



Munich Personal RePEc Archive

**How do lawyers perceive the relevance of
economic and business methods
knowledge in their professional practice?
Evidence from Greece**

Hassid, Joseph and Maniatis, George and Polemis, Michael

University of Piraeus

25 April 2025

Online at <https://mpra.ub.uni-muenchen.de/124590/>
MPRA Paper No. 124590, posted 26 Apr 2025 10:01 UTC

How do lawyers perceive the relevance of economic and business methods knowledge in their professional practice? Evidence from Greece¹

Preliminary version – April 2025

Joseph Hassid^a, George Maniatis^{a,b}, Michael Polemis^{a,c,d*}

^a *University of Piraeus, Department of Economics, Piraeus, Greece*

^b *Foundation for Economic and Industrial Research, Athens, Greece*

^c *Hellenic Competition Commission, Athens, Greece*

^d *Hellenic Open University, Patras, Greece*

Abstract

We explore the value that lawyers in Greece attribute to knowledge of economics and business methods, both in terms of the legal fields where this knowledge is most useful and the specific areas of economics and business expertise that support their professional practice. Our findings, based on a survey of Greek law professionals conducted within the LAPET research project, indicate the broader relevance of economics and business methods across various legal fields. We find that lawyers should mainly possess knowledge in Economics for Business, The Functioning of Markets, and Economics of Competition / Antitrust, as these areas of economic expertise along with knowledge of Law Office Organization, are deemed the most useful for lawyers in their professional activities. Additionally, prior advanced education and professional roles significantly influence perceptions of the usefulness of economics and business methods knowledge. Lawyers with advanced economic education tend to recognize the value of economic knowledge more broadly across all areas. Similarly, business legal advisors perceive economic knowledge as beneficial, whereas self-employed legal practitioners tend to assign slightly lower importance to economic knowledge. Finally, legal specialization was found to be a key factor in shaping the perceived usefulness across different areas of economic and business knowledge. These findings provide valuable insights primarily for law students and early-career lawyers regarding the economics and business methods subjects they should focus on in their education and additional training. They also offer guidance on curriculum development by law schools, which they should consider integrating courses in applied economics and business methods to better equip future lawyers with the necessary skills for the modern legal landscape.

Keywords: Law and economics; Legal education; Interdisciplinarity

JEL Codes: K00; A12; C40

*Corresponding author, E-mail address: mpolemis@unipi.gr

¹ This paper is carried out within the framework of the National Recovery and Resilience Plan Greece 2.0, funded by the European Union – NextGenerationEU (Implementation body: H.F.R.I. - Project title: “*Law Professionals Economics Training – LAPET*” in partnership with the Piraeus Bar Association and Trojan Economics (Project Number 15807). Errors and omissions are the authors’ alone. The usual disclaimer applies.

1. Introduction

Law students and the legal services industry increasingly expect legal education to go beyond the theoretical legal realm and provide future lawyers with the practical skills and knowledge essential for professional practice (Whittam, 2023; Richardson, 2000). Key competencies such as critical analysis and evaluation, written and oral communication, and the ability to navigate complex real-world issues are becoming increasingly essential. In a rapidly evolving and complex world, lawyers must go beyond traditional problem-solving approaches to effectively serve their clients. Law schools, therefore, should not only cultivate legal reasoning but also train new lawyers to develop creative solutions to emerging legal challenges (Weinstein, 1999). Interdisciplinary education plays a crucial role in fostering the knowledge needed for this purpose. While society cannot expect lawyers to possess expertise in every relevant discipline, it is reasonable to expect them to collaborate effectively with specialists from other fields to provide well-rounded solutions for their clients.

Within this context, the necessity of economic knowledge for lawyers is undeniable, particularly in enhancing their ability to critically analyze real-world data, address complex problems, and develop innovative solutions. Economic knowledge for legal professionals serves three primary objectives. First, a fundamental grasp of economics aids in understanding issues that frequently arise across many areas of law (Landes and Posner, 1993; Trebilcock, 1993; Kaplow and Shavell, 2002; Morris, 1985; Scott and Triantis, 2021). Second, in certain fields economic analysis is a crucial component of legal arguments made by both prosecution and defense. Third, legal professionals engaged in public policymaking regularly encounter economic matters, making economic knowledge essential for evaluating the impact of proposed legislation and regulations (White, 1985). Therefore, economics training can provide lawyers with

additional professional advantages in the labor market, often leading to higher earnings compared to lawyers with no formal training in economics (Craft and Baker, 2003; Winters, 2016; McIntyre and Simkovic, 2019).

Studies have highlighted a knowledge gap especially among early-career lawyers regarding economic issues, despite the widely recognized value of training in economic and business methods (Coates et al, 2015; Hassid *et al*, 2024; LAPET, 2024). However, despite the views among legal scholars and higher education providers that the scope and content of interdisciplinary education for lawyers in economics and other related subjects should be expanded (Hunter, 2022; Weinstein, 1999), incorporating such training into legal education presents significant pedagogical challenges.

This study seeks to offer valuable insights to law students, legal professionals, and higher education institutions on the importance of integrating economics and legal studies, particularly in the areas of economics and business methods that lawyers find most useful in practice. Strengthening this interdisciplinary approach would enhance the professional skills and career prospects of both experienced and early-career lawyers, ultimately benefiting society.

Specifically, we examine the perceived usefulness of economic and business knowledge among legal professionals in Greece, both in terms of the legal fields where such knowledge is most applicable and the specific areas of economics and business that contribute to their professional practice. Our focus is on lawyers working in private and public organizations or practicing independently in various areas of private law - who represent most legal professionals in Greece. These lawyers face great challenges in accessing the educational resources necessary for professional advancement. While previous research has explored this issue in the context of lawyers employed at large law firms (Coates et al., 2015), our study offers new insights by assessing the perceived

usefulness of economic knowledge among a broader range of legal professionals. Additionally, we analyze how prior education, professional experience, and legal specialization influence lawyers' perceptions of economic knowledge's relevance to their field.

The main objectives of this study are twofold: first, to provide law students and legal practitioners with information on the legal fields where economic knowledge is most beneficial and the specific types of economic expertise required, thereby guiding them toward further relevant education. Second, to inform educational institutions and law schools about the practical value of economic knowledge in legal practice. This insight can help institutions design continuing education programs for legal professionals and integrate relevant economic subjects into undergraduate law curricula in a way that aligns with practical legal experience.

This paper presents novel insights into the perceived value of economic and business knowledge among Greek legal professionals, addressing a gap in interdisciplinary legal education research. Unlike previous studies that focus primarily on large law firms, this study broadens the scope by examining a diverse range of legal practitioners, including self-employed lawyers who constitute most lawyers in Greece. Using a rank-ordered logit model, the paper offers a systematic analysis of how legal specialization, professional roles, and educational background shape the demand for economic expertise. Additionally, it highlights the underrepresentation of economics in Greek legal education and provides empirical evidence supporting curriculum reform to better integrate applied economics and business methods into legal training. By doing so, the study not only informs legal academia and policymakers but also provides practical guidance for law students and practitioners seeking to enhance their professional competencies in an increasingly complex legal landscape.

The paper is structured as follows: The second section outlines the broader context of legal education and the structure of the legal services industry in Greece, along with details on the research design and participant characteristics. The third section describes the statistical methodology, and the fourth section presents and discusses the results. The study concludes with the fifth section, where a comprehensive summary of the findings is provided, along with a discussion of their broader implications.

2. Context and data

This section presents elements of the survey design and descriptive statistics of the participants in the survey questionnaire. However, before that, we briefly outline the framework of formal legal education and the organization of the legal services industry in Greece. This context helps identify key factors related to participating lawyers' prior education in economics and business, the level of specialization they acquire, the opportunities, obstacles, and challenges they may encounter in expanding their knowledge, as well as providing information to facilitate comparisons to legal education systems in other countries.

2.1 Legal education and structure of the legal services industry in Greece

In Greece, the legal system follows the continental civil law tradition, which also impacts the country's legal education system. As in other countries in Europe, legal education in Greece has been offered through an undergraduate model, although law degree requirements vary somewhat among countries (Martinez, 2015). Undergraduate legal education is offered exclusively at three universities, while a wide range of postgraduate programs provide specializations in various areas of law, including some

interdisciplinary fields such as law and economics² (Stamatoudi, 2004; Stamatoudi, 1997). At the undergraduate level, apart from one or two courses (compulsory or elective) on political economy and law and economics, no other courses in economics or business studies are included in the curriculum -except for a course in management science at one Law faculty. As a result, interdisciplinary approaches, particularly those related to economics, receive minimal emphasis. Furthermore, although legal studies are not entirely disconnected from practice, they are predominantly theoretical and academic. The primary focus is on understanding and interpreting the law rather than preparing students for the job market, as practical legal skills are expected to be developed through professional experience (Stamatoudi, 1997).

