INNOVATION, LEARNING AND DEVELOPMENT EXPENSES IN THE DIGITAL ECONOMY. A STUDY OF THE BIG FOUR ACCOUNTING FIRMS

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Abstract

The key element of the digital economy is the digital technology that has pervaded the financial services and tax advisory sector. In order to sustain digital technologies in this sector, there is a clear need for innovation. Innovations are the factor responsible for economic growth, which in turn requires research, development and training to drive innovation. This study examines the impact of innovation expenses, employee training expenses and research and development expenses on the annual revenues of the Big Four entities, which are representative for the financial services and tax advisory sectors. Therefore, this study focuses on the dynamic analysis of the aggregate global revenue and innovation, learning and development expenses and the efficiency rate of the mentioned expenses for the Big Four entities. The results of the study reflect the insignificant influence of the absolute change of innovation expenses on aggregate global revenues, while the absolute change in development and training expenses leads to the same change of aggregate global revenues. However, the growth rate of these expenses exceeds the growth rate of aggregate global revenues. This condition is explained by the phenomenon of technological transformation in the financial services and tax consultancy sector, which does not generate immediate results on financial performance, but prepares the stage for future financial results.

Keywords: *digital economy, innovation, learning expenses, research and development expenses, Big Four, accounting.*

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1. Introduction

Information technologies are changing the way people work and communicate, conduct transactions and perform daily tasks. These changes have led to a digital technology dependency and a change in the behaviour of society and the economy. Thus the dependence on digital products and services is explained by the extensiveness of the digital economy to permeate all human activities and create new digitalized domains. The digital economy is based on the Internet, hardware and software elements [28]. Following these, the digital economy has been supplemented by digital services, digital marketplaces and digital platforms [5].

In a digital economy, innovation plays an important role, both technological innovation and innovation of organizations, management methods and business models [14]. There is a deep connection between the digital economy and technology innovation, as they influence each other. This connection is observed as technologies evolve and create new business opportunities. In other words, the development of artificial intelligence, cloud services and blockchain has led to the creation of new products and services, process optimization and increased efficiency in various industries. At the same time, the digital economy is creating the conditions for technological innovation, providing it with resources and infrastructure, facilitating access to global markets and boosting competition.

An important aspect of the digital economy, which is constantly driven by technological innovation, remains the fast pace of change [13]. This aspect is very important and comes with an essential requirement to ensure adaptability and success in this new economy, namely lifelong learning. The result of the relationship between the digital economy and technological innovation is the constant emergence of new skills and knowledge required in the labour market. In this context, lifelong learning becomes crucial as it improves the ability to adapt to new technological and economic demands.

Another essential element in supporting technological innovation is investment in research and development. These investments, called R&D expenses, not only stimulate economic growth, but also facilitate the digital transformation of traditional industries, generate new business opportunities and improve operational efficiency.

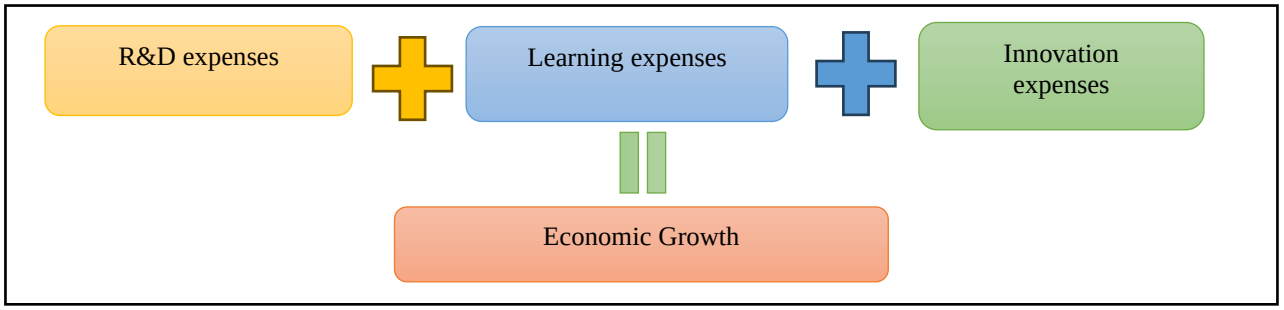

Figure 1. The drivers of economic growth

The relationship between the above-mentioned elements, innovation expenses, R&D expenses and training expenses is presented in figure 1. Thus, R&D expenses together with training expenses becomes a driver of the digital economy, creating a virtuous cycle in which innovation stimulates economic growth, which in turn encourages new R&D investment.

