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# STRATEGIC COMPETITION ANALYSIS AND GROUP MAPPING: THE CASE OF THE GREEK INSURANCE INDUSTRY

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## ABSTRACT

This study aims to investigate the use of classic strategic management models for the competition analysis of the Greek insurance industry. In this direction, the application of the macro-environment analysis model, the industry life cycle model and the Porter's five forces model is concisely described. Special focus is put on the application of the strategic group mapping model, in order to examine the comparative positions of rival firms. The aforementioned models are applied to the Greek insurance industry for the decade 2004-2013 and conjointly reveal the factors that force and transform the competition environment. Results demonstrate that an analyst using classic strategic models can monitor the competitive dynamics and identify opportunities and risks for the Greek insurance companies.

**Keywords**: Strategic management models; Competition analysis; Strategic group mapping; Insurance industry.

**JEL Classification:** G22, L11

## 1. Introduction

Competition in an economic context is a widely studied phenomenon with a significant body of accumulated research and theory. A critical review of the strategic management literature shows that competition analysis is one of the most important aspects in developing strategy. It is well-known that, the formulation of company's strategy starts with the analysis of the factors and forces that shape the competition in the industry in which the firm operates (Hill and Jones, 2012). Understanding the environment in which a company operates, is a vital part of strategic planning. Rivals should be analyzed in-depth and systematically, in order to identify the opportunities and threats firms are facing and formulate strategies that will enable the company to outperform its rivals.

On the other hand, the role of insurance is important not only for the economy but also for the society. Insurance manages, diversifies and absorbs the financial risks of individuals and organizations. It allows individuals to recover from sudden misfortune by limiting the financial burden through mitigation of the effects of exogenous events over which man has no control like illness, accident, death, and natural disasters (The Geneva Association, 2014).

To evaluate the competition in an insurance industry an insurer can use strategic management models. Through this evaluation, an insurance company obtains information about the competition, uses this information to predict competitor's behavior, and assesses the brand positioning in the market. Additionally, identifying the competition in insurance market can reveal value proposition, competitors' strategies, their weaknesses and strengths, as well as the opportunities which arise from timely implementation of appropriate strategies.

The purpose of this study is to investigate the use of classic strategic management models for the competition analysis of the Greek insurance industry (i.e. macro-environment analysis model, industry life cycle model, Porter's five forces model and strategic group mapping model). Five specific research questions are investigated:

1. What kind of competitive forces are Greek industry members facing, and how strong is each force?
2. What factors are driving changes in the Greek insurance industry, and what impact will these changes have on competition?
3. What market positions do industry rivals hold – who is strongly positioned and who is not?

4. To what extent can the selected models help an analyst to identify significant features, opportunities and threats that form competition in the Greek insurance market?
5. Is it feasible for a strategist to analyze the Greek insurance industry using the selected models with only published information?

The remainder of this paper is organized as follows. Section 2 presents a comprehensive selection of the appropriate related bodies of literature. In Section 3 the methodology of this study is described. Section 4 contains the fundamental strategic analysis of the competition in Greek insurance industry based on macro-environment analysis model, industry life cycle model and Porter's five forces model. Section 5 contains competition analysis based on the strategic group mapping model. Section 6 summarizes research results and gives several interpretations. Finally, in Section 7 the main conclusions are presented and suggestions for further research are also provided.

## 2. Literature Review

This section provides a strong theoretical basis for the study by analyzing and composing a comprehensive selection of appropriate related bodies of literature. It presents the relevant theory and previous research on the analysis of an organization's external environment in the context of strategic management with particular focus on competition analysis. Michael Porter's study in competition analysis is the reference point in most of the parts of this section.

Porter (1980) stated that "strategy can be viewed as building defense against competitive forces or as finding positions in the industry where forces are weakest", and added that "strategy is about making choices, trade-offs; it's about deliberately choosing to be different". An ultimate goal of a strategy is to gain strategic competitiveness. Strategic competitiveness is achieved when a firm successfully formulates and implements a value-creating strategy (Volberda et al. 2011). According to Sirmon et al. (2007), a firm has a competitive advantage when it implements a strategy where competitors are unable to duplicate or find it too costly to try to copy.

The following strategic management models for the competition analysis are critically reviewed consequently:

- Macro-environment analysis model
- Industry life cycle model
- Porter's five forces model
- Strategic group mapping model

### *2.1 Macro-environment analysis model*

The company and its rivals operate in a macro-environment of forces, which create opportunities and pose threats (Kotler and Armstrong, 2012). According to Thompson et al. (2013), the macro-environment has seven components:

- Demographics (outcomes of changes of consumer demographics such as population, gender, age distribution, and race)
- Socio-cultural forces (outcomes of changes of role and status in society, marital status, education, language, and local origin)
- Political, legal and regulatory factors
- Natural environment
- Technological factors
- Global forces (outcomes of changes in the global market place)
- General economic conditions

Other well-known variations to this model are PESTLE, PEST, STEEP, and STEEPLE. All are macro-environmental analysis models which focus on important factors of external environment that impact the present and the future of a firm, such as Political, Economic, Social, Technological, Legal, Environmental/ Ecological and Ethical.

Industry and competitive environment are also part of the company's external environment. According to Hill and Jones (2012), an industry is a group of companies offering products or services which are close substitutes of each other and satisfy similar customer needs. The examination of an industry's competitive environment is the beginning of identifying a company's strategy (Rumelt, 2011) and thus it is essential for strategic management process.

Main limitations of macro-environment models are the factors' continuous changes, the uncertainty for the future impact to a company, and bias.