Regardless of whether they have pursued postgraduate studies to gain specialization in a particular area of law, most law school graduates pursue careers in legal practice as lawyers, notaries, judges, or prosecutors (Kandyliis, 2016). Those aspiring to become judges or prosecutors must complete an additional year of specialized training, while the license to practice the notary profession requires successful completion of special exams. Graduates who wish to practice law typically apply for a professional license through the Bar Associations, which are the sole bodies responsible for providing professional legal training. This training is conducted through an 18-month traineeship, during which trainee lawyers assist experienced lawyers who oversee their practical training. The traineeship also involves attending court proceedings and participating in lectures and seminars organized by the Bar Associations. Upon completing the traineeship, candidates must pass examinations in civil law and civil procedure, criminal law and criminal procedure, commercial law,

² For instance, the educational program “Master’s in Law and Economics” at the University of Piraeus (<https://mle.unipi.gr/>).

public law and administrative procedure as well as lawyers' code and code of conduct. Successful candidates are then granted a license to practice law. However, neither law schools nor the Bar Associations provide formal legal specialization. Instead, specialization is typically acquired through experience in a particular field and personal research, with most lawyers initially handling a broad range of cases before gradually developing expertise in specific legal areas.

The legal services sector in Greece is highly fragmented and significantly more asymmetrical than the European Union (EU) average. In 2023, Greece had 19 medium-sized law firms (0.05% of the total, compared to 0.57% in the EU) employing between 50 and 249 people, with an average of 105 employees per law firm. Notably, there were no large law firms with more than 250 employees, whereas, in the EU, such firms accounted for 0.13% of the sector (see Eurostat Enterprise statistics by size class and NACE Rev. 2 activity). Despite their small number, medium-sized legal services firms accounted for 12% of the sector's total turnover. Most law firms in Greece are micro-enterprises, operating as sole proprietorships or self-employed practices. Out of a total of 38,884 legal services firms employing 48,082 people, 91% (35,394 firms) were self-employed lawyers. Additionally, 3,392 firms had between 2 and 9 employees, 52 firms employed 10 to 19 people, and 27 firms had a workforce ranging from 20 to 49 employees.

In this highly fragmented landscape, where medium and large law firms are scarce, achieving a high level of specialization in legal services is more challenging. Consequently, lawyers participating in the survey are more likely to face differing priorities based on their specialization and greater difficulties in accessing the necessary training and resources (financial, time-related, etc.) required for handling complex cases, including knowledge of economics and business methods. This challenge is

particularly pronounced when compared to lawyers working in large law firms that provide structured training and specialization programs for their employees.

2.2 Survey design and descriptive statistics

Our analysis uses data collected from a survey questionnaire targeting lawyers affiliated with the Piraeus Bar Association (PBA), graduates of the Law and Economics postgraduate program at the University of Piraeus, and lawyers employed by the Hellenic Competition Commission. The survey was conducted from December 2023 to March 2024, including a pilot phase in collaboration with the PBA (see also LAPET, 2024). Regarding the approach used for the design and implementation of the survey, the responses are based on the respondents' subjective perceptions of specific questions. In this respect, the research approach differs from alternative approaches that aim to test actual knowledge by incorporating specially designed control questions or validation checks. These alternative methods attempt to derive an "objective" response through the analysis of how participants respond to such checks. In contrast, this study prioritizes capturing the personal evaluations and professional judgments formed by the respondents through their own experiences.

There were 310 responses by lawyers in the survey's questionnaire.³ Data includes demographic (gender, age), educational (e.g., possession of advanced degrees, area of postgraduate studies), and professional (e.g., roles as business legal advisors or self-employed lawyers) characteristics of the respondents (see Table A1 in the Appendix). Most survey participants (60.65%) were women, reflecting the overall

³ The survey's total responses were 353, including respondents employed by law firms without being lawyers (paralegals). In our analysis we only use the responses from lawyers (approximately 88% of the total sample) in order to deal with possible bias and measurement error in our regression analysis.

gender composition of the legal profession in Greece.⁴ Lawyers aged 35 or younger made up 45.5% of the sample, while 14.52% were over the age of 56. A significant proportion (80.61%) held postgraduate degrees in addition to their law degree, with 13.23% specializing in economics or business administration. Regarding professional roles, 29.68% had worked as legal advisors for businesses, while 46.45% practiced law independently (self-employed lawyers), with the remainder employed in various other positions (in law firms, governmental agencies, etc.).

Participants were also asked to rank the following in order of importance: (a) their fields of expertise within private law (selecting up to five out of twelve prespecified fields, ranked as 1-to-5, with 1 indicating the most important and 5 the least), (b) the fields within private law in which they find economics and business methods most useful (selecting up to five out of thirteen prespecified fields, ranked as 1-to-5, where 1 reflects the field in which economics and business methods are most useful and 5 the least) and (c) knowledge in areas of economics and business methods they find most useful in their work based on their experience (selecting up to five out of eight prespecified areas, ranked as 1-to-5, with 1 being the most useful and 5 the least useful).⁵ Table A2 in the Appendix lists the specific fields of law and areas of economic and business methods knowledge included in the questionnaire.

As regards the specialization of the surveyed lawyers, the most frequently cited primary specializations are commercial and civil law, collectively accounting for nearly 58% of the reported main specializations. This is understandable given the significance

⁴ According to the Population Census of Greece, the participation of women in the total number of lawyers in Greece reached 58% in 2011 (Kandyliis, 2016).

⁵ To facilitate comparisons, both in questions (b) and (c) we have also included “*Law Office Organization*” as a ranked item, even though it is not primarily a field within private law, economics or business studies. Moreover, it is a subject in which the necessary knowledge is not acquired through legal studies but primarily through the traineeship required for obtaining a license to practice law or other professional training.

of these legal fields in obtaining a license to practice, which also influences a lawyer's ability to handle such cases, particularly in the early stages of their career. However, it may also reflect the types of cases lawyers typically handle, which might not require deep specialization in specific areas of Commercial or Civil law. Following these, individual branches of Commercial and Civil law, such as Insurance Law (9.35%) and Property Law (7.10%), rank as the next most common top specializations. Other areas of law have lower representation, with Intellectual Property Law and Bankruptcy Law occupying the lowest positions in the ranking of primary specializations of the survey participants.

A lawyer's main specialization is a key factor in shaping their perception of the relevance of economic and business methods in legal practice. However, as implied by the discussion on legal education and the structure of the legal services sector in Greece, lawyers often handle cases across multiple fields. As a result, overall specialization trends may differ from those based solely on a lawyer's self-reported primary specialization, a distinction that will be further explored below.

3. Methodology and Research Questions

Given the survey design, which took into account the characteristics of lawyers in Greece -particularly the predominance of self-employed lawyers and the handling of cases across multiple areas of law- the statistical estimates were obtained using the rank-ordered logit model, which was first applied in economics by Beggs et al. (1981) further developed by Hausman and Ruud (1987) and generalized by Allison and Christakis (1994) to accommodate ties in the rankings.⁶ The rank-ordered logit model is employed to analyze and estimate preferences or perceptions when survey

⁶ The model is also known as the exploded logit model, which was independently developed by marketing researchers (Punj and Staelin, 1978; Chapman and Staelin, 1982).

participants are asked to rank a set of alternative items. The model utilizes the entire ranking information provided by respondents, giving insight not only into the top choice but also into how each item compares with all others and thus providing more efficient estimates of their preferences (Fok et al., 2012). In a rank-ordered logit model, the probability of observing a specific ranking is determined by an underlying random utility model, which assumes each item has an associated latent utility. Respondents rank items based on perceived utility; however, since this utility cannot be directly observed, the model assumes that items with higher utility are ranked higher than those with lower utility.

