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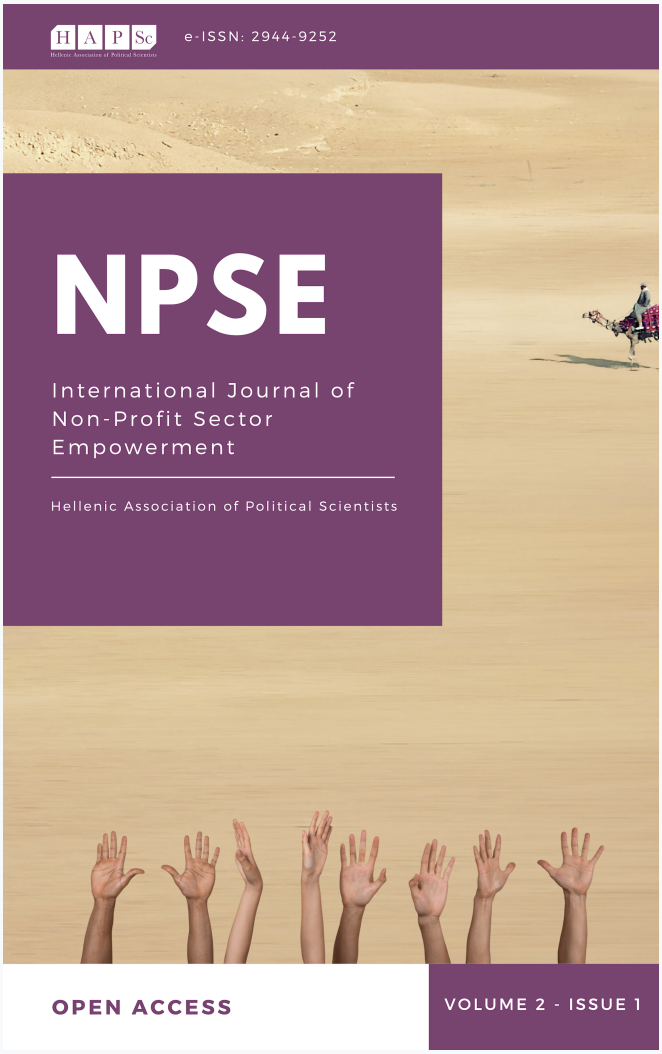

Mapping the Donations of Pharma Companies in Greece: The Case of Scientific Societies

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RESEARCH ARTICLE

Mapping the Donations of Pharma Companies in Greece: The Case of Scientific Societies

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Abstract

Pharmaceutical companies are major donors to medical-related civil society organizations worldwide, which has raised concerns about their influence on public health policy. The support provided includes financial donations, in-kind contributions and collaborations in research and awareness initiatives. However, there is a lack of transparency when it comes to these donations. While they contribute to the ability of recipient organizations to meet their operational needs and to conduct research, they also raise questions about the role of pharmaceutical companies in the formulation of public health policies. This paper aims to map the donations made by pharmaceutical companies to scientific societies in Greece, examining the nature and extent of the support provided, as well as examining the impact of these donations on the scientific community. Finally, recommendations are provided on how transparency and accountability can be strengthened. Further research is needed to understand the full extent of these donations and their impact on public health governance in Greece.

Keywords: Pharmaceutical Companies, Donations, Scientific Societies, Transparency, Accountability

Introduction

Pharmaceutical companies invest heavily in research and development of new molecules and the production of drugs for patients. Healthcare professionals, patients, and healthcare providers use end products to treat diseases, developing a strong degree of dependence on the quality and quantity of pharmaceutical products (Sapra & Dhaliwal, 2021).

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According to Vajinepalli (2019), pharmaceutical companies spend significant amounts on advertising and building relationships with doctors. Significant sums are also spent on research carried out by third parties. However, the participation of pharmaceutical companies in promotional processes can distract them from their main concern, that is the safety of patients, turning their focus on changing the doctors' prescribing behavior. Of course, the relationship between doctors, researchers and industry must not be eliminated, but made strictly regulated. At the same time, according to another study (Ball et al., 2006) patient organizations are clear about their purpose on their websites, but rarely disclose the relationships or connections they may have with the pharmaceutical industry's donors. While ads are generally absent, some patient organizations help companies by displaying logos and corporate banners. The lack of clear promotional and advertising policies harm rather than enhances the feeling of transparency. Information about donations in annual reports often differs from what is given on the SFEE database, and financial summaries rarely allow potential conflicts of interest to be assessed. As many organisations rely on donations from the pharmaceutical industry, self-regulation may not be sufficient and independent oversight bodies may need to be set up.