### *2.2 Industry life cycle model*

A model for assessing the competitive structure of the company's industry is the industry life cycle model. One of the most frequently used models of an industry life cycle was introduced by Porter (1980). This model comprises four stages: Introduction (emergence), Growth, Maturity, and Decline. According to Baum and McGahan (2004), it is important for companies to understand the use of the industry lifecycle because it is a survival tool for businesses to compete in the industry effectively and successfully.

The main concerns on the model are based on the continuous changing environment, the unknown boundaries of the four stages and the diversity of an industry which do not allow the application of the model in every industry.

*2.3 Porter's five forces model*

In most industries, there are strong competitive forces which reduce economic profits over time. The most powerful and widely used model for systematically diagnosing these competitive pressures in a market is Porter's five forces model of competition (Porter 1980; 1985). The five competitive forces are:

- The risk of new entry by potential competitors: Potential competitors are companies that have the capability to enter in an industry but are not there yet (Brickley et al., 2008). These new entrants represent a threat to the profitability of established companies and most of the time they use substantial resources to gain market share (Porter, 1996). Established companies already operating in an industry discourage potential competitors from entering the industry because the more companies that enter, the more difficult it becomes for established companies to protect their market share and their profitability (Hill and Jones, 2012). The risk of entry by potential competitors is a function of the height of barriers to entry. Barriers to entry are all the factors that make it costly for companies to enter an industry. High entry barriers may keep potential competitors out of an industry even when industry profits are high (Hill and Jones, 2012).
- The extent of rivalry among established firms: The strongest of Porter's five competitive forces is the rivalry among existing firms. It is a continuous and dynamic threat that evolves over time. According to Porter (2008) the intensity of rivalry among established companies depends on the industry and is growing slowly or declining.

- The bargaining power of buyers: An industry's buyers may be individual customers (end users of a product or service) or companies which distribute an industry's product to end users, such as retailers and wholesalers (Hill and Jones, 2012). Buyers with strong bargaining power can limit industry profitability by demanding price reduction, better payment terms or additional features and services that increase industry members' costs (Thompson et all, 2013). Therefore, powerful buyers should be viewed as a threat.
- The bargaining power of suppliers: Suppliers are the organizations, which provide resources to the industry, such as materials, services, and labor (i.e. individuals, organizations such as labor unions, or companies that supply contract labor) (Hill and Jones, 2012). The bargaining power of suppliers

refers to the ability of suppliers to raise resources' prices, or to increase costs of the industry; thus, powerful suppliers are a threat (Hill and Jones, 2012).
- The threat of substitute products: Substitute products are goods or services which do not belong to the same industry that perform similar or the same functions as a product that the industry produces (Hitt et all, 2011). The existence of close substitutes is a strong competitive threat because it limits the price that companies of the same industry can charge for their product, and consequently industry profitability (Hill and Jones, 2012).

Nevertheless, this well–known model has suffered criticism on issues such as the assumptions underlying the five forces, the absence of additional forces like regulation and government, the absence of the role of a citizen and consumer behavior, and the absence to evaluate the company in a continuous changing environment.

*2.4 Strategic group mapping model*

The best technique to use in order to reveal the market positions of industry members is strategic group mapping (Porter, 1980). Hunt (1972) observed differences between groups of firms within industries and named those groups as "strategic groups" to describe "a group of firms within the industry that are highly symmetric with respect to cost structure, the degree of vertical integration, and the degree of product differentiation, formal organization, control systems, management rewards/punishments, and the personal views and preferences for various possible outcomes" (Hunt, 1972, p.8). Porter (1980) developed further Hunt's concept. There are threats and opportunities within and across strategy groups. For example, an immediate threat can be customers' perception that products in the same strategic group are direct substitutes for each other and therefore, company's closest competitors are those in same strategic group. It is important to note that the analysis of strategy groups within an industry gives different result (Hill and Jones, 2012).

A strategic group consists of firms with similar competitive approaches and positions in an industry. The major characteristics are defined by Thomas and Venkatraman (1988). Thompson et all (2013) also elaborated into this and refers that organizations in the same strategic group may:
- have similar or the same products, prices, quality, and distribution channels
- react similar to a threat or opportunity
- use the same product attributes to attract similar customer segments
- use similar strategies
- depend on identical technological techniques
- offer similar customer service

According to Porter (1980), strategic groups are stable structural features of industries that are bounded by mobility barriers. There are four steps to construct a strategic group map: (i) identify the competitive variables that distinguish companies; (ii) plot firms on a two-variable map with pairs of characteristics; (iii) assign companies to the strategic groups; (iv) draw circles around each strategic group. With strategic group maps, analysts and strategists can reveal the closest rivals for each company within an industry and identify attractive or unattractive positions within the industry.

The main criticisms against this model are the limited numbers of variables, the selection of the variables, and the variability of the strategic group within an industry and within a country.

## 3. Methodology

Greek insurance market analysis is based on data and reports from the Hellenic association of insurance companies. It is important to note that insurance companies which are reported to Hellenic association of insurance companies represented the 94,6% of total GWP in 2014. We should note that INTERSALONIKA doesn’t contribute to the Hellenic association of insurance companies report. Moreover, the analysis of the insurance firms that operate in Greece was based on 2013 report of the Hellenic association of Greek insurance companies that had detailed production for each company. Our analysis does not include two insurance companies; EVIMA and DIETHNIS ENOSI that stopped operate in 2013. These companies represented 3,1% of total gross written insurance premiums in 2012. We should also note that we noticed small differences in the figures from Hellenic association of Greek insurance industries. Some of its reports issued with slightly different results. Furthermore, the last available data for insurance production per company from the association was 2012. When we refer to brands we used the top 25 Greek insurance brands that represented more than 98% of the insurance production in Greece for 2012. We also need to mention that we didn’t distinguish the companies on personal lines (individuals) and commercial lines (groups) for the interpretation of the results.