Specifically, we assume each respondent ranks J items (e.g., areas of economic knowledge), with R_{ij} representing the ranking given by respondent i to item j . R_{ij} can take integer values from 1 to J , where 1 indicates the highest rank and J the lowest. According to the random utility model, respondent i derives utility from each item j , consisting of a systematic part μ_{ij} and a random part ε_{ij} :

$$U_{ij} = \mu_{ij} + \varepsilon_{ij} \tag{1}$$

If $U_{ij} > U_{ik}$ the respondent assigns greater utility to item j than to k . The random component ε_{ij} is assumed to be independent and identically distributed following an extreme value distribution with probability density function $f(\varepsilon) = \exp\{\varepsilon - \exp(\varepsilon)\}$. In this case, the probability that item j is ranked higher than k is given by $\exp\{\mu_{ij} - \mu_{ik}\}$.

The systematic part μ_{ij} can be expressed as a function of explanatory variables, leading to the equation:

$$U_{ij} = \beta_j x_i + \varepsilon_{ij} \tag{2}$$

where x is a vector of variables describing respondents (e.g., demographic or professional characteristics) that do not vary across items, and β is a vector of coefficients to be estimated. These coefficients vary between items and one of the β_j vectors must be set to 0 to achieve identification (reference or baseline item).

The model assumes the independence of irrelevant alternatives (IIA) which suggests that the relative preference between any two items remains consistent across all other characteristics of the choice set (Allison and Christakis, 1994). The IIA assumption primarily reflects the independence of the ε_{ij} terms across alternative items, though it also relies partly on the assumption of an extreme value distribution for these terms (Allison and Christakis, 1994). However, less-preferred items might be chosen more randomly compared to most preferred ones leading to biased parameter estimates and several procedures have been proposed to address this issue (Hausman and Ruud, 1987; Koop and Poirier, 1994, Fok et al., 2012). We have minimized the potential adverse effects of such randomness by instructing the respondents to select and rank only the top items, as suggested by Chapman and Staelin (1982), and by also limiting the number of items to rank. Furthermore, the survey population consists of highly educated individuals, which suggests that the random selection of least attractive items may be limited.

For each respondent, the random utility model implies the following probability

$$\text{function } L_i = \prod_{j=1}^J \left[\frac{\exp \{\mu_{ij}\}}{\sum_{k=1}^J \delta_{ijk} \exp \{\mu_{ik}\}} \right] \quad (3)$$

where $\delta_{ijk} = 1$ if $R_{ik} \geq R_{ij}$, and 0 otherwise. The model estimates are based on a maximum likelihood procedure and are obtained as maximum partial likelihood estimates of an appropriately specified Cox regression model (Allison and Christakis, 1994).

For a sample of n respondents Eq. (3) implies a log-likelihood of

$$\log L = \sum_{i=1}^n \sum_{j=1}^{J_i} \mu_{ij} - \sum_{i=1}^n \sum_{j=1}^{J_i} \log \left[\sum_{k=1}^{J_i} \delta_{ijk} \exp(\mu_{ik}) \right] \quad (4)$$

By substituting Eq. (2) in Eq. (4) we can then maximize with respect to β_j coefficient vector. The data are stratified by respondent to calculate likelihoods within respondents and then multiplied across respondents. Our dataset contains ties (the same rank is assigned to items that are not chosen) that are handled using the method proposed by Efron (1977).

The specific research questions addressed in this study, within the context of the statistical framework outlined above, are as follows. First, we examine whether there are systematic differences in the areas of legal specialization among legal professionals. Specifically, we explore whether lawyers tend to concentrate their practice in certain fields of law more than others, or if specialization is more evenly distributed.

Second, we investigate whether there are consistent patterns in how legal professionals perceive the need to apply and utilize economic knowledge across different areas of law. We also assess whether lawyers consider economic knowledge to be more relevant in some legal fields than in others and whether this perceived need varies according to each lawyer's declared primary area of specialization.

Third, we explore which characteristics of legal professionals influence their perceptions regarding the usefulness of the various types of economic knowledge examined in this study. Specifically, we examine the following:

- Whether there are gender-based differences in the types of economic knowledge perceived as useful, either overall or within areas of law.

- How age (as a proxy for professional experience), legal specialization, and advanced education impact the types of economic knowledge lawyers consider valuable.
- The extent to which professional background –such as prior experience as a business legal advisor or as a self-employed practitioner– influences perceptions of useful economic knowledge and finally,
- The perceived usefulness of different types of economic and business knowledge varies depending on a lawyer’s main declared area of legal specialization.

4. Results and Discussion

3.1 Areas of specialization within private law

Table 1 presents the statistical estimates of the β_j coefficients for the areas of specialization of respondents within private law, considering the full set of ranked choices provided by all respondents. This approach accounts for the various primary and secondary fields of private law in which they specialize. The LR chi-square statistic for the model suggests that respondents’ areas of specialization within private law differ. Compared to rankings based solely on primary specialization, some differences emerge. While Commercial Law and Civil Law remain the top two areas of specialization among survey participants, Property Law rises to third place, while Insurance Law drops to fourth. The remaining specializations appear less frequently and are ranked lower. Bankruptcy Law remains in last place; however, Intellectual Property Law, despite not being a primary specialization for most participants, climbs to seventh place (from second to last) as it serves as a secondary specialization for many

respondents. Conversely, Maritime Law, despite being the fifth most common area of primary specialization, drops to the second-to-last position due to the lower number of participants who identified it as a secondary area of specialization.

Table 1: Ranking of lawyers' expertise within fields of private law

<i>Rank</i>	Legal field	Coefficient	Exponent
1	Commercial Law	1.27*	3.55
2	Civil Law	1.11*	3.04
3	Property Law	0.45*	1.57
4	Insurance Law	0.00	1.00
5	Family Law	-0.03*	0.97
6	Consumer Protection Law	-0.05*	0.95
7	Intellectual Property Law	-0.11*	0.90
8	Labour Law	-0.37***	0.69
9	Public Procurement Law	-0.61*	0.54
10	Criminal Law	-0.65*	0.52
11	Maritime Law	-1.24*	0.29
12	Bankruptcy Law	-1.29*	0.28
	Obs. (respondents-legal fields combinations)	3,720	
	Number of respondents	310	
	LR $\chi^2_{(11)}$	837.43	
	<i>p-value</i>	0.000	

Note: All parameter estimates are in contrast with the reference category (Insurance Law). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. Exponents of the numerical values of coefficients indicate the odds of preferring an item over the reference item. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the fields of private law).

3.2 Perceptions on the need for economics and business methods knowledge in different legal fields

Table 2 presents the estimates for the β_j parameters, their statistical significance, and their exponential values, which indicate the legal fields where survey participants perceive a need for economic and business methods knowledge. The estimates and their statistical significance are compared against the reference category, “Law Office Organization”. The model's LR chi-square statistic suggests that the perceived need for economic and business knowledge varies across different legal fields. On average, lawyers consider this need to be highest in Commercial Law (coefficient = 1.43; p-value = 0.000), followed by Civil and Insurance law. The exponential form of the

estimated coefficients represents the likelihood of requiring economic and business methods knowledge compared to the reference category. For instance, in Commercial Law it is 4.2 times more likely that there is a need to use expertise in economics and business methods than in “Law Office Organization”, while in Civil Law it is 1.64 times more likely (coefficient = 0.49; *p*-value = 0.000).

Table 2: Ranking of lawyers’ perceptions on the usefulness of knowledge in economics and business methods within fields of private law and practice

<i>Rank</i>	Legal field	Coefficient	Exponent
1	Commercial Law	1.43*	4.20
2	Civil Law	0.49*	1.64
3	Insurance Law	0.06	1.07
4	Law Office Organization	0.00	1.00
5	Property Law	-0.40*	0.67
6	Consumer Protection Law	-0.45*	0.64
7	Family Law	-0.48*	0.62
8	Bankruptcy Law	-0.56*	0.57
9	Intellectual Property Law	-0.78*	0.46
10	Labour Law	-0.84*	0.43
11	Public Procurement Law	-1.03*	0.36
12	Maritime Law	-1.79*	0.17
13	Criminal Law	-1.87*	0.15
	Obs. (respondents-legal fields combinations)	4,030	
	Number of respondents	310	
	LR $\chi^2_{(12)}$	1,004.99	
	<i>p</i> -value	0.000	

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. Exponents of the numerical values of coefficients indicate the odds of preferring an item over the reference item. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the fields of private law).