The pharmaceutical sector is considered a leading sector in industrial sustainability, and sustainability-related activity has increased in breadth and depth in the framework of corporate social responsibility (Schneider et al., 2010). This reflects the corporate need to satisfy public sentiment. Many of the corporate policies examined placed sustainability in the context of the supporting principles or methods of CSR reporting. The pharmaceutical sector uses sustainability as a tool to help protect corporate reputation and brand value. These efforts are the redemptive feature for companies that need positive advertising to remain competitive with their counterparts in the industry.

The CSR Activities of Greek Pharmaceutical Companies

Corporate Social Responsibility has been strengthened the last decade, and played an important role during the recent Covid-19 pandemic in Greece. Almost 900 companies and various institutions (with many pharma companies among them) provided funding to the Greek National Health System, to support the fight against the crisis (Kritas et al., 2020). Pharmaceutical companies, apart from the traditional methods of Corporate Social Responsibility, have greatly developed their extroversion, donating large amounts to structures and bodies with which they either have direct interaction or move in the wider field of health.

Some examples of corporate social responsibility initiatives that the pharmaceutical industry has launched internationally include:

1. Access to drug programs: Many pharmaceutical companies offer drug access programs that provide free or discounted medicines to people who cannot afford them, especially in low- and middle-income countries.
2. Research and development: Pharmaceutical companies invest heavily in research and development to discover new drugs and treatments, often in areas where there is a significant unmet medical need.
3. Charitable giving: Many pharmaceutical companies have established charities and initiatives that support various health-related causes, such as disease prevention, education, and research.
4. Sustainability initiatives: Several pharmaceutical companies have implemented sustainability initiatives to reduce their environmental impact, such as reducing waste and greenhouse gas emissions, as well as promoting sustainable sourcing and packaging.
5. Patient education and support: Some pharmaceutical companies provide patient education and support programs to help patients manage their health conditions, such as disease management programs, patient assistance programs, and support groups.
6. Ethical Business Practices: Pharmaceutical companies are expected to operate ethically and with integrity in all aspects of their business, including research, marketing, and sales practices. Many companies have implemented codes of conduct and compliance programs to ensure they adhere to ethical standards and comply with regulations.

Overall, the pharmaceutical industry has a significant impact on global health and has a responsibility to ensure that its products and practices are aligned with the highest ethical and social standards.

Nevertheless, over the years, various actions have been developed that can be said to have strengthened the influence of pharmaceutical companies on powerful players in the health system, and in many cases commercialization relationships may have been established with the recipients of CSR actions. In the few studies that have been conducted for some countries (UK, Sweden, Finland, Greece, etc.) it appears that there is a relationship between the products manufactured by a pharmaceutical company and the recipients of its donations (Ozieranski et al, 2019; Mulinari et al, 2020; Hemminki et al, 2010; Sidiropoulos, 2023).

Based on the categorization in the Hellenic Association of Pharmaceutical Companies' database, the bodies and institutions that are recipients of the industry's donations include Patient Organizations, Public/Government Bodies, Hospitals, Universities, NGOs, Social Pharmacies, Medical Associations and Scientific Societies.

According to EFPIA (2017), specific criteria must be met for the smooth cooperation of the pharmaceutical industry and patient organizations. Patient organizations and their representatives convey patients' views, which can constantly change as needed. Although pharmaceutical companies may approach healthcare challenges differently than patient organizations, at the same time that they are commercially or financially motivated, sharing ideas in an ethical context and without compromising the independence of organizations is a key means of ensuring that patients have a voice in treatment development. Basic principles that should be observed are: clarity of the purpose of cooperation, transparency, independence, respect.

Pharmaceutical companies also donate to hospitals in a variety of ways, including monetary donations, equipment donations, and donations of medicines or medical supplies. Often, these contributions are provided as part of a company's corporate social responsibility (CSR) or philanthropic initiatives. Donations may be earmarked for specific needs of the hospital, such as sponsoring research projects, purchasing new medical equipment, or contributing to programs for patient care and support. In addition, businesses can partner with hospitals and other healthcare institutions to help public health programs and raise awareness about certain diseases and conditions. The country's hospitals, public or private, are recipients of donations from pharmaceutical companies. The SFEE database records 1,527 donations to hospitals, with about half of them donations in kind or services, and more specifically usually donations of medical equipment and related equipment, medicines, etc. On the other hand, cash donations are mainly aimed at - beyond the purchase of machinery etc. - educational and research programmes.