In order to measure the extent of the involvement in Life and Non-Life sector of an insurance company, we created 3 variables:

- LIFEtoTOTAL = (Life GWP) / (Total GWP)
- NONLIFEtoTOTAL = (NonLife GWP) / (Total GWP)
- NONLIFEINVOLV = (NONLIFEtoTOTAL) - (LIFEtoTOTAL)

The LIFEtoTOTAL indicator measures the percentage of Life insurance production to the total production of an insurance company. Respectively, NONLIFEtoTOTAL indicator measures the percentage of Non-Life insurance production to the total production.

The NONLIFEINVOLV indicator measures the extent of Non-Life involvement for an insurance company. If it is 0 then company's production is split equal in Life and Non-Life insurance sector. If it is 1 then the company has only Non-Life production and if it is -1 then the company has only Life insurance production. If the result is positive then the company has more production in Non-Life sector than in Life, and vice versa if the result is negative.

## 4. Fundamental Strategic Analysis

The aim of this section is to apply strategic management models for the competition analysis of the Greek insurance industry. We start with the macro-environment model in order to examine the forces that are shaping and forming the competition in the Greek insurance industry. Next, we examine Greek insurance industry life cycle in order to identify the characteristics that determine the competition. Finally, we use Porter's five forces model of competition.

*4.1 Analysis of the Greek insurance industry with the macro-environment model*

We start the analysis of the Greek insurance industry with the macro-environment model. The macro-environment consists of components that originate outside of a firm and have the potential to influence the total industry as a whole. Forces that we focus are: demographics, general economic conditions, socio-cultural forces, political, legal and regulatory factors, natural environment, technological, and global factors.

The most strategically relevant macro-environment factors which formulate the competition of the Greek insurance industry in the examined period are presented to the Figure 1. Some of the factors can be placed in another category without affecting the analysis. Also, some of these factors could be applied into Porter's five forces model of Greek insurance industry competition that follows.

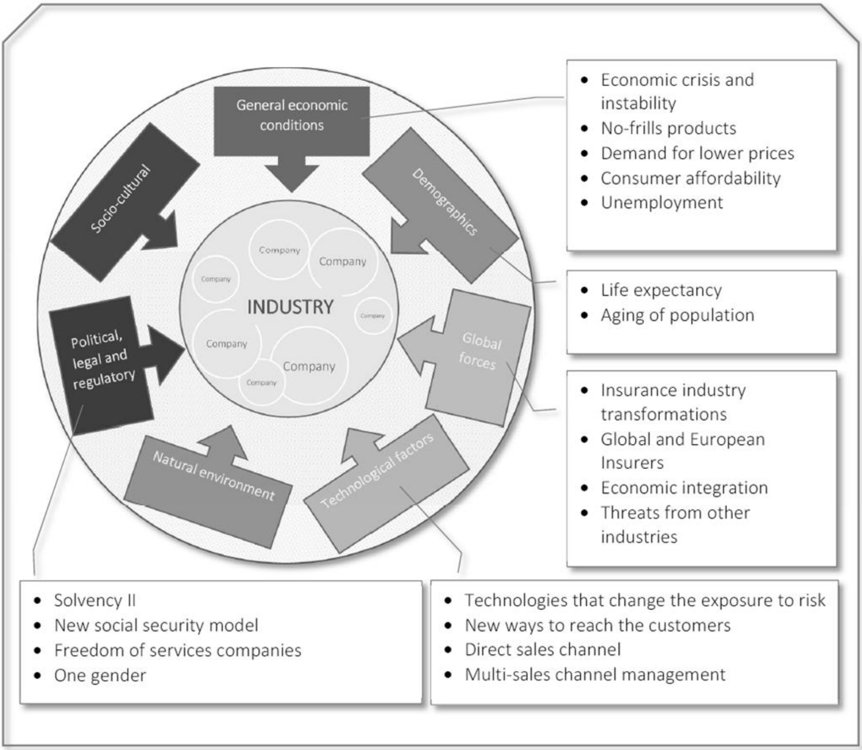


*Figure 1: Macro-environment factors in the Greek insurance industry*

The analysis of the seven components of the micro-environment is a well-structured method that leads the analysts to identify the rivals which need more attention. Using the macro-environment model, strategists and managers can determine which of the factors are important or have great impact on their companies' business model, current business plan, long and short-term strategy moves. For example, a closer look on the dynamics and the penetration of direct distribution channels in Europe could give early warnings to INTERAMERICAN competitors before INTERAMERICAN introduced the first insurance direct channel in Greece (ANYTIME).

It is important to note that events in the macro-environment may occur in a sequence or in parallel, slowly or rapidly, simultaneously to all components or to only one, with or without a sign. The role of the management is to analyze it in a regular base to understand and predict competitors' strategies or to create new directions and strategies in order to gain the competitive advantage in the industry.

*4.2 Analysis of the Greek insurance industry with industry life cycle model*

According to Porter (1998), as an industry goes through its life cycle, the nature of competition will shift. The Greek insurance industry life cycle seems to be in the maturity stage. Although the number of insurance companies decreased during 2000 to 2013 from 110 to 67 (Hellenic association of insurance companies, 2014), the total insurance spending as percentage of GDP stabilized between 2% to 2,2% for the decade 2004-2013 (OECD, 2013).