Notably, “Law Office Organization” ranks fourth, reflecting the necessity for lawyers -most of whom work as freelancers (solo practitioners)- to apply economics and business methods in managing their practice. This highlights the importance of relevant training both during legal studies and the traineeship period required for obtaining a license to practice law. Property Law, Consumer Protection Law, and Family Law rank lower, while Bankruptcy Law, despite having fewer specialists, is positioned higher because of the relatively large number of respondents who identified

it as a secondary field of specialization. Criminal and Maritime Law are at the bottom of the ranking, due to the lower number of participants specializing in these fields.

To assess the extent to which the field of legal expertise influences survey participants' perceptions of the usefulness of economic and business methods knowledge in their professional careers and practice, we further examined the rankings of legal fields where such knowledge is deemed most valuable, based now on participants' stated primary field of legal specialization. The results of these estimates are presented in Table A3a in the appendix, while Table A3b provides the relative rankings for each legal field examined.

A different pattern emerges from this analysis. First, as indicated by the LR chi-square statistic, the perceived usefulness of economic and business methods knowledge varies across legal fields, consistent with the findings for the entire sample. Additionally, the statistical significance of the Wald chi-square statistic suggests that participants' perceptions of the relevance of economic and business knowledge are influenced by their legal specialization.

More specifically, the results show a consensus –regardless of primary specialization– that Commercial Law is the legal field where economic and business methods are most useful. The only exception is among those specializing in Intellectual Property Law, who rank Commercial Law second after Civil Law. While the coefficient for Commercial Law is statistically significant in most cases (relative to the reference category), the absolute values of the coefficients differ across specializations, reflecting variations in the perceived intensity of the need for economic and business knowledge.

Perceptions of the need for economic and business methods knowledge in other legal fields are more variable. For instance, Civil Law, which ranks second overall in

terms of perceived necessity for such knowledge, generally occupies second or third place among most specializations. However, some specializations rank it significantly lower -for example, those specializing in Bankruptcy Law place it in 11th position, while those specializing in Consumer Protection Law rank it sixth. Additionally, the coefficient for Civil Law is statistically significant (relative to the reference category) only among those specializing in Commercial and Civil Law.

A key observation is that, in contrast to the overall rankings for the full sample, participants tend to rank the need for economic and business methods knowledge higher in the legal fields they specialize in, although it must be noted that these rankings are also influenced by their secondary specializations. For instance, Bankruptcy Law specialists rank Bankruptcy Law as the second most relevant field for economic and business methods knowledge, whereas it ranks eighth in the overall sample. Similarly, Maritime Law specialists rank their field second, despite it being in 12th place in the overall ranking. Across all rankings based on primary specialization, the perceived need for economic and business methods knowledge is consistently estimated to be higher compared to the ranking for the entire sample.

Thus, the findings for the entire sample reflect broader perceptions of the necessity of economic and business methods knowledge across legal fields. However, this need is shaped by the distribution of specializations and the frequency of legal cases in which lawyers are involved. As a result, even legal fields that rank lower in the overall analysis may still present a high demand for economic and business methods expertise in practice.

3.3 Perceptions of the usefulness of knowledge in different economics and business methods

Table 3 presents the estimated parameters β_j , their statistical significance and exponentiated values, indicating the usefulness lawyers assign to different economics and business methods. Estimates are all in contrast with the reference category "Law Office Organization". The LR chi-square statistic for the model suggests that respondents' views on the usefulness of knowledge across areas differ. On average, lawyers rate knowledge in "Economics for Business", "The Functioning of Markets" and "Economics of Competition / Antitrust" as the most useful. For instance, "Economics for Business" shows 2.43 (coefficient = 0.89; p -value = 0.000) times higher perceived usefulness than "Law Office Organization". In contrast, fields like "Finance and Accounting", "Tax and Insurance", and "Business Administration" are considered equally or less useful than "Law Office Organization", with "Macroeconomics" rated as the least useful. This last finding is in alignment with Whaples et al. (1998) and can be attributed to the fact that the legal profession focuses on skills like legal research, reasoning, critical analysis, and communication. "Macroeconomics", which focuses on changes in aggregate economic output, inflation, unemployment, interest and foreign exchange rates generally is not relevant to these tasks. Moreover, legal cases typically deal with micro-level issues (e.g., specific disputes, transactions, or regulations), affecting individuals, businesses, and/or the government. The significance of these findings concerning the need to enhance lawyers' education in economic matters is underscored when compared with studies revealing substantial gaps between the perceived usefulness of economic knowledge and lawyers' actual competence in specific areas of economics (Hassid *et al*, 2024).

Table 3: Lawyers’ perceptions on the usefulness of knowledge in areas of economics and business methods

Area of economics and business methods	Rank	Coef.	Exp.
Economics for Business	1	0.89*	2.43
The Functioning of Markets	2	0.62*	1.86
Economics of Competition / Antitrust	3	0.55*	1.73
Law Office Organization	4	0.00	1.00
Finance and Accounting	5	-0.09	0.91
Taxation and Insurance	6	-0.41*	0.67
Business Administration	7	-0.42*	0.66
Macroeconomics	8	-1.47*	0.23
Obs. (respondents-areas combinations)		2,480	
Number of respondents		310	
LR $\chi^2_{(7)}$		594.56	
<i>p-value</i>		0.000	

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. Exponents (Exp.) of the numerical values of coefficients indicate the odds of preferring an item over the reference item. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the areas of economics and business methods).

Furthermore, although there are some differences in the ranking, the perceived usefulness of knowledge in economics and business methods does not vary significantly by gender, as shown by the Wald chi-square statistic in the estimates presented in Table A4 and Figure 3 in the Appendix. In contrast, a statistically significant variation is observed across age groups, as indicated by the estimates and the Wald chi-square statistic presented in Table A5 and Figure 4 in the Appendix. For instance, participants aged 56 years old and over, who also have more years of experience in legal practice, tend to perceive greater utility in “Economics for Business” and “The Functioning of Markets” but slightly lower utility in “Economics of Competition / Antitrust” compared to younger participants (those aged 35 and under) and the reference category. Similarly, participants aged 36-to-45 and those over-56 are more likely to recognize the usefulness of “Finance and Accounting” compared to the reference category. Across all age groups, “Macroeconomics” consistently ranks last in perceived usefulness. It must be noted however that these differences, beyond being influenced by the years of

experience, may also be linked to the varying distribution of specializations across different age groups.

3.4 Impact of lawyers' educational and professional background and expertise

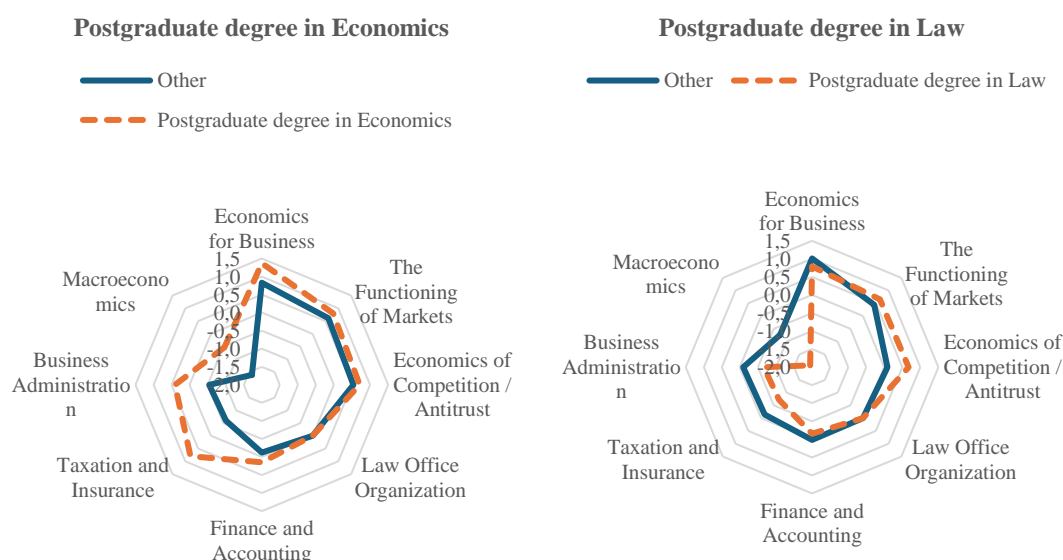
Perceived usefulness of knowledge in economics and business methods shows in most cases significant variation based on the educational and professional backgrounds of the lawyers. The estimates in Table 4 (also presented in Figure 1) suggest that holding a postgraduate degree in Economics is associated with higher perceived usefulness in all subjects especially in “Economics for Business”, “Business Administration” and “Macroeconomics”, with these differences being statistically significant. On the other hand, holding a postgraduate degree in Law is associated with a positive significant difference in perceived usefulness only in “Economics of Competition / Antitrust” and “The Functioning of Markets” with the other areas of economics and business methods showing less intensity in terms of their usefulness compared to participants who did not hold a postgraduate degree in Law. These results highlight the impact of advanced economics education in shaping perceptions of the usefulness of economic and business methods knowledge.

