are valid, should not lead somebody to an "anti-foreign investment" stance, since if that investments had not take place, the Greek economy would have been in an even worse condition. It was the structural inbalances and weakness of the Greek economic formation of that period, which favoured investment in services sectors and counstruction instead of manufacturing, that can be blamed for the lack of an important indigenous industrial development (Freris, 1986).

17. During the same period, the standards of living improved considerably. The income per capita demonstrated a significant increase, despite the fact that income inequalities increased, especially during the military regime period (Krimpas, 1982, in Dahrendorf ed., 1982; see, also Karageorgas, 1973; and Lianos and Prodromidis, 1974).

18. Inflationary pressures were stimulated by rapid increase in wages in the 1972 (see, Tsoris, 1984). Due to the boom in the private housing investment and the huge government expenditures on investment in 1972, the economy was operating close to full employment. The resulting rapid rise in wages —especially in the construction sector—gave the signal for general price increases and so an inflationary process started. Thus, the inflation rate in 1972 increased to 4.2 per cent from 2.9 per cent in 1971 and 1970; in 1968 it was only 0.3 per cent. The first oil crisis in 1973 further aggravated the inflationary pressures, and the rate of inflation increased to 15.5 in 1973 (Freris, 1986). The post-1974 administration wages policies contributed in further intensifying inflationary pressures, by responding to the trade unions' demands for wages increases, by granting explosive increases; wages had been frozen during the 1967-1974 period due to the oppression of trade unions under the millitary regime administration (see, Krimpas, 1982, in Dahrendorf ed., 1982; OECD, 1983; and Tsoris, 1984).

- 19. See, Kripmas, (1982), in Dahrendorf ed., (1982); OECD, (1983); Jouganatos, (1992). However, the recovery was unbalanced and further aggravated the structural weaknesses of the Greek economy and weakened its long-term prospects (OECD, 1983). The economic policies which were implemented resulted in a boom in housing activity and a further expansion of the services sector, thereby protracting the previous period's trend of diverting funds away from manufacturing, and towards construction and service activities (Krimpas, 1982, in Dahrendorf ed., 1982). Despite some improvement in the growth of manufacturing, the services sector held a dominant position in economic activity by accounting for more than a half of GDP For a detailed presentation of data regarding the sectoral distribution of GDP for the period 1975-1981 see, Tsoris, (1984), pp. 21-22, and p. 203; and Jouganatos, (1992), pp. 110-111.
- 20. The deficit in the balance of payments was deteriorating, since the increased oil prices, along with the increased foreign borrowings of the public-sector further aggravated an already high deficit. In the same time, the growth rate of invisible payments, which were playing a crucial role in diminishing the balance of payments deficit, was slowing down due to the world-wide recession (see, Freris, 1986; Kourvetakis and Dobratz, 1987; and Kamaras, 1997). Similarly, despite the abolition of duties and tariffs on Greek industrial products exported to EEC countries, which resulted in a substantial increase in exports of industrial products, the trade deficit was widening due to the faster increase in imports (see, Tsoris, 1984; Freris, 1986; Jouganatos, 1992; and Papas, 1993).
- 21. The continuous fiscal expansion since 1975 in conjunction with increasing inability of the state to raise tax revenues—mainly due to extensive tax evasion and fraud (see, Krimpas, 1982, in Dahrendorf ed., 1982; and Jouganatos, 1992)—led to a widening of the public-sector deficit. As a result in 1980 for the first time since 1953, the general government's expenditures were higher than its revenues,
- 22. The extent of the financial difficulties of those firms is illustrated by the fact that ninety of them had 5 billions GDR in capital and 130 billions in debts (Kourvetakis and Dobratz, 1987).
- 23. Regarding the process of Greece's accession to the EEC see, Freris, (1986), pp. 201-204; and Kourvetakis and Dobratz, (1987), pp. 134-137.
- 24. Furthermore, the firms' financial structures and their financial decisions along with the behaviour of the banking system played a crucial role in creating the phenomenon of problematic firms; this factor will be discussed in more details in subsequent sections.
- 25. The rate of GDP growth was one of the lowest between the OECD countries (see, OECD, 1991). Moreover, the rate of GDP growth during the

1980s was the lowest in the post-war era for Greece. While for the periods, 1954-1974 and 1975-1979 the rate of growth was on average 7 per cent and 5 per cent respectively, for the period 1980-1989 it was only 1.5 per cent (Alogoskoufis and Armagou, 1997; Sarandidis, 1997).

- 26. See, OECD, (1991); Alogoskoufis and Armagou, (1997); Bitros, (1997); Oikonomou, (1997); Kollintzas and Bitros, (1997).
- 27. Indicative of the increase in the public sector employment during that period, is the fact that in 1990 about 30 per cent of the total dependant employment was employed in the public and quasi-public (utilities, state-controlled banks and firms) sector (OECD, 1993),
- 28. According to OECD (1987) the share of manufacturing output in the GDP in the mid-1980s was one of the lowest in the OECD area.
- 29. The sectoral composition of the Greek manufacturing until 1990's was characterised by an insignificant share of the high-technology industries, and only a moderate presence for the medium-technology sectors, while the low-technology, labour-intensive industries dominate the industrial output (OECD, 1993, and Makridakis *et al*, 1997).
- 30. According to OECD (1991) during the 1980s banks financed between two-thirds and three-quarters of the public deficit. The banks were required to invest more than half of their assets in treasury bills or bonds issued by public enterprises, while until 1986 banks were obliged to earmark 75 per cent of their deposits for lending to the public sector at low interest rates (see, OECD, 1991, 1993).
- 31. The high interest rate spread and the high commissions that have distinguished Greek state-controlled banks, perhaps demonstrates the feet that these banks have had to charge high interest rates to non-privileged borrowers in order to compensate for their low-return assets and their high staffing costs (OECD, 1995).
- 32. According to OECD (1989) half of total State grants and subsidies, and one fifth of total bank credits were absorbed by the problematic firms.
 - 33. For more details regarding those measures see the subsequent section.
- 34. The slow progress that has been achieved in the sphere of privatisation can be attributed to a number of factors: (i) over-optimistic estimation of the worth of certain firms; (ii) in the case of problematic firms legal complications have been created by claims of previous private owners; (iii) administrative difficulties resulting mainly by the lack of co-ordination between the public-sector bodies which are responsible of the privatisation (this lack of co-operation is partially explainable by the complicated bureaucratic structure of public sector, however the unwillingness of some public agencies to lose control of these companies should have played some role); (iv) strong political

- opposition especially in the period 1990-1993; (v) strong opposition from the labour unions (OECD, 1992, 1993).
- 35. See, OECD, (1997); Bitros, (1997); Drakatos, (1997); Prodromidis, (1997). For proposed modifications in the mix of macroeconomic and structural policies see, Bitros, (1997); Oikonomou, (1997); Kolintzas and Bitros, (1997); Prodromidis, (1997).
- 36. See, Halikias, (1978); Tsoris, (1984); OECD, (1986, 1993, 1995); and Papas, (1993).
 - 37. See, Halikias, (1978); Tsoris, (1984); OECD, (1986); Papas, (1993).
- 38. Retained profits had not appeared to have been a particularly important source of financing for Greek firms (see, Halikias, 1978; and Tsoris, 1984). Moreover, the size of the Greek economy, and the stage of its industrial development, meant that even if manufacturing firms had earned high profit margins, it would have been unlikely that the accumulated profits would have been adequate to sustain the expansion of Greek industry (see, Bitros, date not given; Halikias, 1978; Makridakis *et al.*, 1997). However, because of the cost pressure factors that have already been discussed, the profitability of many Greek industrial firms was –and in some cases continues to be– under serious strain since the early 1980s; the importance of retained profits as a source of financing for the expansion of industry was further diminished (Tsoris, 1984; OECD, 1993).
- 39. In fact, the Greek authorities' policies effectively contributed to the creation of the oligopolistic situation that had prevailed for decades in the Greek banking system. Since 1953 the administrations either forced or permitted mergers between commercial banks. That procedure resulted in a situation where two banking groups account for the largest of proportion of banking and financial activities in Greece (see, Halikias, 1978; and Kourvetakis and Dobratz, 1987).
- 40. For a thorough and elaborate review and discussion of the form, the content and the scope of the state intervention and control on the banking activities until 1978, see, Halikias, (1978). For the period after 1978 until late 1980s see OECD, (1986), pp. 52-60,
- 41. The easy access of state to banks funds encouraged public spending and thus resulted in a further deterioration of public sector deficit (OECD, 1995).
- 42. See, Halikias, (1978); OECD, (1986); and Kourvetakis and Dobratz, (1987).
- 43. According to Ellis (1964, as cited in Halikias, 1978, p. 191): "...tacit collusive agreements exist between the large banks and old industrial monopolies, according to which no credit is to be granted to rivals."
- 44. See, Halikias, (1978); Tsoris, (1984); Kourvetakis and Dobratz, (1987); OECD, (1995).