The characteristics of the Greek insurance industry are consistent, at least for the vast majority of the insurance production (Life, Motor, Health, and Property) with Porter's study (1998). Table 1 depicts the characteristics of the Greek insurance industry in the maturity stage.

| | **Maturity life cycle stage characteristics** |
|---|---|
| Demand | Mass market saturation especially in Motor business, Repeat buying, Customers are price sensitive for mandatory insurance products like motor, home and liabilities. |
| Technology | Well-diffused technical knowhow: quest for technological improvements |
| Products | Trend to commoditization, Attempts to differentiate by branding, quality, bundling, Less product differentiation, Less rapid product differentiation, Standardization, Market segmentation, Advertising competition especially in Motor business |
| Manufacturing and Distribution | Multi-line of business and multi-distribution exists |
| Competition | competitive costs or net combined ratio is a key issue, Price competition increases |
| Key success factors | Cost efficiency through capital intensity, Margins, Lower prices |

*Table 1: The industry structure over the Greek insurance lifecycle stage*

An interesting question that still needs to be answered is: "Has the Greek insurance industry reached the top of its industry lifecycle?" An answer to this question might give the insurance penetration index which in Greece was 2,1%, when the average European ratio was 7.7% in 2013 (Insurance Europe, 2015).

*4.3 Analysis of the Greek insurance industry competition with Porter's five-forces model*

Porter's five forces model is a powerful and tested model that allows companies to identify and analyze the important forces which determine the characteristics of an industry. This model helps companies assess the nature of an industry's competitiveness and develop corporate strategies accordingly. Any change in one of the forces might mean that the insurer has to re-evaluate its environment and realign its business practices and strategies.

In the analysis of macro-environment of Greek insurance industry in a previous section important factors are described that influence the intensity of each Porter's forces. The most strategically relevant factors that formulate the competition of the Greek insurance industry according to Porter's five forces model in the examined period are presented at Figure 2. Using Porter's five forces, strategists and managers can determine which of the forces have the greater impact for companies' business model, current business plan, long and short-term strategy moves.

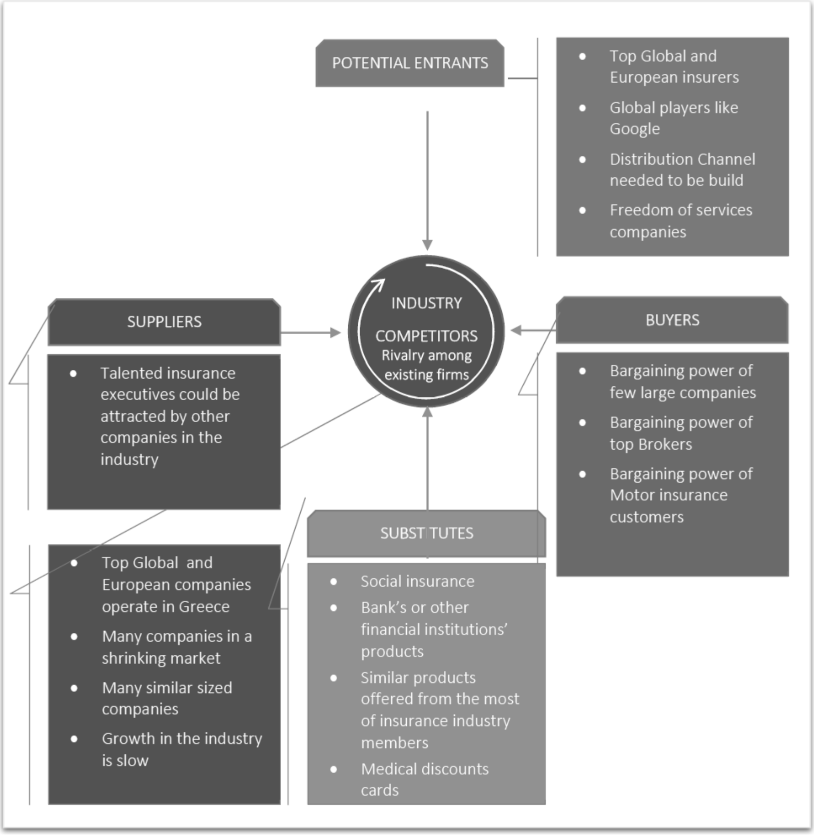


*Figure 2: Porter's five forces (Greek insurance industry)*

## 5. STRATEGIC GROUP MAPPING

As Porter claimed (1980), strategic group mapping is the best technique to reveal industry members' market positions. It can be used in Greek insurance industry to identify companies or groups of companies with similar characteristics and illustrate how easy it might be to move an insurance company from one strategic group to another, to avoid threats and to exploit opportunities.

Fiengebaum and Thomas (1990) used, among other variables, net written premiums and line of business (Life, Non-life) in order to analyze strategic groups and performance in the US insurance industry. Similarly, we used the gross written premiums as the variable which demonstrates the size of the Greek insurance company and the line of business as a diversification variable to distinguish insurance brands.

For the study's purposes, we tried four different strategic group mappings:
• Domestic and foreign insurance strategic groups' map
• Non-Life, Life, and both Non-Life and Life insurance sectors strategic groups' map
• Years in Greek insurance industry strategic groups' map
• Life and Non-Life % production strategic groups' map

All strategic maps are based on the Gross written premiums of the top 25 Greek insurance brands. The analysis is based on 2012 data.

*5.1 Domestic and foreign insurance strategic groups' map*

Figure 3 shows the strategic groups for which the country of origin is used as the main characteristic. Insurance brands were divided to domestic and foreign and compared based on total gross insurance premiums. The most important element for this classification is the potential dynamic that a foreign company might have in terms of investments, international experience, transfers of technological and managerial know-how. Someone can argue that foreign insurers might dominate a domestic market if domestic insurers are inadequate and unsophisticated.