Donations by pharmaceutical companies to universities are also regular, including monetary contributions, equipment donations, and contributions of drugs or medical products. Typically, these contributions are made as part of a company's corporate social responsibility (CSR) or philanthropic initiatives. Donations are intended for specific areas of research or education within the university, such as supporting research projects, contributing to the purchase of new equipment or facilities or financing scholarship programmes. The aim of collaborating with universities and other academic institutions is to support public health initiatives and raise awareness about specific diseases and health conditions. Overall, pharmaceutical company donations can support the research and education efforts of universities and academic institutions, while promoting corporate social responsibility and ethical business practices. Higher Education Institutions are among the largest recipients of donations from pharmaceutical companies in our country. 3,056 donations have been registered under SFEE between 2013 and 2021, with the main purpose of funding educational and research programmes and

scholarships. Naturally, most of the above donations go to medical schools and university clinics and hospitals. It is worth noting that there is no clear distinction in the case of university hospitals/clinics in the SFEE database, resulting in entries in both the "Hospitals" and "Universities" categories. The above categories are not examined in this paper.

NGOs are also the recipients of donations by pharmaceutical companies, in the form of financial donations, donations of medicines or medical products, but also in a special way, through volunteer time donation and transfer of know-how from their employees. These donations are usually made as part of corporate social responsibility (CSR) programs or companies' philanthropic initiatives. Donations target specific areas of need in the context of their mission NGOs, such as supporting research, advocacy or lobbying for certain applicable or applied policies, outreach programmes related to a specific disease, and general health conditions. Companies may also work with NGOs to support public health initiatives and raise awareness about specific health issues. One of the most important characteristics of NGOs, which has established them as an important pillar of the global health architecture, is their connection and closeness to the local communities they help and whose interests they promote (Gellert, 1996; McGann and Johnstone, 2006; Bagire et al., 2014). Particularly in the health sector, their ability to reach secluded areas and small communities is crucial (McGann and Johnstone, 2006; Sidiropoulos et al., 2021), especially when the local government fails to provide the necessary services (McGann and Johnstone, 2006; Smith, 2010). This role of NGOs in providing basic health services when the state is withdrawn or unable to intervene and markets fail, at relatively low cost, has made them one of the most popular channels of funding for health and care actions.

Social pharmacies typically receive drug donations from a variety of sources, including pharmaceutical companies, and may also receive financial support from government agencies and other organizations. The Greek social pharmacy system was created in response to the economic crisis that began in 2008, which led to a significant increase in the number of uninsured people who could not afford essential medicines (Sotiropoulos & Bourikos, 2014). Since then, social pharmacies have played a crucial role in providing medicines to those in need and the network of social pharmacies in Greece continues to expand. Their activity is to provide citizens belonging to these groups, medicines, parapharmaceutical products, health supplies and various social and health services, free of charge. To make it all happen, a feedback and stable system of donation and redistribution of surplus medicines is created. Basically, the beneficiaries are homeless, people with disabilities, refugees, uninsured, destitute, migrants, low pensioners, long-term unemployed, elderly, asylum seekers, stateless people, single-parent/large families.

Scientific societies make a substantial contribution to the development of international scientific and technological cooperation within international scientific associations. Scientific societies actively exchange publications and hold conferences, symposia and conferences. These companies organise scientific conferences, training seminars and workshops to help healthcare professionals keep abreast of the latest developments in their field. They also publish scientific journals and promote collaboration between researchers and clinicians in Greece and abroad. Many pharmaceutical companies in Greece support scientific medical societies through sponsorship of conferences and other educational activities. This support contributes to the promotion of scientific research and education in Greece. Continuing Medical Education is provided by the Scientific Societies through scientific events and activities. Each recognized medical/dental specialty and medical specialization as defined in No. G5a / G.Poik.64843 / 29-8-2018 (Government Gazette 4138 B') and G5a / G.Poik.64845 / 29-8-2018 (Government Gazette 3958 B') ministerial decision corresponds to one Scientific Society. In paragraph b of this decision, the task of the audit committee includes the control of any procedure related to the financial support of activities organized by Scientific Societies.