Table 4: Effect of advanced education on lawyers’ perceptions about the usefulness of knowledge in economics and business methods

Overall Rank	Area	Postgraduate degree in Economics			Postgraduate degree in Law		
		No (=0) Coef.	Yes (=1) Coef.	Dif.	No (=0) Coef.	Yes (=1) ^a Coef.	Dif.
1	Economics for Business	0.83*	1.37*	0.54***	1.01*	0.79*	-0.22
2	The Functioning of Markets	0.61*	0.80*	0.20	0.44**	0.66*	0.22
3	Economics of Competition / Antitrust	0.54*	0.71**	0.17	0.09	0.68*	0.59**
4	Law Office Organization	0.00	0.00	0.00	0.00	0.00	0.00
5	Finance and Accounting	-0.12	0.15	0.27	0.02	-0.16	-0.17
6	Taxation and Insurance	-0.59*	0.80*	1.40	-0.14	-0.71*	-0.58**
7	Business Administration	-0.54*	0.41	0.95*	-0.09	-0.66*	-0.57**
8	Macroeconomics	-1.61*	-0.54	1.08*	-0.74*	-1.92*	-1.18*
	Obs. (respondents-areas combinations)	2,480			2,152		
	Number of respondents	310			269		
	LR $\chi^2_{(15)}$	629.76			182.29		
	<i>p-value</i>	0.000			0.000		
	Wald $\chi^2_{(7)}$	36.91			42.01		
	<i>p-value</i>	0.000			0.000		

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the areas of economics and business methods). The Wald chi-square statistic tests the hypothesis that there no differences between groups. ^a Respondents with postgraduate degrees in economics are excluded.

Figure 1: Effect of advanced education on lawyers’ perceptions about the usefulness of knowledge in economics and business methods



Note: The figure depicts the values of the coefficients in Table 4.

It is noteworthy that, according to the estimates presented in Table 5 and Figure 2, professional experience as a business legal advisor does not, overall, result in a

statistically significant difference in the evaluation of the usefulness of various economic and business methods fields in legal practice, as indicated by the Wald chi-square statistic. However, as expected, a statistically significant difference is observed in “Economics for Business”, along with a positive -though not statistically significant- difference in the areas of “The Functioning of Markets” and “Economics of Competition / Antitrust”, “Finance and Accounting” and “Business Administration”.

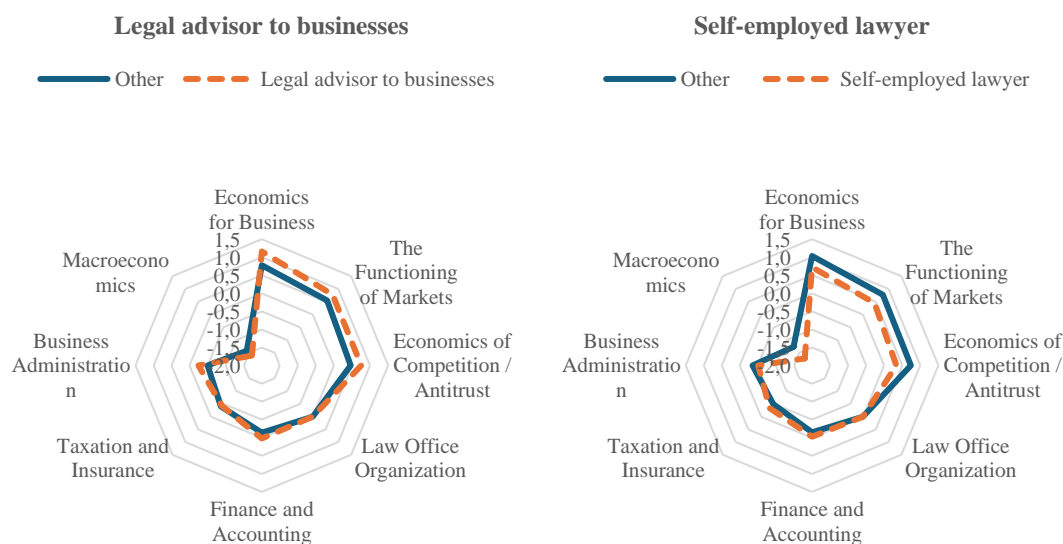
Conversely, solo practice by self-employed lawyers appears to reduce the perceived usefulness of economic knowledge in key areas of economics and business methods. While the overall ranking of importance remains unchanged compared to non-self-employed lawyers, negative and statistically significant differences emerge in highly ranked fields such as “Economics for Business”, “The Functioning of Markets” and “Economics of Competition / Antitrust”. At the same time, positive differences are observed in areas such as “Finance and Accounting” and “Taxation and Insurance”. These results may be attributed to the broader scope of activity and the varying degrees of specialization of solo lawyers in specific legal fields, which influence their assessments.

Table 5: Effect of professional role on lawyers' perceptions about the usefulness of knowledge in economics and business methods

Overall Rank	Areas	Legal Advisor in Businesses			Self-employed (Solo) Lawyer		
		No (=0) Coef.	Yes (=1) Coef.	Dif.	No (=0) Coef.	Yes (=1) Coef.	Dif.
1	Economics for Business	0.78*	1.16*	0.38***	1.04*	0.72*	-0.31***
2	The Functioning of Markets	0.55*	0.77*	0.22	0.77*	0.45*	-0.32***
3	Economics of Competition / Antitrust	0.46*	0.76*	0.29	0.74*	0.34**	-0.40**
4	Law Office Organization	0.00	0.00	0.00	0.00	0.00	0.00
5	Finance and Accounting	-0.14	0.02	0.16	-0.15	-0.03	0.12
6	Taxation and Insurance	-0.40*	-0.43**	-0.03	-0.48	-0.33**	0.15
7	Business Administration	-0.50*	-0.24	0.25	-0.35**	-0.51*	-0.16
8	Macroeconomics	-1.42*	-1.61*	-0.19	-1.27*	-1.72*	-0.45
	Obs. (respondents-areas combinations)	2,480			2,480		
	Number of respondents	310			310		
	LR $\chi^2_{(15)}$	602.91			612.04		
	<i>p-value</i>	0.000			0.000		
	Wald $\chi^2_{(7)}$	7.70			16.91		
	<i>p-value</i>	0.360			0.018		

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the areas of economics and business methods). The Wald chi-square statistic tests the hypothesis that there no differences between groups.

Figure 2: Effect of professional role on lawyers' perceptions about the usefulness of knowledge in economics and business methods



Note: The figure depicts the values of the coefficients in Table 5.

Thus, the legal specialization of law professionals may influence their assessment of the usefulness of economic and business methods knowledge in their

professional practice. Therefore, we examine below the rankings of the most useful areas of economics and business methods based on the primary specialization stated by the survey's respondents. The results of these assessments are presented in Table 6, while Table A6 in the Appendix provides the corresponding rankings for each of the legal specialization fields examined.

The overall findings from these estimates indicate that lawyers' primary area of specialization significantly influences their perception of the usefulness of specific areas of economics and business methods knowledge, although secondary specializations may also play a role. "Economics for Business" consistently ranks first for most legal specializations, though some, such as those specializing in Bankruptcy and Family Law, view its usefulness as lower. Similarly, "The Functioning of Markets" ranks between first and third place across all specializations, except for criminal law, where it falls to sixth place. "Economics of Competition / Antitrust" is considered the most useful area by those specializing in commercial law, while in other specializations, it ranks between second and seventh place (lowest in Maritime Law). "Law Office Organization" generally falls between fourth and sixth place in perceived usefulness across different specializations. "Finance and Accounting" is regarded as the most useful area for those specializing in Bankruptcy Law, while in other specializations, their ranking ranges from fourth to seventh place. "Taxation and Insurance" is particularly valued by specialists in Maritime, Family, and Bankruptcy Law, whereas "Business Administration" holds a high ranking among those specializing in Criminal Law and Public Procurement Law. Lastly, the perception of "Macroeconomics" as the least useful field is nearly universal across all legal specializations.