This classification revealed groups of companies which are very close in terms of insurance production. A point that needs attention is that the domestic market is already well-served by locally owned insurers. ETHNIKI is by far the top brand not only among domestic brands but also from all insurance brands in Greece. In the second position is a Dutch company; INTERAMERICAN that is also the top brand from the foreign companies. ING and METLIFE are in the second and the third position among foreign insurance companies. On the other hand, EUROLIFE is in the second position of domestic brands having less than the half of ETHNIKI's insurance premiums. As Figure 3 depicts, in Greek insurance industry there are many companies with similar insurance production volumes. Considering the above, 8 groups created, 4 for domestic and 4 for foreign companies with similar dynamics in terms of insurance production. Many companies are in group 4 for both domestic and foreign companies with the lower insurance production.

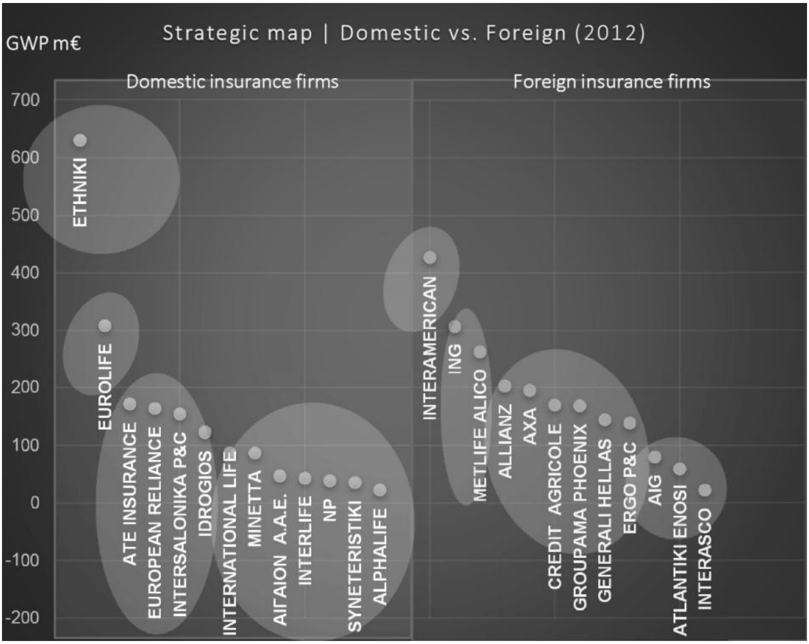

*Figure 3: Strategic group map: Domestic versus Foreign insurance firms (Greece)*

*5.2 Lines of insurance business strategic groups' map*

For the strategic groups of Figure 4 the Line of business is used as the main characteristic to group the insurers. Insurance brands were divided into Life, Non-Life and Mixed (Life and Non-Life) and compared with the total gross insurance premiums. The most important element for this classification is the companies' expertise in Life and Non-Life insurance sector. This classification revealed groups of companies which are very close in terms of insurance production.

Not many firms are among insurance companies which operate both in Life and Non-Life insurance. Most of the leaders in Greek insurance market are in there. We can identify 4 groups. The first group consists of the market leader ETHNIKI. The second group consists of INTERAMERICAN, and EUROLIFE. There was a considerable gap between the first and the two following brands. The difference in insurance production between ETHNIKI and INTERAMERICAN is €204m and the difference with EUROLIFE is €322m. The third group consists of brands below category's average and with an insurance production between €138m GWP and €203m GWP. The leaders in this category are ALLIANZ and AXA with €202,4m and €194,7m gross written premiums respectively. Finally, the fourth group includes the rest of the companies with insurance production less than €88m GWP.

In Non-Life sector we can identify 3 groups. The first group consists of ETHNIKI and INTERAMERICAN with €295,4m GWP and €225,6m GWP respectively. The second group consists of 8 brands between €108m and €153 mil. GWP. The leader in this group is INTERSALONIKA with €152,8m GWP. The third group includes the rest of the companies that had less than €86 mil GWP.

In Life sector, the top companies are close in insurance production. We can divide the sector in 2 groups. The first group consists of ETHNIKI, ING, METLIFE, EUROLIFE, INTERAMERICAN, CREDIT AGRICOLE and the production is between €161m to €336m. The second group consists of the rest of the brands with less than €99m GWP.

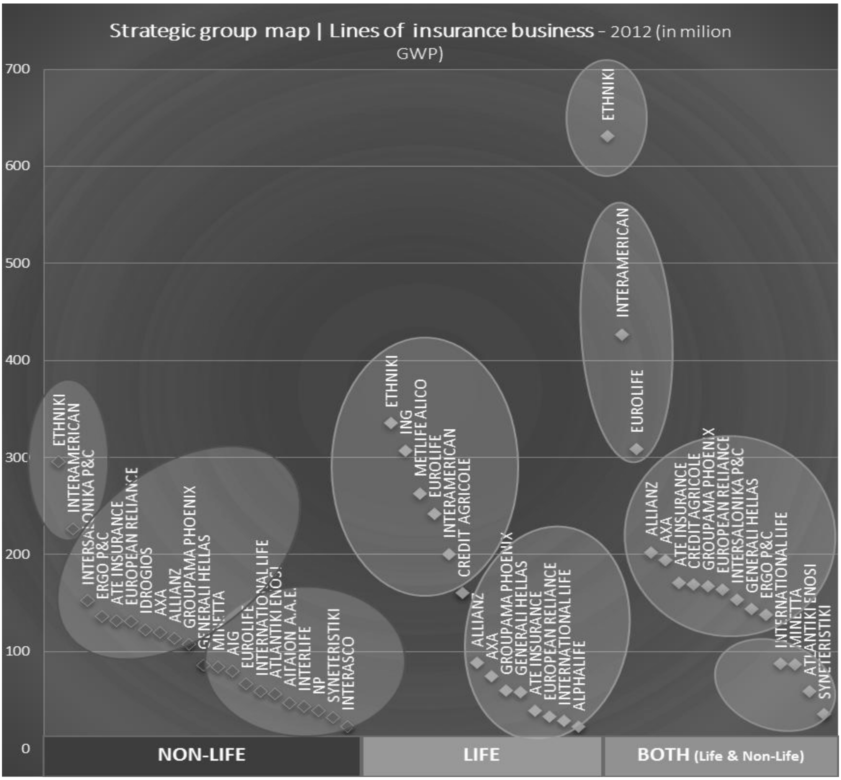


*Figure 4: Strategic group map: Life, Non-Life and both*

It is interesting to note that ETHNIKI is the leader brand in each category. Nevertheless, in Life the competitors are very close to the leading company. Another point that needs to be made is that leading companies from each category are far away from the rest of companies.