According to article 30 of the SFEE's Code of Ethics (2020), pharmaceutical companies must publish on their website every donation they make by June 30 of each year. Article 31 of the Code defines the type of publication according to which the reference period should cover one year at a time, in accordance with the established standard. It also stipulates that there must be access to the website of each Pharmaceutical Company. Next, it is noted that the above rules are governed by National Law and that the recording of donations should be archived. Subsequently, Article 32 of the Code includes the publication of donations per recipient, indicating their full details and which must be categorized.

Donations to Scientific Societies in Greece by the Pharma Industry

After Donations to scientific societies seem to be a priority for the pharmaceutical companies, as they have directed towards them donations of more than 24 million € during the period 2013 - 2019. Table 1 summarizes the annual donations received by scientific societies in that period.

As shown in Table 1, in the approximately 1,700 registrations found in SFEE's database, 58 pharmaceutical companies have been identified that have donated to scientific societies, with the average donation being €14,224. In addition, there has been a significant increase in the number and amount of donations after the first two years, with a relative stabilization from 2015 onwards. It is worth noting that 132 registrations (i.e. 7.8% of total registrations) did not indicate the date of submission of the donation.

Table 1: Total Annual Donations to the Scientific Societies by the Pharma Industry

	2013	2014	2015	2016	2017	2018	2019	No Date	Total (2013-2019)
Registrations	132	176	256	237	222	277	262	132	**1.694**
Amount	2.446.840	2.542.747	3.829.063	3.597.030	3.325.376	3.729.979	3.032.623	1.591.359	**24.095.018**
Average	18.537	14.447	14.957	15.177	14.979	13.466	11.575	12.056	**14.224**
Median	11.500	6.669	8.000	10.000	7.000	7.000	8.000	5.000	**8.000**
Standard Deviation	29.398	24.877	26.034	19.648	24.229	19.446	12.459	18.892	**21.953**
No. of Companies	19	31	38	37	42	36	36	15	**58**

The 10 pharmaceutical companies with the largest donations to scientific societies have donated almost €16 million, or 65.9% of total donations, with the remaining 48 having donated less than €10 million (Table 2). In particular, AstraZeneca, Novartis and Pharmaserve - Lilly represent about 28% of total donations, having each exceeded €2 million during the period covered by the database.

Table 2: Top 10 donors per amount to Scientific Societies (2013–2019)

#	Pharma Company	Total Amount	% Total Donations	Mean Donation	Max Donation	Standard Deviation
1	ASTRAZENECA	2.573.972,40	10,7	24.990,02	190.000,00	31.115,93
2	NOVARTIS	2.105.093,90	8,7	30.957,26	284.096,00	47.396,34
3	PHARMASERVE - LILLY	2.019.346,40	8,4	28.847,81	139.000,00	33.775,19
4	GLAXOSMITHKLINE	1.784.094,26	7,4	20.046,00	278.250,00	33.739,70
5	DEMO	1.594.694,00	6,6	25.720,87	136.000,00	27.243,30
6	BOEHRINGER INGELHEIM	1.418.530,95	5,9	11.821,09	70.000,00	10.107,00
7	PHARMAZAC	1.303.270,15	5,4	11.741,17	60.000,00	13.845,47
8	GILEAD	1.251.190,00	5,2	23.170,19	186.000,00	34.876,46
9	GENESIS	982.607,55	4,1	21.361,03	125.000,00	26.135,43
10	MENARINI	844.466,46	3,5	12.063,81	60.000,00	10.827,37
-	**Donations of the TOP 10**	**15.877.266,07**	**65,9**	-	-	-
-	**Total Donations**	**24.095.017,61**	**100,0**	-	-	-

However, it is also interesting to examine the number of donations made by pharmaceutical companies during the period under review. Regardless of how much money companies can or wish to offer, the number of donations can give us a better idea of which ones are most active in the field.

As shown in Table 3, at the top of the list there are also companies with comparatively lower average and total donations, which, however, based on entries in the SFEE database, make donations more often to scientific societies. The most characteristic case is that of APPIANI, which is 5th in the number of donations, while it is 29th in terms of the amount of total donations.