The global financial and advisory services market is significantly influenced by the digital economy, as it is forcing a redefinition of the way business entities operate and interact with customers. Emerging technologies, such as artificial intelligence, blockchain, cloud computing and big data, automation, internet of things, have accelerated the digitalisation of financial processes, improving efficiency and reducing costs. In this context, financial services and tax advisory companies play a crucial role in guiding companies through the complexities of transactions, providing expertise in the integration of digital technologies and managing associated risks. Market globalization has also led to intense competition, forcing firms to continuously innovate and offer customized solutions to remain competitive in an increasingly interconnected and dynamic environment. The digital economy is thus not only changing the financial landscape, but also redefining the future of global consulting.

2. Literature review

The digital economy is surrounded by major challenges currently facing economic entities [2]. These challenges include: the acceleration of change in the economic environment, the acceleration of the product life cycle, decision making is based on large databases and the operational management of economic entities must be very fast, the emergence of new industrial branches, the outsourcing of value-added services required by economic entities, the increase in the complexity of economic transactions, the replacement of services with information technologies and their improvement, changes in financial reporting and relations with financial markets, the implementation of non-financial reporting, the increase in standardized activities and the need for increased attention to meet consumer needs [28].

The main goal of economic entities remains to obtain and maximize revenues. In addition, economic entities are concerned with the sustainable development of the entities and environmental sustainability [15]. The final findings of the study conducted on 227 Chinese cities [16] reflect the imperative of increasing expenses on technological innovation in the fiscal domain to reduce carbon emissions and keep a sustainable environment.

Innovations are usually the result of a financially challenging research process that generates intellectual property assets, meaning patented inventions or ideas for the digital environment and protected by copyright or otherwise [21]. The results of a study [12] suggest that R&D expenses allow the promotion of digital innovations that improve the performance of economic entities. The findings of the study on the role of innovation expenses and its effects on productivity [6] indicate that innovation expenses has a positive impact on productivity, but at the same time it crowds out R&D expenses.

The digital economy and research and development (R&D) expenses are closely linked, as R&D investments are essential to sustain innovation and competitiveness in an ever-expanding digital economy. In a world dominated by technology, companies and nations that invest significantly in R&D are the ones that secure a competitive advantage by developing new digital technologies, products, and services [4]. In addition, R&D is essential to address global challenges such as cybersecurity and sustainability, providing advanced solutions that can transform entire industries and economies.

The results of the study conducted by Euripidis and Mohsan [9] on Greek economic entities show that the reduction in technological innovation expenses, and thus in R&D expenses on digital technologies, has a negative impact on the future competitiveness of economic entities. A study conducted across EU Member States over the period 2000-2021 [25] found a positive relationship between R&D expenses and the technical efficiency score of economic entities.

Digital technologies, such as artificial intelligence and automation (AI and automation (RPA), are transforming both industries and professional roles, requiring a constant upgrading of professional skills. Based on the above, we can emphasize that lifelong learning supports technological innovation, but at the same time, it also ensures the dynamism and competitiveness of the digital economy, and the human workforce is prepared to meet the challenges of the future [21]. Research findings [1] suggest that providing employee training can improve the overall performance of economic entities. At the same time, researchers [17] emphasize the importance of lifelong learning for acquiring new and useful knowledge and skills to achieve success in the digital economy, which is a constantly changing environment.

Investments in training courses, certifications in areas such as artificial intelligence, cybersecurity, and data analytics not only increase employees' skills, but also contribute to the increase in productivity and continuous development of organizations [27]. The results of the study on the function of employee training and development in metaverse [26] indicate that by leveraging employees' knowledge and skills gained from training hours in digital technologies, economic entities can use the advancements to gain a competitive advantage. In an economic environment marked by constant digital transformations, continuous training becomes a central pillar for maintaining relevance in the labour market and fostering innovation within companies [3]. In addition, continuous training is vital to maintain professional relevance in an environment where technological innovation is advancing fast.

Database and methodology

The aim of the study is to analyse the impact of R&D, training and innovation expenses on aggregate global revenue in the Big Four entities, namely Deloitte Touche Tohmatsu, PricewaterhouseCoopers, Ernst & Young and KPMG. The Big Four refers to the four largest

accounting and auditing firms in the world, which dominate the global financial and advisory services market.

As part of the research methodology, we used quantitative methods, in particular, the dynamic analysis of aggregate global revenue and innovation, training and development expenses by determining the absolute and relative changes and the growth rate for the period 2021-2023 according to the formulas no. 1, 2 and 3 and the analysis of the efficiency rate of expenses calculated based on the calculation relationship no. 4 [21].

$$\Delta E = E_1 - E_0 \ (\mathbf{1})$$

$$\Delta \% E = \frac{E_1}{E_0} \times 100 \ (\mathbf{2})$$

$$I_E = \frac{E_1}{E_0} \times 100 - 100 \ (\mathbf{3})$$

$$R_E = \frac{E}{AGV} \times 100 \ (\mathbf{4})$$

where:
Δ - absolute deviation;
Δ % - relative deviation;
I_E – growth rate;
R_E – expenses efficiency rate;
E – expenses;
AGV- aggregate global revenue.