Table 6: Lawyer perceptions on the usefulness of knowledge in areas of economics and business methods, by main field of legal expertise

Overall Rank	Area	Main field of legal expertise											
		Bankruptcy Law	Commercial Law	Civil Law	Consumer Protection Law	Criminal Law	Family Law	Insurance Law	Intellectual Property Law	Labour Law	Maritime Law	Property Law	Public Procurement Law
		Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
1	Economics for Business	0.00	1.07*	1.10*	0.93***	1.11**	0.22	0.55***	1.42**	0.86*	0.67	0.43	1.24**
2	The Functioning of Markets / Economics of Competition /	0.84	0.83*	0.41**	0.27	-0.04	0.91***	1.12*	0.77	0.75	0.60	0.11	0.79
3	Antitrust	0.12	1.13*	0.26	0.59	0.13	0.47	0.46	0.83	0.83***	-0.57	0.14	0.56
4	Law Office Organization	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Finance and Accounting	1.70**	-0.16	-0.05	0.22	-0.37	0.04	-0.22	-0.12	0.10	0.49	-0.46	-0.38
6	Taxation and Insurance	0.64	-0.84*	-0.17	-0.57	0.06	0.39	-1.29*	-0.40	-0.49	1.02**	-0.01	-0.16
7	Business Administration	-1.17	-0.70*	-0.33	-0.62	0.71	-0.60	-0.70**	-0.15	-0.56	-0.13	-0.40	1.02***
8	Macroeconomics	-0.94	-1.77*	-1.05*	-46.53*	-0.82	-1.18***	-1.92*	-1.82***	-1.51***	-1.40**	-1.08**	-1.95***
	Obs. (respondents-areas combinations)	2,480											
	Number of respondents	310											
	LR $\chi^2_{(94)}$	787.30											
	<i>p-value</i>	0.000											
	Wald $\chi^2_{(76)}$	187.50											
	<i>p-value</i>	0.000											

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the areas of economics and business methods). The Wald chi-square statistic tests the hypothesis that there no differences between groups.

5. Concluding remarks

In this study, we examined the value that legal professionals in Greece attribute to the knowledge of economic and business methods, both in terms of the legal fields where this knowledge is most useful and the specific areas of economic and business expertise that support their professional practice. The study is framed by a legal education system that, at least at the undergraduate level, emphasizes theoretical legal training while providing minimal exposure to economics. It is also shaped by a fragmented legal services market, where most of the lawyers are self-employed and tend to have limited specialization, as they handle cases across multiple legal fields to navigate the intense competition in the legal market. Unlike lawyers in large law firms, they also have fewer opportunities –whether due to time constraints, financial limitations, or other factors– to engage in professional training and expand their knowledge in fields such as economics, which could enhance their ability to handle legal cases.

The lawyers who participated in the survey –primarily specializing in Commercial, Civil, Property, and Insurance Law– recognize, based on their professional experience, the significance of economic knowledge in these fields. They also acknowledge the importance of economic and business methods related to law office organization. The findings indicate that specialization plays a key role in determining which legal fields lawyers perceive as most benefiting from economic and business methods knowledge, as participants tend to assign higher importance to this knowledge to the areas in which they specialize. This highlights the broader relevance of economic and business methods across various legal domains.

The primary finding from the study is that legal professionals should possess knowledge mainly in Economics for Business, The Functioning of Markets, and

Economics of Competition / Antitrust. These areas of economic expertise, along with knowledge of Law Office Organization, are deemed the most useful for lawyers in their professional activities. Additionally, prior advanced education and professional roles significantly influence perceptions of the usefulness of economic and business methods knowledge. Lawyers with a postgraduate degree in Economics tend to recognize the value of economic knowledge more broadly across all areas, in contrast to those with a postgraduate degree in Law. Similarly, business legal advisors perceive economic knowledge –especially in Economics for Business– as highly beneficial, whereas self-employed legal practitioners tend to assign slightly lower importance to economic knowledge, likely due to the diverse nature of the cases they handle and the broader range of legal fields in which they work. The main legal specialization of lawyers was found to be a key factor in shaping their perceived usefulness across different areas of economic and business knowledge.

These findings, which reinforce those of LAPET (2024), provide valuable insights primarily for law students and early-career lawyers regarding the economic and business methods subjects they should focus on in their education and/or additional training. For legal academia, the results also offer guidance on curriculum development. Law programs should consider integrating courses in applied economics to better equip future lawyers with the necessary skills for the modern legal landscape. Further research may help identify more specific subjects of economic knowledge that are particularly valuable within the broader fields of economic and business methods examined in this study. These insights could complement legal education through the development of interdisciplinary approaches or serve as the basis for targeted professional training programs for lawyers.

This discussion should be viewed within the broader context of technological, social, and economic shifts that are dramatically reshaping the legal profession, making continuing education and curriculum reform essential (Browning, 2024; Oranburg, 2024). The need for education in economics for legal professionals suggests that law schools should actively promote lifelong learning initiatives, encouraging graduates to pursue further education in economics and business methods throughout their careers. Striking a balance in legal education between traditional legal training and practical economic knowledge will be crucial in preparing lawyers for the evolving demands of the profession.

References

- Allison, P.D. & Christakis, N.A. (1994). Logit Models for Sets of Ranked Items, *Sociol. Method.* 24, 199-228.
- Beggs, S. & Cardell S. & Hausman J. (1981). Assessing the Potential Demand for Electric Cars, *J. Econometrics* 16, 1 19.
- Browning John G. (2024). No “Robot Lawyers” Just Yet: The Role of Continuing Legal Education in Fulfilling the Duty of Technological Competence. *Journal of Legal Education*, Volume 72, Number 3 & 4.
- Chapman R. G. & Staelin, R. (1982). Exploiting Rank Ordered Choice Set Data within the Stochastic Model, *J. Market. Research* 14, 288 301.
- Coates, J. C. IV & Fried, J. M. & Spier, K.E. (2015). What Courses Should Law Students Take? Lessons from Harvard's BigLaw Survey, 64 *J. Legal Educ.* 443.
- Craft, R. K., & Baker, J. G. (2003). Do Economists Make Better Lawyers? Undergraduate Degree Field and Lawyer Earnings. *The Journal of Economic Education*, 34(3), 263–281. <https://doi.org/10.1080/00220480309595220>.
- Efron, B. (1977). The Efficiency of Cox's Likelihood Function for Censored Data. *Journal of the American Statistical Association*, Vol. 72, No. 359, pp. 557-565.
- Fok, D. & Paap, R. & Van Dijk, B. (2012). A Rank-Ordered Logit Model With Unobserved Heterogeneity In Ranking Capabilities, *Journal of Applied Econometrics*, John Wiley & Sons, Ltd., vol. 27(5), pages 831-846, August.
- Hassid, Joseph and Maniatis, George and Polemis, Michael (2024): Do Law Professionals Lack Economic Knowledge? Field Evidence from Greece. MPRA paper 122550, University Library of Munich, Germany.

Hausman J. A. & Ruud, P. A. (1987). Specifying and Testing Econometric Models for Rank-Ordered Data, *J. Econometrics* 34, 83-104.

Henderson, Bethany Rubin. (2003). Asking the Lost Question: What Is the Purpose of Law School? *Journal of Legal Education*, vol. 53, no. 1, pp. 48–79.

Hunter H. O. (2022). Education of Common Lawyers in a Twenty-First-Century Environment. *J. Legal Educ.* Volume 72, Number 1 & 2.

Kandylis, G. (2016). Social physiognomy and geography of the legal professions, in Women in the legal professions in the era of crisis. Between work and family. Ed. National Center for Social Research. (in Greek).

Kaplow, L. & Shavell, S. (2002). *Chapter 25 - Economic Analysis of Law*, Editor(s): Alan J. Auerbach, Martin Feldstein, Handbook of Public Economics, Elsevier, Volume 3, Pages 1661-1784.

Koop, G. & Poirier, D. J. (1994). Rank-Ordered Logit Models: An Empirical Analysis of Ontario Voter Preferences, *Journal of Applied Econometrics*, Vol. 9, No. 4, pp. 369-388.