*5.3 Years in Greek insurance industry strategic groups' map*

For these strategic groups the number of years that the brand operates in Greek insurance industry (see Figure 5) is used as a criterion. The number of years in Greek insurance industry can be interpreted as experience to Greek insurance market characteristics, better handling on political and tax issues, stronger relationship with sales channels, deeper understanding of Greek consumers.

For this strategic group the establishment year of the company in Greece is used and not the year that the company was merged or sold to the current brand. Furthermore, insurance brands were divided into 0 to 40 years, 40 to 80 years and 80 and more years in order to have better results.

Three companies operate in insurance industry more than 80 years. ETHNIKI, GROUPAMA and GENERALI. ETHNIKI operates since 1891 and had 630,9 gross insurance premiums in 2012. GROUPAMA and GENERALI had 167,9m and 143,7 respectively being far less than ETHNIKI.

Five companies operate between 40 and 80 years. Top three companies had a significant deviation and we include them in the same group. INTERAMERICAN is a 46 years old company with 427m insurance premiums, METLIFE with 263m GWP, and ERGO with 138m GWP. Only, INTERNATIONAL LIFE and AIG had very close insurance production.

Thirteen companies operate less than 40 years. Top 2 companies, EUROLIFE and ING had similar insurance production and formulate a group. The second group consists of ALLIANZ, AXA, ATE, CREDIT AGRICOLE, EUROPEAN RELIANCE, and INTERSALONIKA with insurance production between €122m and €203m. The third group consists of MINETTA, INTERLIFE, NP, and INTERASCO.

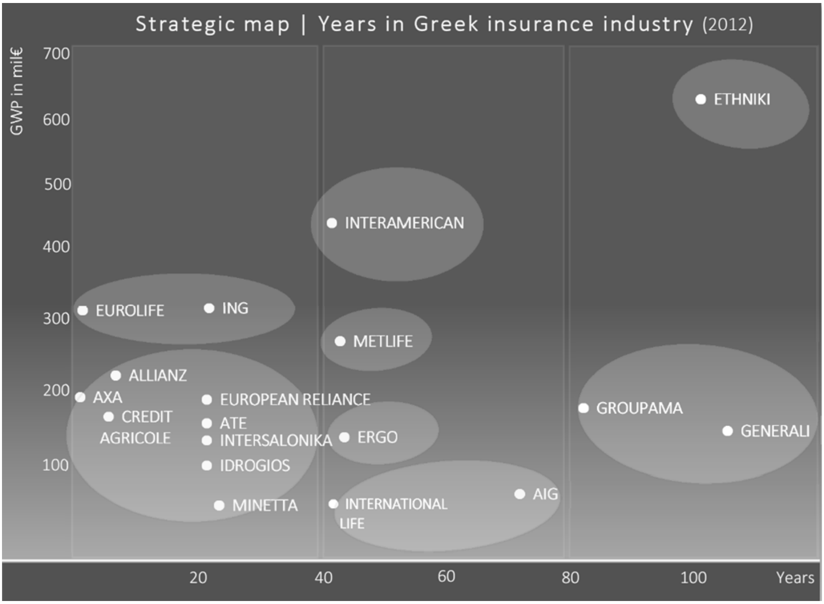


*Figure 5: Strategic group map: Years in Greek insurance industry*

*5.4 Companies involvement in Life and Non-Life sector strategic group's map*

For the strategic groups of Figure 6 the NONLIFEINVOLV index is used (see methodology section) to measure the extent of insurance companies' involvement in Life and Non-Life sector and the GWP. The groups which were pointed outhave the percentage of Non-Life (or Life) production as the basic characteristic. In Group 1 we have the leaders in Greek insurance industry; ETHNIKI and INTERAMERICAN which have almost a balanced Non-life and Life production. In the second Group EUROLIFE is included with more Life production than Non-Life. The 3rd Group consists of companies with none or almost none Non-Life production. In this group we include ING, METLIFE, CREDIT AGRICOLE, ALPHA LIFE. The fourth Group consists of companies that mainly concentrate in Non-Life sector but also have a significant percentage of their production in Life insurance. Final, the 5th group has companies with Non-life insurance production and none or almost none Life production.