Table 3: Top 10 donors per registrations to Scientific Societies (2013–2019)

#	Pharma Company	Registrations	% of total registrations	Total Amount	Mean Donation	Max Donation	Typical Deviation
1	BOEHRINGER INGELHEIM	120	7,1	1.418.530,95	11.821,09	70.000,00	10.107,00
2	PHARMAZAC	111	6,6	1.303.270,15	11.741,17	60.000,00	13.845,47
3	ASTRAZENECA	103	6,1	2.573.972,40	24.990,02	190.000,00	31.115,93
4	GLAXOSMITHKLINE	89	5,3	1.784.094,26	20.046,00	278.250,00	33.739,70
5	APPIANI	80	4,7	153.375,00	1.917,19	10.000,00	1.770,40
6	MENARINI	70	4,1	844.466,46	12.063,81	60.000,00	10.827,37
7	PHARMASERVE - LILLY	70	4,1	2.019.346,40	28.847,81	139.000,00	33.775,19
8	NOVARTIS	68	4,0	2.105.093,90	30.957,26	284.096,00	47.396,34
9	ELPEN	64	3,8	594.600,00	9.290,63	72.000,00	13.147,25
10	DEMO	62	3,7	1.594.694,00	25.720,87	136.000,00	27.243,30
-	**Total of TOP 10**	**837**	**49,4**	-	-	-	-
-	**Total Registrations**	**1.694**	-	-	-	-	-

Interesting information can be obtained by examining the purposes for which the above donations are offered. Tables 4 and 5 summarize donations for different causes, highlighting priorities and largest donors.

Research is by far the activity that has absorbed the highest donations, with 45.3% of donations directed to this purpose. A significant part of the donations (27.4%) is also directed to educational activities. The absorption of almost 73% of donations from research and education is, of course, to be

expected, since these are the main pillars of action of scientific societies. At a considerable distance behind them, donations were channeled into scholarships, infrastructure and equipment, medical equipment, information campaigns, etc.

Table 4: Donations to Scientific Societies by purpose (2013–2019)

Cause	Total amount	% of total donations	Registrations	No. of Companies	Max Donation	Donor of the max donation
RESEARCH	10.921.926,85	45,3	655	40	284.096,00	NOVARTIS
EDUCATION	6.599.078,30	27,4	504	46	139.000,00	PHARMASERVE LILLY
SCHOLARSHIPS	2.010.416,00	8,3	124	24	72.000,00	ELPEN
INFRASTRUCTURE/ EQUIPMENT	1.260.229,87	5,2	92	25	210.000,00	NOVARTIS
MEDICAL EQUIPMENT	918.726,16	3,8	63	21	160.000,00	NOVARTIS
AWARENESS EVENTS	870.126,90	3,6	73	18	278.250,00	GLAXOSMITHKLINE
GENERAL/MULTIPLE PURPOSE	584.568,96	2,4	57	26	91.000,00	GENESIS
CONFERENCES & SCIENTIFIC EVENTS	368.963,00	1,5	64	11	40.000,00	ASTRAZENECA
PHILANTHROPIC ACTIVITIES	268.400,00	1,1	10	6	186.000,00	GILEAD
N/A PURPOSE	183.260,00	0,8	25	14	28.500,00	MSD
PUBLICATIONS	75.171,80	0,3	18	13	8.700,00	PFIZER
DRUGS/COMPANY PRODUCTS	21.785,50	0,1	4	4	15.197,50	PHARMATEN
OTHER	12.364,28	0,1	5	5	4.564,28	CHIESI
TOTAL	**24.095.017,61**	**100,0**	**1694**			

Looking at the largest donations per cause, it is interesting that Novartis is the only company that has offered the largest single donation to more than one cause, namely three (research, infrastructure and equipment, and medical equipment).

As shown in Table 5, in terms of donations to infrastructure and equipment, as well as medical equipment, in addition to the largest single donation, Novartis has also offered the largest overall donations compared to other companies. However, the same does not apply to research, where

although Novartis has offered the largest individual donation – both for the purpose and in general the maximum donation to a scientific society registered to SFEE – it does not belong to the 3 largest donors towards research.