45. See, Halikias, (1978); Tsoris, (1984); OECD, (1986); Kourvetakis and Dobratz, (1987); Makridakis *et al.*, (1997).

- 46. The interest rates that were forced on the banks by the monetary authorities for many years, rendered long-term financing less profitable. In addition, the commissions that were charged on the short-term loans increased the banks' profits, while the almost automatic renewal or expansion of short-term loans further increased that profit (Halikias, 1978).
- 47. In certain cases the banks refused to continue to finance even the working capital requirements of many firms. The very high inflationary pressures that prevailed during the period that most firm faced financial problems, meant the needs for working capital were increasing due to the rising prices of raw material. The banks, however, refused to give a second mortgage on firms' real estate and required additional guaranties. Many industrialist have argued that in reality problematic firms had never existed, but that it was simply the case that certain firms were facing short-term financial difficulties, because banks refused to finance their working capital requirements due to high inflation (Tsoris, 1984).
- 48. For a concise review of the major elements of the liberalisation programme regarding Greek financial system see OECD, (1995), pp. 47-51.
- 49. For a limited review of the most important institutional and technical changes regarding the operation of the Athens Stock Exchange in the early 1990s see Xanthakis, (1997); for a comparatively more detailed presentation of many aspects of operations in Greek securities markets in the early 1990s see Papas, (1993), pp. 36-42.
- 50. This classification criterion regarding whether a firm can be identified as a widely held has been derived by The Stock Market Guide (1993).
- 51. Perhaps it is indicative of the extent of concentration in the ownership structure in Greek manufacturing firms, that only an extremely small proportion of firms which were quoted on the Athens Stock Exchange were widely owned. For the vast majority of public firms, a proportion of share capital, well above the 50 per cent, was usually owned by a very limited number of shareholders, while cases where one shareholder owns 70 per cent or even 90 per cent of the equity are not entirely uncommon (see, Stock Market Guide, 1993; and Karakousis, 1998).
- 52. See, Halikias, (1978); Kourvetakis and Dobratz, (1987); Bourantas *et al.*, (1990); Papas, (1993); OECD, (1995); Makridakis *et al*, (1997).
- 53. See, Cummings and Schmidt (1972); Veiga *et al*, (1987); Bourandas *et al*, (1990); Makndakis *et al*, (1997).
- 54. See, Triandis and Vassiliou (1972); Bourandas *et al.*, (1990); Makridakis *et al.*, (1997),

55. This is possibly a factor that could have explained the stagnation that characterised the sectoral composition of the industrial sector in Greece (see, footnote 29). However, the administrative structure of the family controlled firms was not the only factor that can contribute in explaining the stagnation of the sectoral composition. The size of Greek industrial concerns has a crucial role in explaining the slump in industrial output in Greece. The vast majority of Greek industrial firms are small in size. Even the firms which are identified as large (employing 100 people or more) are relatively small in size, compared to their European counterparts (OECD, 1993, and Makridakis et al, 1997). A consequence of that small size was a limited access to capital markets, which has resulted in a scarcity of funds for investing in Research & Development. Perhaps that partially explains the extremely low proportion of funds that have been –and continues to be-invested in Research & Development in Greece. However, the family controlled and bank-administrated firms, have not been the only ones that have experienced difficulties in adapting to the changing circumstances. The professionally-managed firms which are entirely under Greek control, have not always taken the necessary' measures to maintain a continuing competitive position, while the subsidiaries of the multinational corporations have only taken such measures after pressure from their parent companies, and not always to the required extent (Makridakis et al, 1997). In any case, the redirection of the production activity of a substantial proportion of Greek industry requires strategic long-term planning. However, the fluid economic and business environment of Greece does not particularly encourage strategic planning. The continuous change of various legislations -which in most cases aim to serve special interests- coupled with frequent shifts in economic policies have created an external environment for the firms so fluid, that any long-term plans are rendered out of date (Ballas, 1994; Makridakis et al, 1997). At the same time, the lack of infrastructure further hinders any attempt to successfully implement a long-term strategic plan.

56. In fact, the Greek subsidiaries of multinational companies, have achieved a level of performance that, in certain cases, is better than the performance of the subsidiaries of the same parent-company, in other countries (see, Makridakis *et al.*, 1997).

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AUGMENTED PRODUCTS, MARKET-SEGMENTS AND DEMAND IN THE CONTEXT OF TOURISM MARKETING. THE CASE OF CULTURAL ROUTES AND TOURS IN ATHENS

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Abstract

The purpose of this research is to highlight ways of enriching the tourism cultural product of selected archaeological sites of Athens in order to transform the tangible product into augmented. Through this transformation the Athens' brand will gain competitive advantage, the tour operators will be capable of offering differentiated tourism packages and the various market-segments will have the opportunity to experience an enriched tourism product. The final result of the primary research is a proposal for the creation of four cultural routes that lay the foundations for an alternative, sustainable, complex, diversified tourism cultural product that will enhance the demand for authentic experiences in the tourism destination "Athens". These cultural routes are qualitative alternatives for the existing market-segments and can simultaneously attract more specialized market-segments, thus contributing to the increase in demand.

JEL Classification: M31, Z32, Z33

Keywords: augmented product, cultural routes, demand, tourism marketing

1. Introduction

Our cultural heritage concerns much more the present and the future than the past. In this context, the enhancement of an archaeological site is particularly important for the further enrichment of the tourism product in terms of the cultural attractions and monuments of a city. Consequently, it is important to create tourism products that combine values and entertainment (Kotler, Kotler & Kotler, 2008) and are based on elements of giving prominence and promoting cultural heritage.

The benefit that derives from tourism cultural promotion is multiple, since value is created for the visitor through the satisfaction of her/his needs and the

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cultural destination is further enriched through new cultural products. Namely, through the important variable of the marketing mix that concerns the product (Kotler, 2001; Gounaris, 2002; Kotler & Keller, 2008; Kotler et al, 2021).

The present study examines the possibilities of enriching the cultural product of the archaeological sites of Athens, so that they function as augmented tourism products and become even more attractive. This approach makes the present study important. Especially after the experience of the pandemic and the needs that emerged to increase arrivals and attract more visitors, it is a fact that a further enriched tourism product can also attract new markets and contribute to increasing demand (Kotler et al, 2021). The potentials of enriching the cultural product of the archaeological sites of Athens are examined through the development of new tourism cultural products and specifically cultural routes, that can give the cultural product the characteristics of an augmented product. This is an innovative approach which, based on the study of the bibliography, has not been developed again with the characteristics included in this research.

The archaeological sites of Athens include monuments with high scientific, historical, national, symbolic, aesthetic, didactic, cultural, tourism value and have not been sufficiently exploited. Thus, the planned cultural enhancement, policy and strategy, the implementation of good practices and the development of know-how will promote cultural heritage and contribute to education and the provision of economic, social and environmental benefits.

In addition, it will attract visitors and investors, create new jobs, specialization and adoption of ICT (Information and Communication Technologies) based on the challenges of the new digital-communication era. Therefore, for the archaeological sites of Athens, long-term prospects emerge for the city to become an important center of excellence in the field of enhancement and promoting archaeological sites (Jurėnienė & Radzevičius, 2014; Liu & Chen, 2015; Gonçalves, Dorsch, & Figueiredo, 2022; Vujadinović & Jaksic-Stojanovic, 2022).

In addition, cultural routes can be parts of tourism packages or independent tours offered by various tour operators and/or travel agents, which target either domestic or inbound tourism. Customers who are interested in such services are an important part of the market, and at the same time, they are also desirable target markets. For this reason, this paper, after first studying (through a primary research design) and taking into account the knowledge, interests, desires, needs, attitudes, and preferences of visitors, proposes four cultural routes on the one hand and analyzes their content on the other hand in such a way that it can form the basis of describing a tour and advertising the route as

a guided tour to interested groups of tourists. Strategies for the development and communication of cultural routes in the urban area of Athens also emerge.

2. Literature review

2.1 Cultural routes, tourism cultural products and elements of tourism marketing

Cultural routes were originated in 1987 and they were a program of the Council of Europe that was the result of international trends and growing demand in the field of cultural tourism. Cultural routes are a tool for highlighting and enriching tangible and intangible cultural heritage, taking into account the impact they have on its promotion (Council of Europe, 2010; World Tourism Organization, 2015). The implementation of cultural routes constitutes a multidimensional challenge, as it includes cultural and environmental attractions, requires effective collaborations for the dissemination and success of the project and can receive national and european funding.

Each route emerges as an effective and sustainable tool of cultural, tourism and communication management and constitutes an integrated and branded cultural "product" for twelve months of the year, extending the tourism season and providing the required printed and electronic information for every potential visitor. With their digital representation, cultural routes can also be shaped as digital cultural goods (Avgerinou - Kolonia, 1995 & 2009; Silberberg, 1995; Karavasili & Michelakis, 1999; Zirini, Sofikitou & Hatzinikolaou, 2015; Gonçalves, Dorsch, & Figueiredo, 2022; Vujadinović & Jaksic-Stojanovic, 2022).

Tourism products are essentially services characterized by a series of special characteristics such as (among others) their intangible nature, perishability, seasonality, fluctuations in demand, etc. The management of these special characteristics is a major concern of marketers and the present study also contributes in this direction.

Specifically, due to both the perishability and seasonality, as well as fluctuations related to demand (Middleton, Fyall, Morgan & Ranchhod 2009; Kotler et al, 2021), the development of cultural tourism products, such as cultural routes, provided twelve months over year, may contribute to the limitation of the above special characteristics of the tourism products with a consequent extension of the tourism season.