The database analysed consists of information published in the annual reports of each of the Big Four entities at the global level available on the companies' websites as follows: https://www.deloitte.com, https://www.pwc.com, https://www.ey.com, https://kpmg.com, and information retrieved from the Refinitiv Eikon database in the News section available at https://eikon.refinitiv.com. The database of initial values can be found in appendix 1 called Big Four Initial Data 2021-2023. These data have been processed mathematically, resulting in the calculation of the absolute and relative deviations and the growth rate which can be found in appendix 2 called Results of the Dynamic Analysis for the Big Four. The results obtained by applying the calculation formula no. 4 to the data in appendix 1 are presented in appendix 3 called Expense Efficiency Rate of the Big Four.

This research was based on the following questions:

Q_1 – Does the decrease in innovation expenses lead to a minimum level of aggregate global revenue?

Q_2 – Does increasing training expenses lead to the highest level of aggregate global revenue?

Q_3 – Does increasing R&D expenses lead to the highest level of aggregate global revenue?

3. Results

Over the period 2021-2023, according to the data in appendix 1, the aggregate global revenue for the Big Four entities is on an upward trend. These data have been resented for illustrative purposes in figure 2. Data in figure 2 are expressed in billion USD.

Based on the data presented in figure 2 we can say that the global leader remains the company Deloitte in the analysed period, which in 2023 recorded a aggregate global revenue of 64.9 billion USD, followed in the ranking by PricewaterhouseCoopers with a global aggregate global revenue in the amount of 53.1 billion USD, the third place is Ernst & Young with a aggregate global revenue of 49.4 billion USD, and the fourth place is occupied by KPMG with a aggregate global revenue of 36.4 billion USD. The data presented in appendix 2, indicates for Deloitte an absolute growth compared to 2022 in the amount of 5.60 billion USD, and compared to

2021 in the amount of 14.70 billion USD. During the same period, the slowest growth was recorded by KPMG, which compared to 2022 grew by only 4%, followed by PricewaterhouseCoopers whose growth rate compared to 2022 is 5.57%.

Figure 2. Evolution of Big Four aggregate global revenue between 2021-2023
Source: own processing

In order to answer the first research question, we analysed the evolution of innovation expenses recorded by the economic entities of the Big Four group in one of the disruptive technologies, namely artificial intelligence. The data in figure 3 represents the evolution of the Big Four's innovation expenses, based on the data in appendix 1, expressed in billion USD.

The data in figure 3 reflect a heterogeneous situation and different evolutionary trends for the Big Four entities. These aspects tell us that innovation expenses are planned and performed according to digitalisation needs and payback time. However, the company Deloitte reflects a stable growth trend, recording innovation expenses in the amount of 1.80 billion USD in 2023. During the same period, a decreasing trend in innovation expenses is noted for the company Ernst & Young, which decreased its expenses by 0.5 billion USD from 2021 to 2023. The highest level of innovation expenses in 2023 was recorded by PricewaterhouseCoopers company of 2.6 billion USD, followed by KPMG company with an amount of 2 billion USD. However, PricewaterhouseCoopers company in 2022 did not record any innovation expenses.

Based on the data in appendix 2, we can emphasize the high growth rate in KPMG company compared to the year 2022 of 300%, this aspect highlights the need to track the benefits for this company, because in 2022 the amount of innovation spending was limited and followed in the immediately following period by a significant increase. These discrepancies in absolute values over the analysed period attest the positive impact of the increase in innovation expenses on the financial performance of the entity.

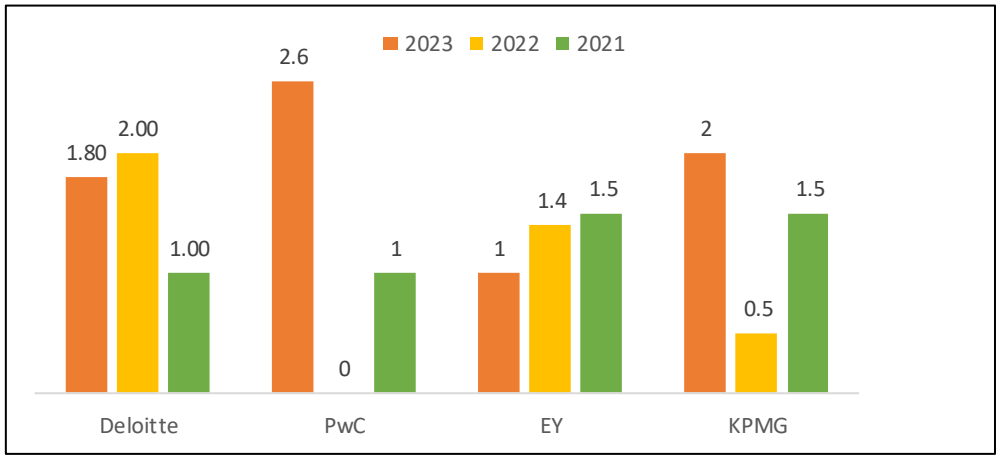

Figure 3. The evolution of Big Four innovation expenses between 2021-2023
Source: own processing