Landes W. M. & Posner R. A. (1993). The Influence of Economics on Law: A Quantitative Study, *The Journal of Law and Economics*, Volume 36, Number 1, Part 2.

LAPET (2024). Knowledge and Skills Gap Survey, <https://lapet.unipi.gr/index.php/to-ergo/proionta-tou-ergou/> (In Greek).

Leo P. Martinez, Legal Education in a Modern World: Evolution at Work (2015).

Charleston L. Rev. 267.

McIntyre Frank and Simkovic Michael (2019). Value of a Law Degree by College Major. *Journal of Legal Education*, Volume 68, Number 3.

Morris, D. (1985) Why teach economics to law degree students? *The Law Teacher*, 19:2, 76-83, DOI: 10.1080/03069400.1985.9992638

Oranburg Seth C. (2024). Advanced Online Continuing Legal Education: How to Leverage Technology-Mediated Education for Lawyers' Lifelong Learning. *Journal of Legal Education*, Volume 72, Number 3 & 4.

Punj G. N. & Staelin, R. (1978). The Choice Process for Graduate Business Schools, *J. Market. Research* 15, 588 598.

Richardson Milner Margaret (2000). Changes, Choices, and Challenges for the Legal Profession (2000). *Journal of Legal Education*, Vol. 50, No. 4 (December 2000), pp. 477-480.

Scott Robert E. and Triantis George G. (2021). What Do Lawyers Contribute to Law and Economics? *Yale Journal on Regulation*, Vol. 38:707.

Stamatoudi, I. (2004). An introduction to Greek legal education. *European Journal of Legal Education* 1 (1), 64-66.

Stamatoudi, I.A. (1997). Legal Education in Greece. *Web Journal of Current Legal Issues* 3, 15.

Trebilcock M. J. (1993). Law and Economics, 16:2 *Dal LJ* 360.

Weinstein, J. (1999). Coming of Age: Recognizing the Importance of Interdisciplinary Education in Law Practice, 74 *Wash. L. Rev.*, 319.

Whaples, R., Morriss A.P., Moorhouse, J.C (1998). What Should Lawyers Know About Economics, *J. Legal Educ.*, 48: 120-124.

White, M. J. (1985). Why Would Law Students Benefit from Studying Economics?, 18 *U. MICH. J. L. REFORM* 277.

Whittam Sadie (2023). Keep it Real: The Case for Introducing Authentic Tasks in a UK Undergraduate Law Degree. *Legal Education Review*. Volume 33 Issue 1.

Winters, J. V. (2016). Is economics a good major for future lawyers? Evidence from earnings data. *The Journal of Economic Education*, 47(2), 187–191.
<https://doi.org/10.1080/00220485.2016.1146101>.

Appendix

Table A1: Respondents' characteristics

Number of respondents (n)	310
	Percentage
<i>Gender</i>	
Male (=0)	39.35
Female (=1)	60.65
<i>Age</i>	
up to 35	45.48
36 to 45	17.42
46 to 55	22.58
56+	14.52
<i>Education</i>	
Possession of advanced degree* (=1)	81.61
Postgraduate studies in economics (=1)	13.23
<i>Professional roles</i>	
Legal advisor to businesses (=1)	29.68
Self-employed (solo) lawyer (=1)	46.45
<i>Main field of legal specialization (top choice)</i>	
Bankruptcy Law	1.29
Civil Law	22.58
Commercial Law	35.16
Consumer Protection Law	3.55
Criminal Law	3.55
Family Law	3.87
Insurance Law	9.35
Intellectual Property Law	2.58
Labour Law	3.23
Maritime Law	4.84
Property Law	7.10
Public Procurement Law	2.90

*including postgraduate degrees in Economics and Business.

Table A2: Legal fields and areas of economics and business methods included in the survey

#	Legal field	#	Area of economics and business methods
1.	Bankruptcy Law	1.	Economics for Business
2.	Civil Law	2.	Business Administration
3.	Commercial Law	3.	Economics of Competition / Antitrust
4.	Consumer Protection Law	4.	Finance and Accounting
5.	Criminal Law	5.	Law Office Organization
6.	Family Law	6.	Macroeconomics
7.	Insurance Law	7.	The Functioning of Markets
8.	Intellectual Property Law	8.	Taxation and Insurance
9.	Labour Law		
10.	Maritime Law		
11.	Property Law		
12.	Public Procurement Law		

Table A3a: Lawyer perceptions on the usefulness of knowledge in economics and business methods within fields of private law and practice, by main field of legal expertise

Overall Rank	Legal fields	Main field of legal expertise											
		Bankruptcy Law	Commercial Law	Civil Law	Consumer Protection Law	Criminal Law	Family Law	Insurance Law	Intellectual Property Law	Labour Law	Maritime Law	Property Law	Public Procurement Law
		Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
1	Commercial Law	2.00***	1.82*	1.68*	0.50	2.03*	0.81	1.59*	0.19	1.22**	1.40*	0.71**	1.28**
2	Civil Law	-0.12	0.52*	0.90*	-0.37	0.67	0.70	0.02	0.57	0.40	0.68	0.34	0.16
3	Insurance Law	1.22	0.00	0.27	0.23	-0.13	0.27	0.30	-0.78	0.29	0.59	-0.65	-0.30
4	Law Office Organization	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Property Law	-0.06	-0.45**	-0.09	-46.74	0.11	-0.49	-0.39	-0.62	-0.71	0.18	-0.31	-1.13
6	Consumer Protection Law	-44.51*	-0.19	-0.49*	0.04	-0.46*	-2.12**	-0.05	-0.73	-1.23	-45.92*	-0.96**	-1.11
7	Family Law	0.00	-0.38***	-0.16	-2.42**	-0.35	-0.12	-0.31	-0.62	-1.21	-0.14	-1.54*	-1.11
8	Bankruptcy Law	1.78	-0.88*	-0.45	-0.85	0.95	-0.24	-1.47*	-1.99**	-0.01	0.28	-0.62	0.08
9	Intellectual Property Law	-44.51*	-0.57*	-0.83*	0.11	-45.92*	-1.40***	-0.83**	-0.48	-1.20	-1.22	-1.22**	-1.87***
10	Labour Law	0.82	-0.97*	-0.49***	-2.39**	0.27	-0.31	-0.93**	-46.69*	-0.41	-1.19	-1.57*	-0.66
11	Public Procurement Law	-0.06	-1.18*	-0.71**	-1.25***	0.21	-0.84	-3.13*	-1.21	-0.40	-1.18	-1.33*	-0.33
12	Maritime Law	0.05	-2.73*	-1.71	-2.45**	-45.92	-1.32	-3.14*	-46.69*	-1.90***	1.19**	-1.95*	-1.11
13	Criminal Law	0.05	-2.55*	-1.14*	-46.74*	-0.87	-46.33*	-2.43*	-1.18	-46.38*	-0.76	-1.91*	-1.90***
	Obs. (respondents-areas combinations)	4,030											
	Number of respondents	310											
	LR $\chi^2_{(144)}$	1,292.23											
	<i>p-value</i>	0.000											
	Wald $\chi^2_{(121)}$	229.14											
	<i>p-value</i>	0.000											

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the areas of economics and business methods). The Wald chi-square statistic tests the hypothesis that there no differences between groups.