The city of Athens has a rich cultural reserve (archaeological sites and museums) which makes it a tourism destination for all seasons. The cultural

tourism product of Athens has largely become more tangible for the potential visitor through the strong established brand name that reduces uncertainty, anxiety and perceived risk. The creation of cultural routes acts as reinforcement in this direction, because it offers even more "tangible" characteristics and understanding of cultural goods. Thus, the approach of this study contributes both to the management of the intangible nature of the tourism product and to the creation of physical evidence. In this way, it works once again positively towards the management of the special characteristics of the tourism product.

After all, a strong brand, like that of Athens, reinforces the development of essential values in every aspect of the product. A strong brand helps to reduce the medium and long-term vulnerability to unpredictable external events that threaten the tourism industry, reducing the risk that arises for the consumer at the time of purchase. Furthermore, it also facilitates accurate market segmentation (Buttle, 1986; Hawkins, Mothersbaugh & Best., 2007; Kotler & Keller, 2008; Schiffman, Hansen & Kanuk, 2008; Solomon, 2009; Dolnicar, Grün & Leisch, 2018), since it helps to attract some and repel other segments of the market, a fact that can be a strategic weapon for long-term planning in tourism. In addition, an internationally recognized brand is an important part of online promotion efforts (Kotler, 2007; Middleton et al., 2009; Deffner & Karachalis, 2011 & 2012; Karachalis, 2015).

The total cost for the consumer/tourist results from the cost (e.g. monetary), time, energy/effort and mental cost. By subtracting the total cost from the total value, the value assigned to the customer/visitor is obtained (Malindretos 2011a and 2011b). So, it can be said that the visitor gets the best value for her/his money when additional benefits arise. An augmented product, which is not content with the tangible product (e.g. "Sun and Sea") but responds to the different needs and interests and desires of travelers can be beneficial, as it offers a variety of new and innovative options and forms of tourism (Kotler et al, 2021). Primary and interesting cultural routes are in accordance with the above.

2.2 Augmented product – Design of tourism cultural products – Tour operators/Travel agencies and possibilities of offering differentiated tourism packages and tours

In the context of what was analyzed above, it is worth pointing out that marketers should think about the product on three levels (Middleton et al, 2009; Kotler et al, 2021).

Using Kotler's terminology, which is based on Levitt's earlier work, these three levels are:

- The core product, which is the essential services or benefits designed to meet the identified needs of the market segment
- The formal or tangible product, which is a specific selling proposition that states what the customers will get for their money.
- The augmented product, which includes all forms of added value that producers can add to their official products to make them more attractive than competitors' offerings to potential customers.

In this research, the cultural products that are designed and proposed belong to the spectrum of the augmented product. Both tangible and intangible, the augmentation is shaped by the search of the competitive advantage and it is difficult to be defined precisely. The competitive advantage of Athens, as it is to be further enriched through the proposed cultural products, consists in the difference between the conventional essentials of the tangible product and the sum of all the benefits and experiences associated with offering the product to the visitor. It may cover one or all stages – from the visitor's first contact with the product, to every subsequent contact of the provision and experience of the cultural product. The augmented product also expresses the idea of added value beyond the tangible offering. It represents a number of vital opportunities to differentiate Athens' cultural product from those of its competitors.

Concerning the products to be designed, there are several "additional" benefits to the tangible product, minor or major. Some of the benefits are tangible, but some are intangible such as a meaningful understanding of the monuments and their environment. All augmented elements are purposefully designed around the benefits of the core product in ways "calculated" to increase appeal to the needs of the target segments (Middleton et al, 2009; Kotler et al, 2021).

The approach of the present research is additionally documented by the data of the tourism phenomenon. Specifically, tourism is a human-centered service and the ultimate goal is the human being, i.e. the visitor (People, an element that falls under the 7Ps theory of the marketing mix, (McCarthy, 1960; Booms & Bitner, 1981) and the satisfaction of her/his needs, desires and interests (Consumer wants and needs, elements that fall under the 4C theory, Lauterborn, 1990). In this context, the aim is that, through successful communication (Communication, an element that falls under the 4C theory), no visitor leaves an archaeological site confused, uncomprehending or tired. And in this case arises the need for the two-way communication, which is the successful "dialogue" of visitors with the monuments. Furthermore, all of the above is achieved if additional values ("augmented product") are developed to the existing tourism cultural product of Athens, namely the experience and understanding of the monuments, their history, function and symbolism. Finally, if

all of the above are successfully implemented, the increase of visits will also be achieved.

Tour operators, in their efforts to offer differentiated services, through the design of competitive tourism packages, are looking for original and interesting "hands-on" proposals to integrate them into the products they prepare and then present in their advertising campaigns. Tour operators and travel agencies that operate either at the level of domestic tourism or at the international level address a multitude of market segments. These customers can be interested either primarily in cultural tours and educational tourism (e.g. specialized target-markets, schools, Universities, cultural associations, etc.) or in tourism packages of general interest which include cultural tours in their program and are aimed at a variety of market segments. The segments of the market that choose these types of tourism packages are, at the same time, desirable customer markets because they have, for the most part, a high demographic profile, an element that also falls within the goals of the wider tourism policy of the country.

Travel agencies in the context of offering competitive products are looking for tourism packages with differentiated characteristics, able to offer added value to their diverse clientele. Therefore, in addition to integrating diversified and enhanced tourism products into their offer, they will also promote and advertise them, both locally, nationally and internationally.

Consequently, the approach of the present research also has practical implications. In addition to studying ways to transform the tangible product into an augmented one, it will also offer practical directions to travel businesses for designing competitive packages.

3. Objectives of the study

The purpose of the research is to highlight ways of enriching the tourism cultural product of Athens and the essential experience and knowledge of the monuments' history and their symbolism in order to transform the tangible product into an augmented one, through proposals for the creation of cultural routes. In this context, a more specific research objective is to clarify the subject and goals of cultural routes and the ways in which they can contribute practically and not only academically to the further promotion of cultural tourism of a region. Therefore, another goal of this research is the study of cultural routes as elements to enrich tourism packages and tours or as autonomous proposals to interested clientele of tour operators and/or travel agents.

Consequently, the primary research on visitors of archaeological sites has

as its research objectives to highlight a) whether visitors actually know and understand essentially the history, function and symbolism of the monuments or they simply impress the visitors b) their desire and interest to participate in new cultural products and specifically in cultural routes and c) the recording of data and information that will indicate the creation of new cultural routes (cultural products), which will be the proposals of this work.

The archaeological sites of Athens were selected as the study area, namely the historical area that extends from the South Slope of the Acropolis to the Kerameikos, and in particular the South Slope of the Acropolis, the "Sacred Rock" of the Acropolis, the Ancient Agora and Kerameikos.

4. Empirical setting, questionnaire and research design

In the present survey, 207 questionnaires were distributed, with questions that explore the degree of respondents' knowledge of monuments and archaeological sites and the interest of them in participating in cultural routes, in understanding the function and symbolic significance of monuments and in reviving the route followed by the ancient Athenians. All questionnaires were distributed in printed form and in person, with the researcher being present in the conduct of the survey and solving queries in relation to the questions, such as what is meant by "cultural-museum-educational routes", etc.

Descriptive statistics and crosstabulations of variables were implemented in the present research. Crosstabulations correlated a number of qualitative and demographic variables to see if there was a relationship between them. For example, it was examined, among other things, whether the interest in participating in cultural routes depends on the profession (see figure 1), or whether the increase of desire for reviving the route followed by the ancient Athenians depends on the level of education (see figure 7).

4.1. Sampling, sample size, profile and description of the sample

Given that the cultural routes must have as recipients new people who should reap the benefit not only of the visit but also of the education, it was decided to include a part of students in the sample. Subsequently, it was decided to include private employees as well as civil servants, in equal percentages as much as possible, so that there is a representation of a wide range of professions. Therefore, the sample selected was a non-probability sample and the survey was conducted in March and April 2022.

The sample consisted of 206 people, 96 men and 110 women. In terms of

age group, the distribution is as follows: ages 13-18: 66 respondents, 19-25:7, 26-35:31, 36-45:54, 46-55:32, 56-65:13 respondents. In terms of educational level: 2 primary school graduates, 7 middle school graduates (a school between a primary school and a high school), 67 high school students and 7 high school graduates (a total of 74 high school students and graduates), 6 vocational training Institute graduates, 68 University graduates, 46 Master's graduates and 2 PhDs. In relation to profession (the term profession includes and the students): 62 civil Servants, 67 private employees, 6 freelancers, 2 entrepreneurs, 67 high school students and 3 university students.

The sample consists of 3 main categories of respondents, civil servants, private employees and students.

5. Statistical analysis and findings

The analysis of the questionnaires revealed the following findings.

Table 1. Knowledge and visit to the archaeological sites

| Archaeological Sites | Knowledge of the archaeological site | Visit to the archaeological site |
|--|--------------------------------------|----------------------------------|
| Acropolis' Archaeological Site | 99% | 92% |
| Archaeological Site of the South Slope of the Acropolis | 64% | 55% |
| Archaeological Site of the Ancient Agora | 78% | 67% |
| Archaeological Site of Kerameikos | 66% | 49% |

Source: Aristogeni (2022)

According to the research findings, 99% of the respondents are aware of the Archaeological Site of the Acropolis, with 92% of the respondents having visited it. Also, 64% of respondents know the Archaeological Site of the South Slope of the Acropolis with the Theatre of Dionysus, with 55% having visited it. It is a fact that some of the respondents, while they may have visited the archaeological site in question, did not know its name. Additionally, 78% of respondents know about the Archaeological Site of the Ancient Agora, while 67% have visited it. At the same time, 66% of the respondents are aware of the Archaeological Site of Kerameikos, with 49% having visited it.