Table 5: Largest donors by purpose (2013 – 2019)

Rank	Company	Donations	No. of registrations	% of the total donations for the purpose
RESEARCH				
1	ASTRAZENECA	1.799.651,00	53	38,5
2	DEMO	1.465.144,00	53	
3	PHARMAZAC	936.900,00	59	
EDUCATION				
1	PHARMASERVE - LILLY	1.922.135,40	63	44,3
2	GLAXOSMITHKLINE	645.480,78	36	
3	MENARINI	354.920,00	35	
SCHOLARSHIPS				
1	GLAXOSMITHKLINE	236.000,00	11	32,9
2	ASTRAZENECA	214.035,00	8	
3	JANSSEN – CILAG	211.390,00	11	
INFRASTRUCTURE & OTHER EQUIPMENT				
1	NOVARTIS	282.304,00	5	41,5
2	MSD	131.930,00	2	
3	AMGEN	108.900,00	9	
MEDICAL EQUIPMENT				
1	NOVARTIS	366.489,90	8	60,7
2	BOEHRINGER INGELHEIM	110.000,00	5	
3	ASTRAZENECA	81.100,40	7	
AWARENESS EVENTS				
1	GLAXOSMITHKLINE	315.390,00	10	62,3

2	NOVARTIS	127.116,00	7	
3	GILEAD	99.200,00	7	
GENERAL/MULTIPLE PURPOSE				
1	GENESIS	142.000,00	5	52,6
2	MSD	91.000,00	4	
3	GILEAD	74.300,00	3	
CONFERENCES & SCIENTIFIC EVENTS				
1	ASTRAZENECA	85.141,00	4	59,4
2	BAXALTA	73.000,00	16	
3	SOBI	61.200,00	14	
PHILANTHROPIC ACTIVITIES				
1	GILEAD	216.400,00	2	95,5
2	BOEHRINGER INGELHEIM	28.000,00	2	
3	GENESIS	12.000,00	1	
PUBLICATIONS				
1	BAXALTA	16.000,00	2	43,5
2	PFIZER	8.700,00	1	
3	MENARINI	8.000,00	1	
DRUGS & COMPANY PRODUCTS				
1	PHARMATEN	15.197,50	1	-
2	PFIZER	5.188,00	1	
3	VIANEX	1.200,00	1	
4	BENNETT	200,00	1	
OTHER				
1	CHIESI	4.564,28	1	83,0
2	AMGEN	3.000,00	1	
3	ASTELLAS	2.700,00	1	

An interesting observation that also emerges from Table 5, lies in the percentage of donations covered by the 3 largest donors to each cause. Typically, for medical equipment and information campaigns, Boehringer Ingelheim, Astrazeneca and GlaxoSmithKline, Novartis and Gilead account for 60.7% and 62.3% of total donations respectively.

Limitations of Research

The data available from the publicly accessible database by the Hellenic Association of Pharmaceutical Companies (SFEE) were not in editable form, due to non-standardized coding. In many cases we encountered duplicates, or records incorrectly placed, in groups that were not related to the reported values. Clearly, our study, as well as a pre-existing study, highlights the problematic development of the recording system and the doubts that arise for the correct entry of records in the information system.

Discussion

Health professionals paid by British pharmaceutical companies for providing time and advice are the least likely to have voluntarily declared their payments, according to the study by Hawkes (2016). The figures show that 70% of healthcare professionals who receive payments from pharmaceutical companies (which are required to register their details on a British Pharmaceutical Association website) agreed to the data being made public. Unfortunately, the 30% who did not agree to the disclosure were also those who received a total of 52% of the payments recorded. The main figures in this database show that pharmaceutical companies paid doctors and other health professionals £340 millions (€410 millions) in 2015 for services provided, two-thirds of which was spent on clinical studies and trials. The largest part, £46 million, has been allocated to consultancy services. Donations and grants to healthcare organizations reached £30.3 million. The participation of companies in the database is a requirement of the Association of the British Pharmaceutical Industry's Code of Practice (2021). There was, however, no means of checking that the companies had disclosed all payments made. The disclosure of payment data is "a landmark moment" for transparency in the pharmaceutical industry and for its partnerships with healthcare professionals and organizations across the UK (Hawkes, 2016).

The presence of industry in research can cause bias in the design and publication of research studies. The funding phenomenon raises questions about industry-funded research and the safety of the drugs being studied. Research bias and the lack of laws regulating disclosures of conflicts of interest also raise questions about the authenticity of studies published in medical journals. Since funding from

pharmaceutical companies is vital for research, such donations should be encouraged, but within strict ethical regulations and supervision (Vajinepalli, 2019).