Table A3b: Lawyer perceptions on the usefulness of knowledge in economics and business methods, within fields of private law and practice, by main field of legal expertise (rankings)

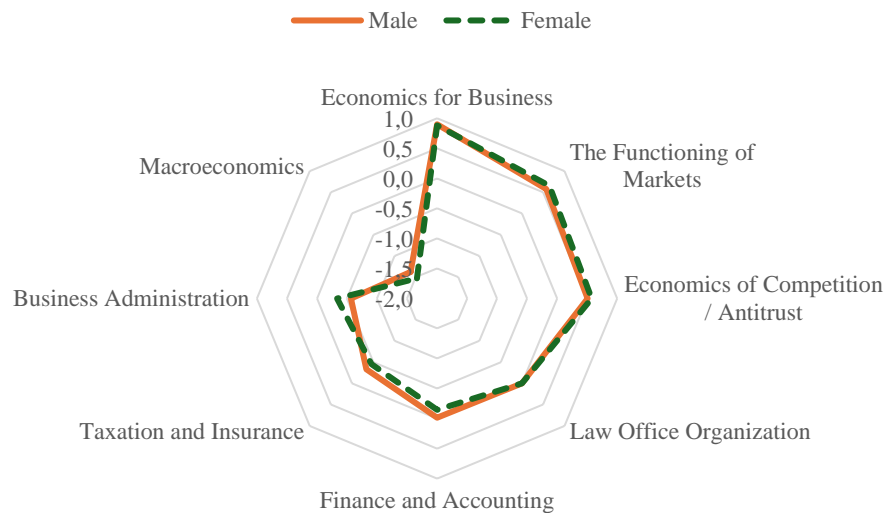
Overall Rank	Legal fields	Main field of legal expertise											
		Bankruptcy Law	Commercial Law	Civil Law	Consumer Protection Law	Criminal Law	Family Law	Insurance Law	Intellectual Property Law	Labour Law	Maritime Law	Property Law	Public Procurement Law
		Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
<i>1</i>	Commercial Law	1	1	1	1	1	1	1	2	1	1	1	1
<i>2</i>	Civil Law	11	2	2	6	3	2	3	1	2	3	2	2
<i>3</i>	Insurance Law	3	3	4	2	8	3	2	8	3	4	6	5
<i>4</i>	Law Office Organization	7	4	3	5	7	4	4	3	4	7	3	4
<i>5</i>	Property Law	10	5	7	13	6	8	7	6	8	6	4	11
<i>6</i>	Consumer Protection Law	13	8	5	4	10	12	5	7	11	13	7	10
<i>7</i>	Family Law	8	6	6	10	9	5	6	5	10	8	10	9
<i>8</i>	Bankruptcy Law	2	7	9	7	2	6	10	11	5	5	5	3
<i>9</i>	Intellectual Property Law	12	11	8	3	13	11	8	4	9	12	8	12
<i>10</i>	Labour Law	4	9	10	9	4	7	9	13	7	11	11	7
<i>11</i>	Public Procurement Law	9	10	11	8	5	9	12	10	6	10	9	6
<i>12</i>	Maritime Law	5	13	13	11	12	10	13	12	12	2	13	8
<i>13</i>	Criminal Law	6	12	12	12	11	13	11	9	13	9	12	13

Table A4: Lawyer perceptions on the usefulness of knowledge in economics and business methods, by gender

Overall Rank	Area	Male Coef.	Female Coef.	Difference
1	Economics for Business	0.90*	0.88*	-0.02
2	The Functioning of Markets	0.57*	0.65*	0.08
3	Economics of Competition / Antitrust	0.51*	0.57*	0.07
4	Law Office Organization	0.00	0.00	0.00
5	Finance and Accounting	-0.01	-0.15	-0.13
6	Taxation and Insurance	-0.33**	-0.46*	-0.12
7	Business Administration	-0.57*	-0.34**	0.23
8	Macroeconomics	-1.38*	-1.53*	-0.15
Obs. (respondents-areas combinations)		2,480		
Number of respondents		310		
LR $\chi^2_{(15)}$		598.81		
<i>p-value</i>		0.000		
Wald $\chi^2_{(7)}$		4.19		
<i>p-value</i>		0.757		

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the areas of economics and business methods). The Wald chi-square statistic tests the hypothesis that there no differences between groups.

Figure 3: Lawyer perceptions on the usefulness of knowledge in economics and business methods, by gender



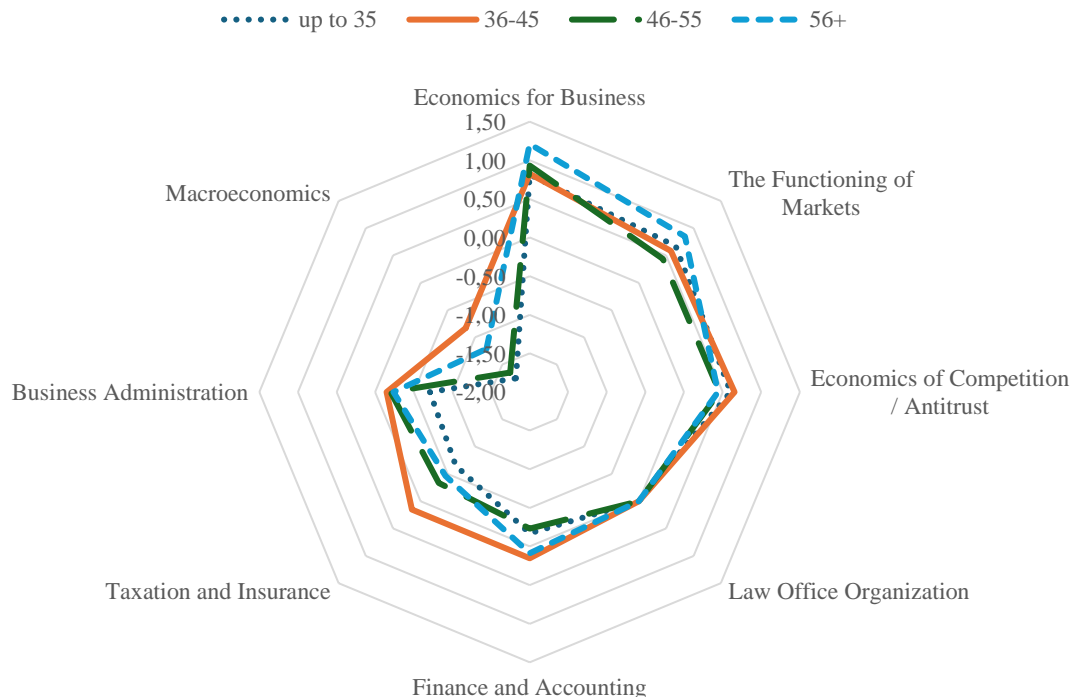
Note: The figure depicts the values of the coefficients in Table A4.

Table A5: Lawyer perceptions on the usefulness of knowledge in economics and business methods, by age group

Overall Rank	Area	Age group			
		up to 35 Coef.	36-45 Coef.	46-56 Coef.	56+ Coef.
1	Economics for Business	0.81*	0.83*	0.93*	1.21*
2	The Functioning of Markets	0.67*	0.58**	0.44**	0.85*
3	Economics of Competition / Antitrust	0.60*	0.65*	0.46**	0.44***
4	Law Office Organization	0.00	0.00	0.00	0.00
5	Finance and Accounting	-0.17	0.15	-0.23	0.09
6	Taxation and Insurance	-0.65*	0.16	-0.33	-0.46
7	Business Administration	-0.71*	-0.15	-0.20	-0.24
8	Macroeconomics	-1.75*	-0.83*	-1.65*	-1.21*
Obs. (respondents-areas combinations)		2,480			
Number of respondents		310			
LR $\chi^2_{(31)}$		630.09			
<i>p-value</i>		0.000			
Wald $\chi^2_{(21)}$		34.85			
<i>p-value</i>		0.029			

Note: All parameter estimates are in contrast with the reference category (Law Office Organization). *Indicates statistical significance at the 1% level. **Indicates statistical significance at the 5% level. ***Indicates statistical significance at the 10% level. The LR chi-square statistic tests the null hypothesis that all the parameters are zero (no differences among the areas of economics and business methods). The Wald chi-square statistic tests the hypothesis that there no differences between groups.

Figure 4: Lawyer perceptions on the usefulness of knowledge in economics and business methods, by age group



Note: The figure depicts the values of the coefficients in Table A5.

Table A6: Lawyer perceptions on the usefulness of knowledge in areas of economics and business methods, by main field of legal expertise (rankings)

Overall Rank	Area	Main field of legal expertise											
		Bankruptcy Law	Commercial Law	Civil Law	Consumer Protection Law	Criminal Law	Family Law	Insurance Law	Intellectual Property Law	Labour Law	Maritime Law	Property Law	Public Procurement Law
		Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
1	Economics for Business	5	2	1	1	1	4	2	1	1	2	1	1
2	The Functioning of Markets Economics of Competition /	2	3	2	3	6	1	1	3	3	3	3	3
3	Antitrust	4	1	3	2	3	2	3	2	2	7	2	4
4	Law Office Organization	5	4	4	5	5	6	4	4	5	5	4	5
5	Finance and Accounting	1	5	5	4	7	5	5	5	4	4	7	7
6	Taxation and Insurance	3	7	6	6	4	3	7	7	6	1	5	6
7	Business Administration	8	6	7	7	2	7	6	6	7	6	6	2
8	Macroeconomics	7	8	8	8	8	8	8	8	8	8	8	8