Table 2. Degree of respondents' knowledge

| Archaeological sites | Questions | Correct | Wrong | Don't know |
|--|--|--|--|---------------|
| | To which goddess was Parthenon dedicated | 93% | 1% | 5% |
| | What is the symbolism of the Parthenon | 84% | 7% | 9% |
| Archaeological | What is included in the sculptural decoration of the Parthenon | 93% 1% 84% 7% 65% 27% 57% 34% 23% 31% 1 72% 6% 56% 10% 72% 28% 9% 91% 43% 25% | 8% | |
| site of Acropolis and Parthenon | What is the architectural type of the Parthenon | 57% | 34% | 9% |
| | Where is the relief representation of the procession for the delivery of the veil on the wooden statue of the goddess Athena located in the Erechtheion? | 23% | 31% | 46% |
| Panathinaion street | What was the name of the way followed by the Athenians during the procession of the Greater Panathenaea? | 72% 6% | 6% | 21% |
| | Which archaeological sites does Panathinaion Street cross? | 56% | 10% | 34% |
| | In the ancient theatre of Dionysus, the foremost ancient Greek tragedies and comedies were first presented; | 72% 28 | 28% | _ |
| Ancient Theatre of Dionysos and | Did the ancient theatre correspond to the psychology of the Greek? | 9% | 91% | _ |
| Tripodon Street | Which ancient road did the ancient Athenians follow to reach the ancient theatre of Dionysus? | 43% | 1% 7% 27% 34% 31% 6% 10% 28% 91% 25% 41% 12% | 31% |
| | What were the Tripods in ancient Athens? | 34% | 41% | 25% |
| Archaeological site | Which was the use of the archae- ological site of Kerameikos? | 65% | 12% | 22% |
| of Kerameikos | Which was the location of Dipylon, the Sacred Gate and Pompeion? | 35% | | 48% |
| Ancient Agora and Temple of Hephaestus | Which was the location of the Temple of Hephaestus? | 42% | 18% | 39% |

As it is shown in the table above, some questions received a higher percentage of correct answers as they concern very basic and well-known issues such as the question concerning which goddess was the Parthenon dedicated to, which the respondents answered correctly at a rate of 93%. On the contrary, it was revealed that 77% of the respondents are unaware of where in the Parthenon sculptural decoration the procession of the Greater Panathenaea Festival is depicted in relief sculpture. Also, only 35% knew that Dipylon, the Sacred Gate and the Pompeion are located in the archaeological site of Kerameikos. In addition, only 34% knew that the Tripods in ancient Athens were sponsorship monuments related to sponsorships for theatrical performances at the ancient theatre of Dionysus.

5.1. Views, interests and needs of the respondents

The following questions explore views and interests and therefore needs for new cultural products which can act as a marketing tool.

Table 3. Importance of cultural routes and participation interest

| Scales | Degree of cultural routes' importance for promoting cultural heritage | Degree of cultural routes' importance for understanding cultural heritage | Scales | Degree of interest in participating in a cultural route |
|----------------------|---|---|-----------------------|---|
| Extremely important | 59% | 58% | Extremely interested | 49% |
| Very important | 30% | 28% | Very interested | 29% |
| Moderate | 8% | 12% | Moderate | 14% |
| Slightly important | 3% | 2% | Slightly interested | 7% |
| Not at all important | _ | _ | Not at all interested | 1% |

Source: Aristogeni (2022)

A percentage of 59% considers that cultural routes are extremely important for the promotion of the special features of classical cultural heritage to the general public and 30% very important. Consequently, the responses of a percentage that reaches 90% are on the very high scale of importance.

A percentage of 58% considers that the creation of cultural routes is

extremely important for the understanding of the classical cultural heritage of Athens and 28% very important. Consequently, the responses of a percentage that reaches 90% are on the very high scale of importance. Also, 49% of the respondents are extremely interested in participating in a cultural route to the archaeological sites of Athens and 29% very interested. In other words, the responses of a percentage of up to 80% are on the very high scale of interest.

In particular, during their participation in a cultural route, the public expressed their desire for the following:

Table 4: Needs and desires of the respondents

| Needs and desires of the respondents | YES | NO |
|--|-----|-----|
| Desire for the revival of the route followed by the ancient Athenians | 71% | 29% |
| Desire for understanding the function of monuments | 63% | 37% |
| Desire for an in-depth understanding of the symbolic significance of monuments | | 41% |

Source: Aristogeni (2022)

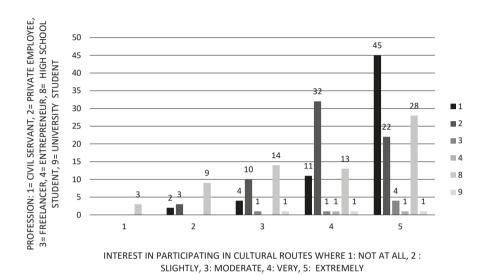
The above table shows that 71% of the respondents express desire for reviving the route followed by the ancient Athenians, while, at the same time, 63% desire to understand the function of the monuments. Also, 59% of respondents desire an in-depth understanding of the symbolic significance of the monuments.

As illustrated in table 4 above, regardless of the specific characteristics of each category of respondents, the majority of them express desire for understanding and experiencing the monuments and cultural routes. Specific conclusions are drawn from the following cross tabulations of variables.

5.2. Crosstabulation of demographics with qualitative variables

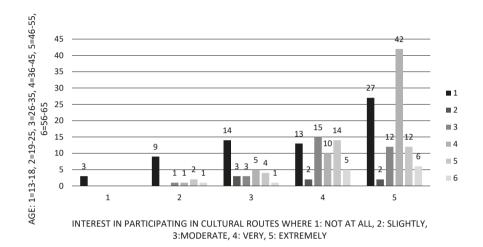
In the figures below, demographics are related through crosstabulation with qualitative variables and conclusions are drawn, which are used in the proposals for new cultural products.

Figure 1: Crosstabulation between the interest in participating in cultural routes and the profession of the respondents



The figure above crosstabulates the interest in participating in cultural routes with the profession of the respondents. As illustrated in the figure, the interest in participating in cultural routes is correlated with the profession. More specifically, 45 of the 62 civil servants stated that they were extremely interested in participating in cultural routes, while 11 very interested, just 4 moderate and 2 slightly. The same interest is not recorded in the students, since 28 said they were extremely interested and 13 very, while several are those who have stated that they are interested from a scale of moderate (14) to slightly (9) and not at all (3). As far as private employees are concerned, 22 are extremely interested, 32 very, 10 moderate and 3 slightly, so in this case as well there is an interest in participating in cultural routes. Please note that private employees and students have the same number (67) in the sample. As follows from the above, civil servants seem to be the target group most interested in participating in cultural routes.

Figure 2: Crosstabulation between the interest in participating in cultural routes and the age of the respondents



The figure above crosstabulates the interest in participating in cultural routes with the age of the respondents. In this case, no firm conclusions can be drawn in relation to age as the number of respondents belonging to certain age groups is extremely small, e.g. respondents in the 19-25 age group are only 7 and in the 56-65 age group are only 13, while 66 respondents belong to the 13-18 age group, 54 to the 36-45 age group, 32 to the 46-55 age group and 31 to the 26-35 age group. Nevertheless, we note that the 36-45 age group has the greatest interest in participating in cultural routes, followed by the 13-18 age group.

cultural routes and the educational level of the respondents

Figure 3: Crosstabulation between the interest in participating in

EDUCATIONAL LEVEL: 1=PRIMARY SCHOOL, 2=MIDDLE SCHOOL, 3=HIGH SCHOOL, 4=VOCATIONAL TRAINING INSTITUTE, 5=UNIVERSITY DEGREE, 6=MASTER'S DEGREE, **1** ■ 2 **■** 5 10 ■ 6 **7** INTEREST IN PARTICIPATING IN CULTURAL ROUTES WHERE 1= NOT AT ALL,

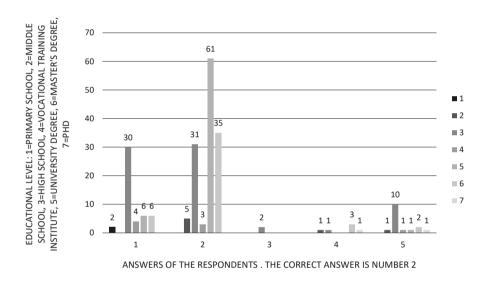
2=SLIGHTLY, 3=MODERATE, 4=VERY, 5=EXTREMELY

Source: Aristogeni (2022)

The figure above crosstabulates the interest in participating in cultural routes with the educational level of the respondents. More specifically, 43 University graduates and 22 Master's degree graduates stated that they are extremely interested in participating in cultural routes, while 18 University graduates and 18 Master's degrees graduates stated that they are very interested, (i.e. a total of 101 people with a high level of education say they are extremely to very interested), while only 4 University graduates and 5 Master's degrees are stating that they are moderately interested and 3 University graduates and 1 Master's degree graduate slightly interested. Of the 74 high school students (67) and graduates (7), 29 are extremely interested, 16 very, 16 moderate, 10 slightly and 3 not at all. So, in this case there is interest in participating in cultural routes, since more than half (45 out of 74) are extremely and very interested, while 29 are in the scale of moderate to no interest. Therefore,

we cannot safely conclude that as the interest increases, the educational level increases, since most people are interested in participating in cultural routes regardless of educational level.