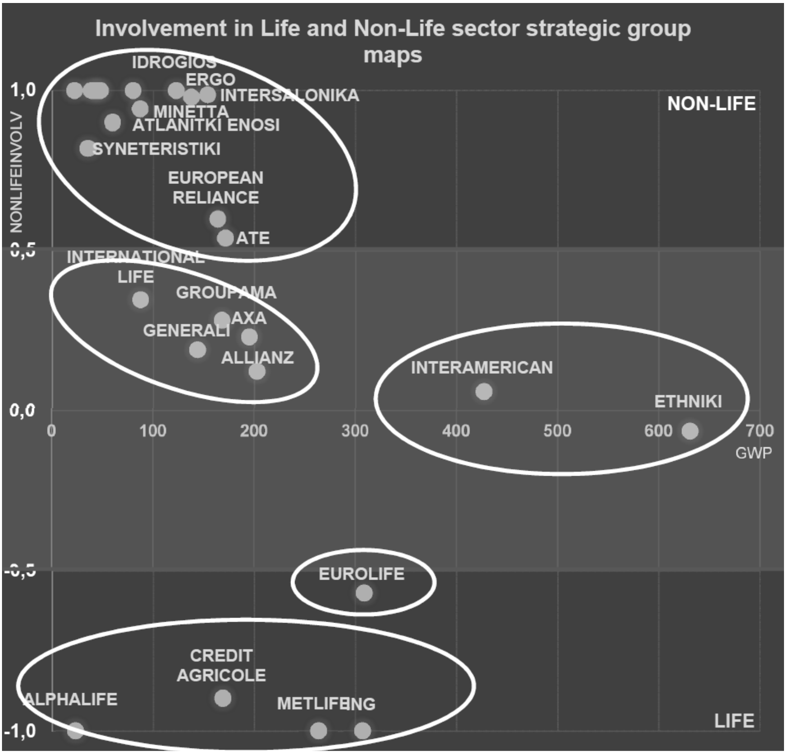


*Figure 6: Involvement in Life and Non-Life sector strategic group maps (2012)*

## 6. SUMMARY OF RESEARCH, RESULTS AND INTERPRETATION

Based on our research the summarized results are presented below:

Macro-environment analysis model offered a structured way to analyze the Greek insurance industry competition environment. With this model a strategist can understand and identify risks and opportunities associated with external factors that influence an insurance company's competitive position. In addition, this model can be used to forecast movements of its competitors and helps managers make better decisions. Nevertheless, past behavior doesn't always lead to the same future results and the management of an insurance company should analyze the macro-environment regularly and compare the results with rival's movements. However, macro- environmental analysis is complex and difficult, and the most important is that it is subject to individual interpretation and abilities.

Industry life cycle is a fundamental analysis based on the different stages of an industry at a given point in time. The analysis of the Greek insurance industry lifecycle didn't offer insights for the competitors which operate in the Greek market. Nevertheless, this analysis can help the process of making investment decisions for companies that want to expand their business through merger or acquisition. Another point that needs to be considered is that the Greek insurance life cycle stage was made through assumptions. Changes in market conditions or consumer behavior cannot predict future movements of the industry. This analysis cannot give a certain insight that the Greek insurance industry will grow or remain stable or even decline and at what pace.

Porter's five-forces model can be used to analyze the Greek insurance industry in order to find threats and opportunities. Similar to macro-environment analysis, this model helps us to have a broader view on insurance competition but closer to company's environment. This model is also subject to individual interpretation and abilities. Additionally, it requires knowledge about the Greek insurance industry. Factors, such as substitution of insurance products, are difficult to analyze, and possible substitutes can be missed. For example, governance protection for catastrophic events could be seen as a substitute threat. Also it is clear that if we have chosen to analyze Porter's five- forces model only for the Life or for the Non-life insurance industry then we would have different results. Finally, the use of Porter's model must be granular since, the existence and the intense of a factor is not always the same over time.

Strategic group mapping is one of the methods for revealing the competitive structure of an industry. It can be used for explaining the performance deviation between firms which follow different strategies. The first difficulty when using this model is when setting the right dimensions for the analysis. At this study we used only public published data. For better analysis we need more information, for instance on brand preferences, claims or combined ratio, number of employees, product characteristics and sales channel traits. Our analysis in Greek insurance industry with the use of the Gross written premiums, the age of the brand, the line of business and the origin of the brand cannot demonstrate a clear relationship or clusters within the insurance industry. We saw many small brands that had similar production but this model could not give any insight of the dynamics, the similarities or the differences between firms which are very close to each other. It is obvious that a large amount of companies which compete in the Greek insurance industry show similar performance and may have similar competencies but it is not easy to identify with few only components to analyze.

## 7. DISCUSSION AND CONCLUSIONS

In this section, we examine the level of research questions' reply based on the relevant literature and the findings of the analysis that took place in the previous sections. Moreover, we present the theoretical and practical implications of this study and we suggest further research in areas that might be interesting for someone to explore.

The study was set out to explore the concept of competition analysis models in Greek insurance industry and to examine the use of four models: macro-environment analysis, industry life cycle, Porter's five forces model of competition, and strategic group mapping. The theoretical literature on strategic management and specifically in the context of competition analysis has criticisms and restrictions. Thus, the study also examined if these limitations exist for the Greek insurance industry. The study sought to answer five questions:

1. What kind of competitive forces are Greek industry members facing, and how strong is each force?
2. What factors are driving changes in the Greek insurance industry, and what impact will these changes have on competitive intensity?
3. What market positions do industry competitors hold ;who is strongly positioned and who is not?
4. To what extent can the selected models help an analyst to identify significant features, opportunities and threats that form the competition in the Greek insurance market?
5. Is it feasible for a strategist to analyze the Greek insurance industry using the selected models with only published information?

The application of Porter's five forces model answers the first question of the study. The competitive forces which Greek insurance industry members are facing arise from the study of the five forces model. First, the study of risk of new entry by potential competitors showed that Global and European insurers might enter in Greek market. Google might be another new entry. In addition, we found that the low barriers of entry of the new freedom of services' companies make easier their entrance to the Greek market. Secondly, the study of the extent of competition among established firms shows that there is strong competition in Greek market. Leader Greek, top Global and European firms, and many smaller similar sized companies create an intense competitive environment in a shrinking market. Thirdly, studies of the bargaining power of consumers showed that the power is concentrated on few large companies in Greece, which insure their personnel, property and operation and on big broker's branches. Additionally, the study of the power of suppliers showed that talented insurance executives, underwriters, actuaries and account managers are easier to be attracted by a competitor.