Ozaki et al. (2020) examined non-research donations to healthcare organizations and healthcare professionals in Japan, drawing data from 71 pharmaceutical companies (members of the Japan Association of Pharmaceutical Industries). Their research showed that Japanese healthcare organizations and professionals received significant amounts of donations from pharmaceutical companies, while data disclosure methods did not provide adequate levels of transparency in these financial relationships. The total value of non-research payments amounted to US$1,762,119,513. Of these payments, identifiable details (e.g. the timing and name of events and promoted medicines) were available in only 33.0% of the cases, while one company did not disclose the required data.

The cooperation of Pharmaceutical Companies with bodies of either public or private law has recently been extensively studied by the international bibliography, highlighting mainly the dependent relationship that develops mainly with the Patient Organizations (Ball et al., 2006; Hemminki et al., 2010; Lexchin, 2019; McCoy et al., 2017; Herxheimer, 2003; Ozieranski et al., 2022; Kang et al., 2019; Sidiropoulos, 2023). The first extensive study for Greece, showed a significant degree of commercialization in the donations of the industry towards patient organizations (Sidiropoulos, 2023). However, the financing of the patient organizations by the pharma industry is vital for their operation, and should be continued within a well-regulated framework. The collaboration of patient organizations (and NGOs in general) with the private and public sector is necessary in order to address public health issues, which has become particularly evident during pandemic and epidemic crises (Sidiropoulos et al., 2022; Tzagkarakis et al., 2023). The issue of commercialization of the donations by pharmaceutical companies has been studied in other EU and non-EU countries in recent years (see Taylor & Denegri, 2017; Rickard et al., 2008; Kent, 2007; Fabbri et al., 2019).

Since June 2016, British pharmaceutical companies have been required to publicly disclose details of certain payments and value transfers to individual healthcare companies, healthcare professionals and healthcare organisations. Details of these payments are published in the central database of the Assocation of the British Pharmaceutical Industries (ABPI) and are accessible to the public. This database is part of an industry move towards greater transparency, with the aim of building better relationships with the medical community, and the trust of patients and society at large (Pendleton, 2016).

Our study produces similar conclusions to what is happening in Israel according to the study by Nissanholtz-Gannot and Yankellevich (2017), where the reports published by the Ministry of Health, Pharma Israel and the Israeli Medical Association show clear inconsistencies between the total payments disclosed by the Pharmaceutical Companies and those disclosed by their beneficiaries. The same problem can be found in Greece too, where there is no consistency in what is announced on the pages of donors, recipients and SFEE's database. A similar picture is presented in the international bibliography, reflecting the current situation in Europe, with the need for a central regulatory authority being imperative (Trayer et al., 2022).

Policy Recommendations

Based on the findings of the research on mapping donations of pharma companies in Greece to scientific societies, the following policy recommendations can be proposed:

There is a need for greater transparency in the donation practices of pharmaceutical companies to scientific societies in Greece. Although the institutional framework and the process of registration of the donations to third entities is supervised by SFEE in Greece, there is still room for improvement in the process and the framework. It is important to maintain a registry for all donations made by pharma companies to scientific societies (as well as to other private and public institutions). This registry should be publicly available, easily accessible and all donations should be registered in a timely manner, allowing the scientific community, the authorities and the public in general to see where the funding is going and how it is being used. The funding of these groups should continue and be supported under conditions of control and transparency, to ensure that their actions are not commercialized (Sidiropoulos, 2023; Trayer et al., 2022).

Moreover, the Greek government should implement stricter regulations on the donations made by pharmaceutical companies to scientific societies. These regulations should include guidelines on the types of projects and programs that can receive funding and how these donations should be reported. SFEE should implement a formal procedure for standardised coding of donors, recipients and characteristics of the donations.

Also, there is a potential for conflicts of interest when pharmaceutical companies provide donations to scientific societies. It is essential to establish clear guidelines on how these conflicts of interest can be supervised, and ethical practices should be promoted when providing funding to scientific societies.

In conclusion, mapping the donations of pharmaceutical companies to scientific societies in Greece is an important step towards promoting transparency, accountability, and ethical behavior in the pharmaceutical industry. There is a need for greater collaboration between pharmaceutical companies and scientific societies in Greece. Collaboration should focus on initiatives that benefit the medical community, such as joint research projects and educational programs. At a European level, EFPIA should harmonize national codes of conduct and transparency practices for donation procedures. A central database should be set up to analyze data from all national trade associations.

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