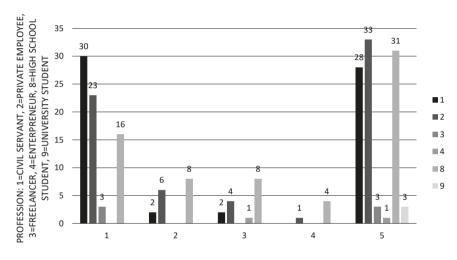
Figure 4: Crosstabulation between the knowledge about the sculptural decoration of the Parthenon and the educational level of the respondents



Source: Aristogeni (2022)

The figure above crosstabulates the knowledge of what is included in the sculptural decoration of the Acropolis with the educational level of the respondents. Since the correct answer is 2 (it includes pediments, metopes and frieze), it is found that the educational level correlates with the degree of knowledge about the sculptural decoration of the Parthenon, since 61 out of 68 University graduates and 35 out of 46 postgraduate graduates answered correctly. Of the 74 high school students (67) and high school graduates (7), 31 answered correctly, 33 incorrectly and 10 said they did not know. Consequently, more than half answered incorrectly or did not know.

Figure 5: Crosstabulation between knowledge of the location of Dipylon, Sacred Gate and Pompeion and the profession of the respondents

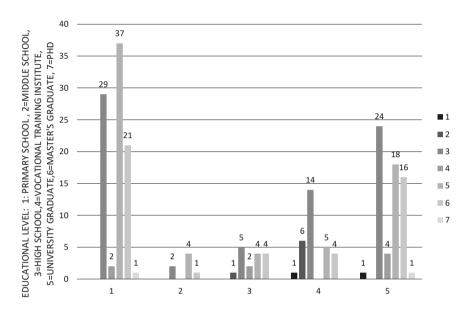


ANSWERS OF THE RESPONDENTS. THE CORRECT ANSWER IS NUMBER 1

Source: Aristogeni (2022)

The figure above crosstabulates the degree of knowledge about the location of Dipylon, the Sacred Gate and the Pompeion with the profession of the respondents (the correct answer about the location is Kerameikos). There is no correlation between the degree of knowledge and the profession, as it is a rather specialized information for the general public, as shown by their statement that they do not know (answer 5), although particularly important for ancient Athens.

Figure 6: Crosstabulation between knowledge about Tripodon Street and educational level

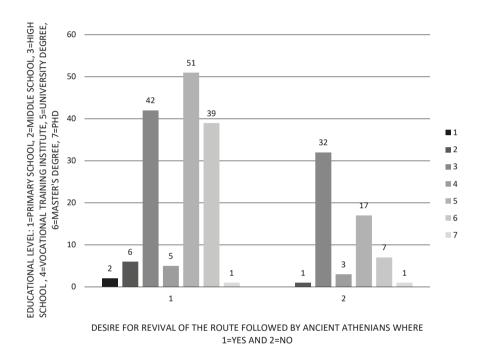


ANSWERS OF THE RESPONDENTS. THE CORRECT ANSWER IS NUMBER 1

Source: Aristogeni (2022)

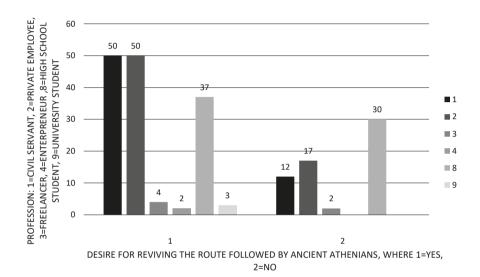
The figure above crosstabulates the degree of knowledge about Tripodon Street with the level of education (the correct answer is that the ancient Athenians followed Tripodon Street, starting from the ancient Agora, to reach the ancient theatre of Dionysus). Given that more than half (37 out of 68) University graduates answered correctly, while less than half of Master's degree graduates (21 out of 46) and less than half of high school students or graduates (21 out of 74) answered correctly, we cannot draw a safe conclusion about the existence or not of a correlation between knowledge about Tripodon Street and educational level.

Figure 7: Crosstabulation between the desire for revival of the route followed by ancient Athenians and the educational level of the respondents



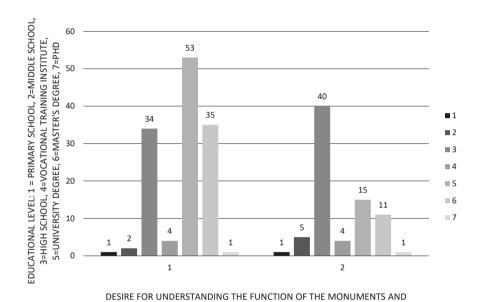
The figure above crosstabulates the desire of the respondents for a revival of the route followed by the ancient Athenians, during their participation in a cultural route, with their educational level. As illustrated in the graph, 51 out of 68 University graduates and 39 out of 46 Master's degree graduates expressed their desire for reviving an ancient Athenian route. So the vast majority of them expressed their desire, while at the same time more than half of high school students and graduates (42 out of 74) also declare their desire. Therefore, the desire of the respondents is motivated when it comes to walking in the footsteps of the ancient Athenians and this fact does not entirely depend on their level of education.

Figure 8: Crosstabulation between the desire for revival of the route followed by ancient Athenians and the profession, of the respondents



The figure above crosstabulates the desire of the respondents for reviving the route followed by the Ancient Athenians during their participation in a cultural route, with their profession. It is understood that 50 out of 62 civil servants and 50 out of 67 private employees expressed desire for reviving an ancient Athenian route. Consequently, the vast majority of them express their desire, while at the same time more than half of the students (37 out of 67) also declare their desire. Therefore, the desire of the respondents is motivated when it comes to walking in the footsteps of the ancient Athenians, regardless of what their profession is.

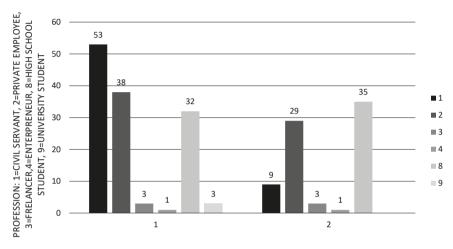
Figure 9: Crosstabulation between desire for understanding the function of the monuments and educational level of the respondents



The figure above crosstabulates the desire of the respondents to understand the function of the monuments, when participating in a cultural route with their educational level. It is understood that 53 out of 68 University graduates and 35 out of 46 Master's degree graduates expressed desire for understanding the function of the monuments. Therefore, the vast majority of them express their desire. In contrast, less than half of high school students and graduates (34 out of 74) declare their desire to understand the monuments. Consequently, the desire of respondents to understand the function of monuments is related to their educational level.

EDUCATIONAL LEVEL OF RESPONDENTS, WHERE 1=YES, 2=NO

Figure 10: Crosstabulation between desire for understanding the function of the monuments and profession of the respondents

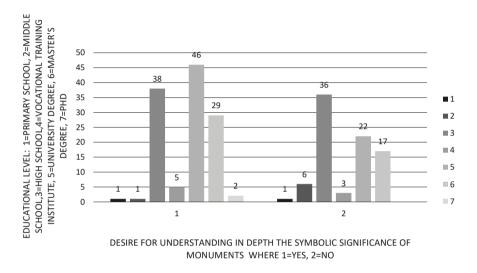


DESIRE FOR UNDERSTANDING THE FUNCTIONS OF THE MONUMENTS, WHERE 1=YES, 2=NO

Source: Aristogeni (2022)

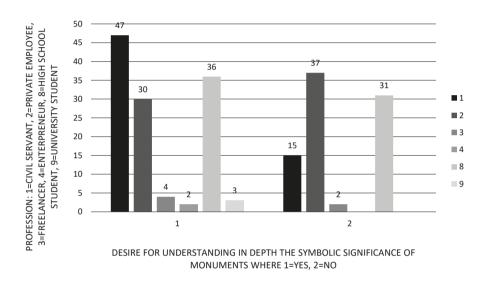
The figure above crosstabulates the desire of the respondents to understand the function of the monuments, when participating in a cultural route, with their profession. As illustrated in the figure, 53 out of 62 civil servants and 38 out of 67 private employees expressed their desire to understand the function of the monuments. So the vast majority of them express their desire. In contrast, less than half of the students (32 out of 67) declare their desire. Therefore, the desire of respondents to understand the function of monuments is related to their profession. In other words, the greatest desire is expressed by civil servants, followed by private employees.

Figure 11: Crosstabulation between the desire of the respondents to understand in depth the symbolic significance of monuments and their educational level



The figure above crosstabulates the desire of the respondents for an in-depth understanding of the symbolic significance of monuments, when participating in a cultural route, with their educational level. As reflected in the graph, 46 out of 68 University graduates and 29 out of 46 master's degree graduates expressed interest in understanding the function of monuments. So the vast majority of them express their desire. At the same time, more than half of high school students and graduates (38 out of 74) declare their desire to understand in depth the symbolic significance of monuments. Therefore, the desire of the respondents to understand in depth what the monuments symbolize is not directly related to their educational level.