Moreover, the study of the threat of substitute products identifies that Greek social security and health system, products sold from banks and other financial institutions and medical discount cards are seen as insurance substitutes for the Greek consumers. The study shows that strategic analysts can use Porter's five forces in an insurance industry to identify potential profitable areas, to mitigate risks and to avoid mistakes.

The second research question: "What factors are driving changes in the Greek insurance industry, and what impact will these changes have on competitive intensity?" was answered with the macro-environment model and the industry life time model. The scan of the seven macro-environment factors for the Greek insurance industry leads as to focus on five of them which can been seen as the most important at that period. These five factors are: general economic conditions, demographics, global forces, technological improvements, and political, legal and regulatory conditions. The structured approached of the macro-environment analysis showed factors that can be opportunities or threats for all or for specific segments of Greek insurance companies and probably will affect directly or indirectly competition in the Greek market. The factors which were identified by this research were: economic crisis and instability, new no-frills products that appeared in the market, increasing demand for lower prices especially in Motor insurance, consumer affordability, improvement of the insurance combined ratio in Motor business, increase in life expectancy, aging of population, insurance industry transformations, power of Global and European insurers, economic integration, entrance of new companies from other industries, new technologies, new ways to reach a customer, multi-channel management, solvency II, and freedom of services' companies. Even that many factors were identified; somebody could find more or fewer factors. On the other hand, the analysis of the Greek insurance industry life time model confirmed industry's traits. The characteristics of the Greek market are mass market saturation (especially in Motor business), price sensitive customers, continuous need for technological improvements, trends to commoditization, efforts to differentiate by branding, quality, bundling, slower product differentiation, standardization, market segmentation, advertising competition especially in Motor business, multi-line of business and the multi-distribution, efforts to have competitive costs, and price competition among rivals. Greek insurance industry life cycle is a survival tool not only for businesses to compete in the industry effectively but also for potential new entrants.

The third research question: "What market positions do industry rivals hold, who is strongly positioned and who is not?" was approached with the strategic group mapping model. Strategic group mapping showed market positions of the insurance industry members. Four strategic group maps not only showed the market position of each insurance company in the market but also the relevant position of each company according to characteristics: Origin, years in Greek market and business line of the insurance company. According to our study in Greek insurance industry, there are many companies which, at least in 2012, were very close in terms of gross insurance premiums. Only few companies excelled for their production.

For the fourth question: "To what extent can the selected models help an analyst to identify significant features, opportunities and threats that form the competition in the Greek insurance market?", we cannot be sure if the analysis brought all the possible options. Although the macro-environment analysis model is a structured methodology to identify threats and opportunities it is complex and difficult, and it is subject to individual interpretation and abilities. This means that different analysts might get different results. Similar to this, Porters' five models analysis is based also to individual interpretation and knowledge of the business environment under analysis. An analyst might see more or less threats and opportunities not because of the model but due to his personal interpretation and knowledge on the Greek insurance industry. It is important to note that, if an analyst wants further understand or wishes to predict competitors' strategies then the analysis needs to take place regularly. Events in the macro-environment may arise in sequence or in parallel, slowly or rapidly, simultaneously to all factors or to only one.

For the last question: "Is it feasible for a strategist to analyze the Greek insurance industry using the selected models with only published information?" the results showed that it is feasible. More than 60 basic industry's key success factors and indexes were used for the analysis. Nevertheless, for the strategic group mapping we would have a better analysis if we could have more available information, particularly on company's key success factor.

All models relied on historical, backward looking data to extrapolate future assumptions. For this reason, we found that it is important to be cautious when interpreting strategic analysis results. Otherwise the analysis may be unduly influenced by individual's preconceptions.

The topic of the study is, undoubtedly, important; it combines an essential subject from strategic management theory and a major business sector. Insurance has a significant role on the global economy, not only because it is a precondition for sustainable development of economic activities mitigating financial risks for individuals and organizations, but also, because it offers alternative access to credit by providing savings into long-term investment products, supporting capital movement, and in addition, providing further support to the economy due to people connected directly or indirectly with the industry. Similarly, the competition analysis of an insurance industry is crucial and sometimes vital. Timely, identification of the risks may prove critical for an insurance company.

Based on the above, it seems that strategic management models which were used were key to ensuring that discipline and consistency was applied to the analysis of the Greek insurance industry. These analytical models improved the focus of our analysis and ensured a methodical, and more balanced approach to the competition analysis of the Greek insurance industry competition.

The research presented in this paper is limited for several reasons. At the outset, the observed phenomena were approached from an empirical viewpoint assuming that even though a factual reality exists, it is only imperfectly apprehensible as the observations are distorted by the observer's own understandings. Moreover, the study relied on multiple data sources consisting of both primary and secondary data. Nevertheless, the number of data sources was inevitably limited and due to the scarcity of available academic research on this topic, the study relies mostly on non-academic secondary data. Finally, the limitations of the models also limited the research scope.

Concerning future research, several interesting directions could be identified with respect to analysis of the Greek insurance industry. For instance, we suggest using more variables for the strategic group mapping. Particularly, we propose: brand preferences, sales channel preferences, product diversification, price differentiation, geographical criteria, cost efficiency, number of employees, distribution channels characteristics and customer classification. This sophisticated competitor analysis is needed to deeper understand the structure of the Greek insurance industry. Moreover, we suggest a continuous and periodically study of the Greek strategic group maps. If an analyst monitors the strategic groups every 6 months, then he might find more insights and depicts the differences or the similarities of the Greek insurance companies. Relative to competition analysis and insurance industry, the findings of the study raise maybe another interesting topic of a possible future research. A comparison of macro-environment model and Porter's five forces model with other countries, particularly from South European countries, might reveal interesting correlations. It seems that some strategies come to Greece, with a delay, from other more mature insurance industries.

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