Figure 12: Crosstabulation between the desire of the respondents to understand in depth the symbolic significance of monuments and their profession



Source: Aristogeni (2022)

The figure above crosstabulates the desire of the respondents for an in-depth understanding of the symbolism of the monuments, when participating in a cultural route, with their profession. The figure shows that 47 out of 62 civil servants and 36 out of 67, i.e. more than half expressed desire for understanding the symbolism of monuments. By contrast, 30 out of 67 private employees, i.e. less than half expressed similar desire. Therefore, civil servants seem to have a greater desire to understand the symbolism of monuments, followed by the students and the private employees. It should be noted that the findings from the respondents who show a very small number e.g. 2 entrepreneurs, 3 students are not commented on as no conclusions can be drawn with such a small number of respondents.

6. Results and discussion

6.1. Degree of respondents' knowledge

It is reasonable and expected that questions related to basic historical knowledge were answered correctly by more respondents, while those related to more specific historical knowledge, although crucial and important, received a lower percentage of correct answers.

6.2. Interests, desires and participation in cultural routes. Crosstabulations of qualitative variables with demographics

As illustrated in table 4, the majority of respondents (and regardless of the specific characteristics of each category of respondents), express their desire for understanding the monuments and participating in cultural routes. Furthermore, the figure 3 associates, through cross-tabulation, the interest in participating in cultural routes (qualitative variable) with the educational level of the respondents (demographic) and this crosstabulation does not lead to the conclusion that this interest depends on the level of education.

In addition, figures 7 and 8 associate, through crosstabulation, the desire for reviving an ancient Athenian route (qualitative variable) with the educational level (figure 7) and profession (figure 8) (demographics) of the respondents and it is concluded that the respondents are motivated if they are going to follow the course of the ancient Athenians, regardless of the their level of education or profession.

In the same direction, figure 11 crosstabulates the desire of the respondents to understand in depth the symbolic significance of monuments, when participating in a cultural route (qualitative variable), with their educational level (demographic) and it is concluded that there is no dependence between them.

It should be noted that in the present survey, some correlations of the interest and the desire of the respondents with demographic data were recorded, which, however, simply reflect more interest or/and desire from some categories of respondents, without recording indifference from the rest of the categories, which also express interest and/or desire. For example, figure 1 shows a greater interest of civil servants in participating in cultural routes.

In the same direction, figures 9 and 10 correlate the desire of the respondents to understand the function of monuments, when participating in a cultural route (qualitative variable), with their educational level (figure 9) and

profession (figure 10). It is observed that a greater desire is expressed by those with a higher level of education. Also, there is a connection between desire and profession, i.e. a higher desire is expressed by civil servants and they are followed by the private employees.

However, looking at the results holistically, it is concluded that the majority are interested in participating in cultural routes, while, even if some groups express less interest than others, they also express interest.

Specifically, the following categories of respondents emerge, the majority of whom express interest and desire and they are the basis for creating demand:

6.3. Categories of respondents based on the previous analysis and directions for target market approaches

The respondents are about 1/3 civil servants, 1/3 private employees and 1/3 students. The following categories of respondents (Aristogeni, 2022) arise:

- a) A category of respondents who have not visited even the most important monuments (e.g. Acropolis), has answered "I do not know" most questions and so a great effort should be made for these category to be motivated to visit and get to know basic historical and cultural elements of their homeland.
- b) A category of respondents who have not been to any archaeological site, however, they know some facts and would like to visit them and participate in cultural routes.
- c) A category of respondents who have visited the archaeological sites but have not noticed or understood sufficient information about the monuments, while they may have visited an archaeological site and may not be sure about its naming and.
- d) A category of respondents who have visited the archaeological sites and have the wrong impression that they know some information, in particular about the Acropolis (because it is a well-known archaeological site, most people think they know), while they do not know.
- e) A category of respondents who have visited the archaeological sites, have understood some elements and are "thirsty" for even greater knowledge and experience of antiquity. From the description of the characteristics of the above categories, a specific, among others, conclusion emerges, that of the necessity of effective promotion and advertising of such products, in order to inform potential visitors and stimulate the desired demand.

Therefore, another contribution of the present research is that it "reveals" categories of respondents that could indicate possible market-segments, future visitors and ways of how to approach them regarding offered products and advertising.

7. Proposals for cultural routes, augmented and new cultural products

The questionnaire explores basic knowledge of the pillars of ancient Greek civilization, which constitute the offer of Hellenism to world culture: theatre (ancient greek tragedy and comedy), democracy, ancient greek temple architecture and ancient greek religion. Accordingly, the following proposals are designed based on the above findings, i.e. they are based on these pillars and are addressed to visitors who are not indifferent, meaning the majority of visitors. Through the cultural routes proposed below, it is expected to achieve the successful "dialogue" of visitors with monuments (Sali-Papasali, 2016), which is required, in the context of an augmented product.

Furthermore, through this successful "dialogue" visitors are expected to remove any stereotypes and transform their false assumptions, negative opinions and attitudes, in the context of an internal process of "transformative learning" (Mezirow, 1991 & 2007; Grain, 2010; Kokkos, 2010 & 2011). It is worth noting that the erroneously and already formed stereotypes and assumptions of the respondents may concern a) either difficulties in understanding the monuments, b) or the illusion that they know without knowing, c) or the museum fatigue caused by an incomprehensible archaeological site that makes them wondering and therefore forms a negative attitude for a possible next visit. Thus, in the long term, they will want to revisit an archaeological site, instead of avoiding the visit, that is, they will transform their attitude towards monuments and culture, with the ultimate result of increasing the demand and the number of visitors to the archaeological sites. Besides, the following proposals are designed and implemented in the context of psychological encouragement and empowerment of the public to acquire a positive attitude towards visiting the archaeological site and choose to visit it again, increasing the demand in this way.

7.1 Cultural routes

With the perspective of enriching the cultural product, the analysed data and the conclusions will be followed by a series of proposals on cultural and educational routes that could appeal to the majority of visitors.

More specifically, the following 4 routes are proposed:

- Getting to know the ancient temples of Athens and their architecture
- In the footsteps of the Greater Panathenaea' procession
- Discovering the ancient Tripodon Street
- One day at the ancient theatre of Dionysus

7.1.1. Getting to know the ancient temples of Athens and their architecture

A cultural route that starts from the Parthenon on the Sacred Rock of the Acropolis and ends at the Temple of Hephaestus in the Ancient Agora of Athens.

As it became clear from the findings of the above research, visitors may be impressed by the archaeological temples, but a large percentage even of those who had visited the Parthenon do not know basic facts about the architecture, the sculptural decoration and the symbolism of the temple, while many were even unaware of where the Temple of Hephaestus is located. Thus, the need arose for the implementation of the present cultural route, which has essentially a tourism, cultural and educational character in order to substantially experience and understand the important monuments.

First of all, we visit the Parthenon. In order for visitors to understand which side of the Parthenon they face, it should be made clear that as soon as they climb the Ancient Rock they face the west side of the Parthenon, while the entrance of the temple was on the east side. At this point, and being in front of the west side of the temple, they are invited to locate the southwest corner of the Parthenon from where the relief sculpture of the Panathenaic Procession (i.e Parthenon Frieze) started and headed so far to the right, traversing the south side of the Parthenon, as well as to the left, running through the west and then the north side, while the processions met on the East side.

Then, in order for the participants of the cultural route to understand the ancient Greek temple architecture and its symbolism, the following parameters are analyzed by a tour guide:

- The selection of the appropriate location for the construction of a temple
- Orientation of ancient Greek temples
- The architectural styles and parts as well as the typology of ancient greek temples (Spawforth, 2006).

Finally, the tour guide analyzes the symbolism of the Parthenon Frieze (160 m long) expressing the Athenian ideology and its religious, political and cultural status (Choremi-Spetsieri, 2004).

The cultural route "Getting to know the ancient temples of Athens and their architecture" can be shaped on a case-by-case basis in terms of duration and range of information depending on the needs of the public, in order to avoid museum fatigue. After its completion, participants are expected to have been fully enlightened about the function and importance of ancient Greek temples and to have positively transformed erroneous assumptions or stereotypes. Therefore, this route will contribute to the knowledge of the identity, function and symbolism of the monuments.

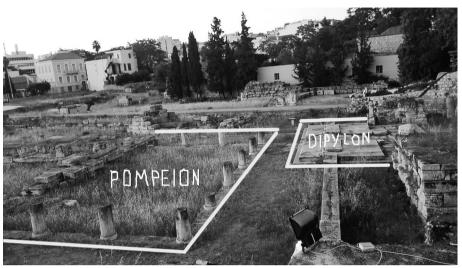
7.1.2. In the footsteps of the Greater Panathenaea' procession

For the realization of the cultural route, participants initially visit the area of Kerameikos, and specifically locate the Pompeion, where the preparation of the Panathenaic Procession took place, between Dipylon and the Sacred Gate. Then, they locate Dipylon as well. After understanding the importance of these monuments, from where the procession began, they continue their course to the ancient Agora by crossing Panathinaion Street and finally ascend to the Acropolis reaching the Erechtheion. Particularly, the stations of the Panathenaic Festival's Procession are the following:

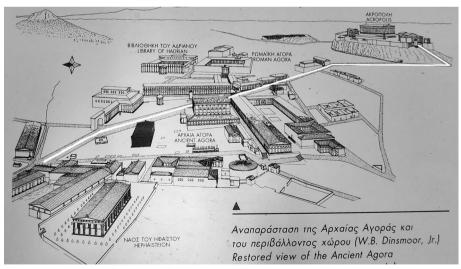
- · Archaeological site of Kerameikos
- Pompeion (between Holy Gate and Dipylon) and Dipylon
- Ancient Panathinaion Street
- Ancient Panathinaion Street in the central square of the Ancient Agora
- Sacred Rock of the Acropolis (entrance)
- Erechtheion on the Sacred Rock of the Acropolis

It is suggested to add visible signs and explanatory signs at each point of the route, in order to make them understandable by visitors and participants.

After the completion of the cultural route, the participants are expected to have fully understood the course followed by the ancient Athenians during the most important celebration of the city and in general in their daily lives. They are also expected to have been enlightened about the location, the function and the significance of Dipylon, Pompeion and the Sacred Gate, positively transforming their earlier erroneous assumptions. A route like this will help the visitors to identify the connection of all these archaeological sites and discover the history they have to reveal, in an emotive and experimental way, which promotes in depth knowledge.



From left to right: Pompeio and Dipylon (personal archive). Extremely difficult to detect by the modern visitor, due to lack of signage and explanatory signs



Representation of the Ancient Agora and the surrounding area (W. B. Dinsmoor). Source: Adapted from explanatory signs of the archaeological site of the Ancient Agora

7.1.3. Discovering the ancient Tripodon Street

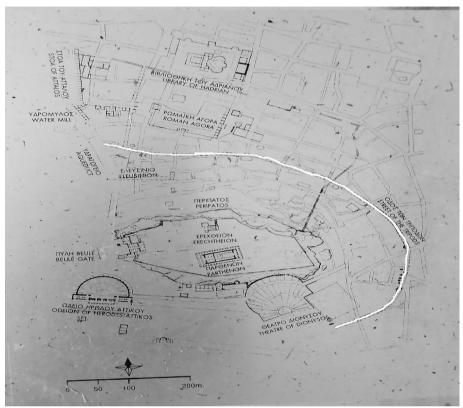
It started from the Prytaneion of the Ancient Agora and extended up to the sanctuary and the theatre of Dionysus Elefthereas. The Prytaneion is located at the eastern foothills of the Acropolis, in the peristyle complex under the square of St. Catherine (near the monument of Lysicrates) a fact that is also in line with the description of Pausanias (Pausanias; Plutarch; Schmalz, 2006; Miller, 2020).

Along and on either side of the 6.5-meter-wide street, the winning sponsors, who had financed the preparation of the dance in the trilogies, which won the first prize in the dramatic games, erected monuments (simple rectangular bases in the 5th century BC, small ornate buildings often in the form of a temple in the 4th century BC), where they placed as prizes bronzes, gilded or silver-plated tripods. The winning sponsor, as a representative of his tribe, received from the state as a prize the tripod, which he placed at his own expense on the monument, which had the corresponding inscription (Choremi-Spetsieri, 1992 & 1994; Rigopoulos, 2003; Theodosopoulos, 2016).

Visitors in the cultural route will follow the path described above and depicted in the photo below, starting from the peristyle complex under the square of Saint Catherine near the monument of Lysicrates, which is adopted as the most likely location of the rectory.

Along the route, all the above information is mentioned by the tour guide and the choragic monuments are located, the main one being Lysicrates. Arriving at the South slope of the Acropolis, participants locate the Choragic Monument of Thrasyllos, the Choragic columns and the Choragic Monument of Nikias.

After the completion of the cultural route, the participants are expected to have fully understood the route followed by the ancient Athenians in order to watch an ancient tragedy or comedy at the Theatre of Dionysus as well as the importance of sponsorship monuments and sponsorship. A route like this will contribute to the connection of all these monuments but also to the discovery of the narrative they have to present to the visitor, thus helping him to see other aspects of cultural heritage.



Tripodon Street Source: Adapted from explanatory signs of the archaeological site of the Ancient Agora

7.1.4. One day at the ancient theatre of Dionysus

Initially, the participants in the cultural route are distributed a blueprint plan with the parts of the ancient Greek theatre and are invited to locate them in the ancient theatre of Dionysus.

Then, they locate selected monuments in the archaeological site, like a "hunt-game of ancient lost treasure". After all, learning through discovery is always more effective, since according to Socrates' "maieutic method", knowledge should not be offered in advance, but we should be led to it through internal processes of search. In particular, the participants are divided into 4 groups:

- The first group seeks Thrasyllion: the choragic monument that was turned into a christian temple.
- The second group seeks the Stoa of Eumenes, the "Foyer" of Antiquity.
- The third group seeks Asklepieion: an ancient infirmary with a cave that gushes water for purification.
- The fourth group seeks Klepsidra: sacred archaic spring (fountain) (Petropoulos, 2017) The roles of the teams alternate.

After the completion of the cultural route, the participants are expected to have been enlightened about the parts of an ancient Greek theatre and the importance of the birth of the theatre on the South Side of the Acropolis by the ancient Greeks, for both Greece and world culture, positively transforming their already formed assumptions. A route like this can turn into a journey that completes a circle of knowledge.

8. Concluding remarks and implications

It is proposed to emphasize in museum teaching-cultural and tourism routes in the context of the augmented product, both related to their design and to markings, explanatory signs, educational programs, guided tours and interactive technological applications that will frame them, in order to systematically highlight the cultural resources of Athens.

Each cultural route has the element of telling a story and, therefore, strengthens the brand storytelling of Athens as a cultural tourism destination. Through collaborations with cultural institutions and advertising, the intensity and dissemination of the message about the creation of new augmented cultural product (Kotler, 2001) can be strengthened. While, through advocate storytelling (User generated content, Word of Mouth & Engagement) and public relations actions, the reach of the brand "Athens - cultural destination" is expected to be reinforced. At the same time, in a long-term basis, loyalty and reach of brand to existing and new categories of visitors will be succeeded. Besides, through appropriate collaborations and the promotion of cultural routes as well as the dissemination of proposals through the Cultural Organization of the Municipality of Athens, the Ephorate of Antiquities and related organizations, the increase of visitors to archaeological sites and the further rise of cultural tourism will be achieved (insete.gr, 2020). At the same time, tour operators and travel agents can incorporate these routes into their suggested tours and advertise them to a variety of customer markets nationally and internationally, thus promoting augmented products.

8.1. Future research and limitations of the study

The present thesis focused on a sample of Greeks and a non-probability sample. Therefore, it is proposed in the future to conduct a survey on a random sample that will include participants from various countries that are target markets of Greece and in particular of Athens.

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THE ECONOMIC DEVELOPMENT OF THRACE IN 19TH CENTURY: THE CASES OF KAVALA'S AND DEDEAĞAÇ'S (ALEXANDROUPOLI) PORTS

S. KARAGIANNIDOU*

Abstract

In 19th century while the Ottoman Empire was falling apart, Thrace experienced an economic bloom based on trade. Tobacco industry led the economy of the region in this economic development. Xanthi, center of the tobacco industry, had not harbor to trade the goods, as a result the merchants had to transport their cargos nearby in Kavala and in Dedeagaç (Alexandroupoli). Dedeagaç was established by this economic development and became the new port city of Ottoman Empire. Although the commercial port of Kavala predated of Dedeagaç, however from economical sources the new harbor was more profitable than Kavala's.

JEL Classification: F1, N13, N43, N73

Keywords: Economic development, trade, tobacco industry, port, Kavala, Dedeagać.

1. Introduction

At the end of 18th century and at the beginning of the 19th century the Ottoman Empire was in decay. After the French Revolution in 1789, the idea of the independence was raised up in minds of the enslaved nations in Ottoman Empire's territory. Many revolutions took part in 19th century and forced Ottomans to give privileges to Non-Muslim population (Tanzimat). These reforms were made to keep alive the Empire and to avoid an upcoming collapse (Zürcher, 2004). The Ottoman Empire lost many territories and wanted desperately to keep it together.

The economy could not be unaffected at this time. Despite wars and reforms that were made this century, there was an economic development. At the 19th century the gates for trade were opened. The reforms gave the boost to Non-Muslim population that they need it in order to grow and open their trade horizons. At this century is observed the fact that many Non-Muslim

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population are appointed in public sector something that was unacceptable in Ottoman Empire the previous centuries.

In Thrace, there was a specific kind of trade that gave prosperity to everyone in this territory. The tobacco industry raised up in the 19th century and made Thrace the best tobacco industry in Ottoman Empire. The development of the tobacco industry among with its trade was mainly due to the fertile ground in this area (Genisea, Xanthi) and the big ports [Kavala, Alexandroupoli (Dedeaāaç)]. Among with enormous profits to the coffers of the Ottoman Empire, tobacco industry brought prosperity at the population in Thrace. Although, the exports of tobacco eventually couldn't give the life vest that the empire wanted to grab, to avoid the crisis.

The ports of Kavala and Dedeaāaç were the center of the trade in 19th century in this region of the Ottoman Empire. In general, trade that Ottoman Empire dashed her hopes for economic recovery, display the need of a bigger port than Kavala. Although Thessaloniki's harbor was 510 km, by train, away from Istanbul and they wanted to be closer than this. As a result of this situation was the establishment of Dedeaāaç. The new rail station and the new harbor of Dedeaāaç, reduced the distance in half. The railroad that passed through the city were giving a major advantage instead of Kavala's port. Those two harbors were played a significant role to the Ottoman Empire because there was a big profit in the import/export balance.

2. Tobacco Industry and its Trade at 19th Century

2.1. Introduction

In eastern Macedonia and western Thrace, the tobacco industry appeared in proscenium at the 19th century. The climatic conditions at the region played a decisive role in the cultivation of tobacco. Second factor for this development was the reforms (Tanzimat) that took the Ottoman Empire. They gave same privileges to Non-Muslim populations (who lived in Thrace) as Muslims and they were able to deal with tobacco industry and trade. The importance of the tobacco trade in this area could be found in the economic statistics of Greece comparing the statistics in 1899 (without the annexed lands of Macedonia) with the ones in 1914.

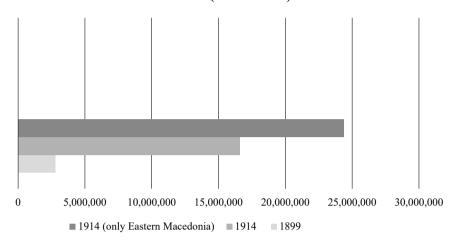


Figure 1: Tobacco exports in Greece before and after the attachment of the Eastern Macedonia (in drachma)

The Figure 1 is presented the proof of how the tobacco trade of this area could be an important tool at the economy of the country.

2.2. Xanthi: The Mekka of tobacco industry

The center of tobacco industry until the 19th century was Genisea (Yenije). Even though Genisea was a small town, remained the main administrative area. Many tobacco merchants built their warehouses here to place tobacco after sough to sell it. A conflagration that burned Genisea to the ground took place in 1870 was the reason to transport all the tobacco activities in Xanthi.

There were two reasons that contributed to make Xanthi capital of kaza. The first one was the completed destruction of Genisea after the fire. The Ottoman Empire would need long time to rebuild the town again and the time was not with Empire's favor because of the crisis. The second one was the financial bloom that Xanthi had at this period. A lot of tobacco varieties were cultivated in the wider area of Xanthi. As a natural consequence the town became the center of tobacco in Thrace.

Although Xanthi is amphitheatrically built on the foot of Rhodope Mountain chain, there were a minor disadvantage that Xanthi did not have a port.

All the products that Xanthi's merchants wanted to trade, fled to the ports of Kavala and Dedeagać.

Many tobacco merchants and tobacco traders built their masons and their warehouses in Xanthi. Plenty of those are well preserved through the years.

3. Kavala's Port

3.1. Tobacco exports from Kavala's port

Kavala was a capital of a Sancak, but until 18th century it did not have its own governor, was part of the sancak of Thessaloniki and it ruled by a sub-governor (Stefanidou A.,1991). Kavala's port was not such big as Thessaloniki's and not preferable for trade. That thing rapidly changed with the tobacco industries. Kavala was surrounded by towns such as Xanthi, Drama and Genisea which were tobacco centers and did not have port. As a result, the port emerges as a center for processing the product and moving it to external markets.

The distributing of the product was made mainly by the port because Kavala had never railroad station and the nearest was in Drama. In 19th century the port became an attraction pole of steamboats from European countries such as Austria and France. Tobacco was transported to the ports of the Black Sea and the Mediterranean, in the Arab countries, Northern Europe and Scandinavia, North and South America, the Far East, India and Congo, while since 1829 sub-consulates and consulates were in Kavala in order to support the commercial activities of their respective citizens. After the liberalization of state economic policy through the trade agreements of 1839 and 1840, the trade value, of which 80% was exports, grew by 600% in the period of 1857-1912. The agreements had set the import custom duties at 3% and the export at 12%, while trade within Sultan's dominion was tax free according to French-Ottoman Trade Treaty in 1839. The Table 1 below provides evidence about the value of tobacco trade through the years:

Table 1: The value (in French franc) of tobacco exports from Kavala's port in years (1847, 1848, 1851, 1852, 1875)

| Tobacco exports from Kavala's port | | | | |
|------------------------------------|----------|-----------|--|--|
| Year | Currency | Value | | |
| 1847 | FRF | 2,930,000 | | |
| 1848 | FRF | 1,795,000 | | |
| 1851 | FRF | 2,655,000 | | |
| 1852 | FRF | 257,800 | | |
| 1875 | FRF | 5,552,000 | | |

Ministry of Finance Bureau of Statistics (1890), Trade of Greece with foreign territories in the year 1889.

Until 1864 Kavala was a small town with nothing to give. After this economic bloom of the tobacco trade the population has doubled (Chionis, 2000, pg. 12-13). New buildings such as tobacco silos and tobacco warehouses made their appearance in the town. The first tobacco warehouse in Kavala was built near the port, it was an unorthodox way because near the sea was not the perfect climate conditions to tobacco maturing. Although it was near to the port, so they wanted to eliminate the time to load the cargos.

3.2. Other exports and imports from Kavala's port

Kavala's port was not exclusively for the tobacco trade but also general trade. The Table 2 provide evidence about cereals.

Table 2: The value (in French franc) of cereals (wheat, barley, corn) exports from Kavala's port in years (1847, 1848, 1851, 1852, 1875)

| Cereals exports from Kavala's port | | | | |
|------------------------------------|----------|-----------|---------|---------|
| X 7 | Currency | Value | | |
| Year | | Wheat | Barley | Corn |
| 1847 | FRF | 2,425,000 | | |
| 1848 | FRF | 400,000 | | |
| 1851 | FRF | 203,520 | | 203,520 |
| 1852 | FRF | _ | 8,400 | 152,240 |
| 1875 | FRF | 50,000 | 135,000 | 246,000 |

Ministry of Finance Bureau of Statistics (1890), Trade of Greece with foreign territories in the year 1889

As it obvious the numbers are lower than the numbers of tobacco trade, but it proves that Kavala's port was engaged with all the kinds of trade. A big port couldn't be uninvolved to importations. There were some products that the Ottoman Empire imported from Kavala's port.

Table 3: The value (in French franc) of imported products from Kavala's port in years (1851, 1852, 1875)

| Imports from Kavala's port | | | | | |
|----------------------------|----------|---------|---------|---------|--------|
| Year | Currency | Value | | | |
| | | Coffee | Sugar | Salt | Wine |
| 1851 | FRF | 132,000 | 745,000 | 28,000 | 23,000 |
| 1852 | FRF | 121,990 | 101,300 | 41,100 | 33,210 |
| 1875 | FRF | 280,000 | 410,000 | 200,000 | 45,000 |

Ministry of Finance Bureau of Statistics (1890), Trade of Greece with foreign territories in the year 1889

From the above Table 3 it seems that all the imports that the Ottoman Empire made from the Kavala's port were necessary and uncultivable in the territory. Even though the Ottoman Empire made all these imports, the exports from tobacco trade were so increased that did not affected damage at the financial debt.

4. Dedeagaç's Port

4.1. The new port city of Dedeagać (Alexandroupoli)

The establishment of Dedeaāaç was a consequence of the trade development. The imperative for a port in this region led the Ottoman Empire to transform a small fishing village to a new port. Despite Enez was already a big city, the ground was marshy, and it would not be safe to build the commercial port there (Temirtzidi, 2009). The foundation of the city is placed by the Ottoman source at 1288, i.e., approximately at 1872 (Mpakirtzis, 2015). It is exactly the year that the railway station and the first, small harbor were operational.

4.2. Ottoman Empire's new commercial harbor

The construction of the new harbor was carried under the directions of engineer Tafel of French company of railways. The amount that they had to spend, corresponding to 200000 frf. The location of Dedeagać was crucial because the area was excellent for a potential big harbor. The construction started right away and the Dedeagać changed radically. Dedeagać went down in history as a railway station but along the way it also became known for the largest commercial port in Thrace (Karagkos, 2000). The ever-increasing rate of ship approach to the harbor made urgent the need of a big lighthouse. This lighthouse was operated for the first time on 1st June in 1880 (Karakousis, 1998).

4.3. The significance of Dedeagaç's port

The statistics of maritime traffic in the port of Dedeagaç in 1885 provide evidence about how the trade going. In this year all the types of ships, transported 649698,72 tons of cereals, bones, wood etc., from Dedeagaç to ports of Asia Minor, Kavala, Thessaloniki, Greece, France, England, Italy and Germany (Stefanidou A., 1991).

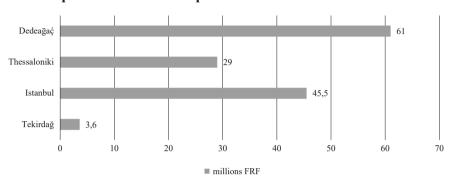


Figure 2: The value (in French franc) of exported products from the ports of Ottoman Empire in 1889

The exports in ascending order were as follows: Tekirda\(\overline{g}\) 3,6 million, Thessaloniki 29 million, Istanbul 45,5 million and Dedea\(\overline{g}\)a\(\overline{e}\) 61 million. The Figure 2 provides the significance of the new harbor to the Ottoman Empire as Dedea\(\overline{g}\)a\(\overline{e}\) had more profit than the capital of the empire. The strategical location of this harbor brought prosperity to this place and transformed from a village to city.

5. Conclusion

The economic development in Thrace in 19th century was bloomed in contrast of the phase that Ottoman Empire had fallen into. Based on trade this region had economical growth and its population experienced prosperity. Among general trade, tobacco industry contributed the most in this development. To conclude, the 19th century was held the industrial revolution of Thrace. New cities sprung up for different reasons. As for example Xanthi became the center of tobacco industry and Dedeagaç became the most significant (according to economical sources) harbor in Ottoman Empire, overtaking in profit the already existing ports.

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