In order to complete the data presented above, the efficiency rate of the innovation expenses, as shown in appendix 3, was also analysed by comparing them to the overall aggregate global revenue. The results obtained and presented in figure 4 reflect an efficiency rate of 5.49% for innovation expenses in 2023 for KPMG, which ranked second in 2023 in terms of the absolute value of innovation expenses. In other words, KPMG's innovation expenses in 2023 contributed to an increase in aggregate global revenue by 5.49 pp. A significant impact was also noted for PricewaterhouseCoopers, which in 2023 recorded the highest level of innovation expenses of 2.8 billion USD and contributed to an increase in aggregate global revenue by 4.90 pp. The downward trend in the innovation expenses efficiency rate for 2021-2023 is observed at Ernst & Young from 3.75 pp to 2.02 pp which in absolute value reflects a downward trend in innovation expenses. For the company Deloitte the efficiency rate of innovation expenses on aggregate global revenue falls in the range of 1.99-3.37 pp and leads to a decreasing impact of innovation expenses on overall aggregate global revenue.

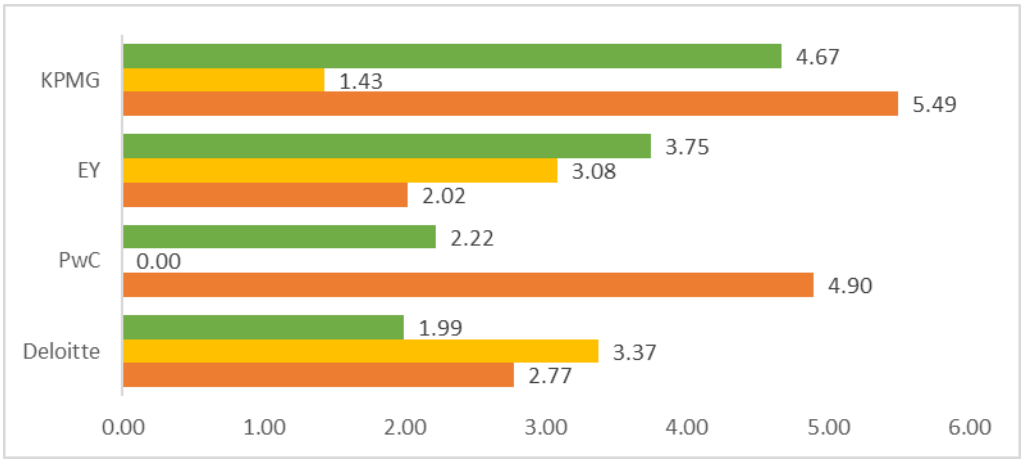

Figure 4. Efficiency rate of Big Four innovation expenses in the period 2021-2023
Source: own processing

An important aspect that comes out from the data of the dynamic analysis (appendix 2) is that the growth rate of aggregate global revenue in 2023 compared to 2022 for KPMG (4%) is outpaced by the growth rate of innovation spending (300%). The same situation is valid for

Deloitte, PwC and KPMG in the dynamic analysis compared to 2021. Having said that, it follows that the Big Four entities are investing in innovation in order to maintain their place in the financial, audit and tax advisory services market that is being affected by the digital economy. Innovations in this sector, provide customized and efficient solutions to clients' needs. The outpacing of aggregate global revenue growth ahead of innovation expenses growth shows that companies are preparing their infrastructure and capabilities to capture new market opportunities and respond to new challenges.

According to the above, the answer to the first research question Q_1 - *Does decreasing innovation expenses lead to a minimum level of aggregate global revenue?* indicates that decreasing innovation expenses does not lead to a decrease in aggregate global revenue. In other words, innovation expenses are profit- or loss-bearing in the period after they are incurred, because they are labelled as part of the long-term strategy. There is a possibility that the technologies for which innovation expenses have been incurred do not respond to market needs, which can lead to financial failures. It may also fail from the very first steps of implementation, which requires considerable development and research expenses as well as adequate professional skills to achieve maximum revenue potential.

In order to answer the second research question, the development expenses of digital and professional skills of employees in Big Four companies were analysed using the average training expenses per employee. The development of the average training expenses per employee is presented in figure 5, based on the data in appendix 1 and expressed in USD.

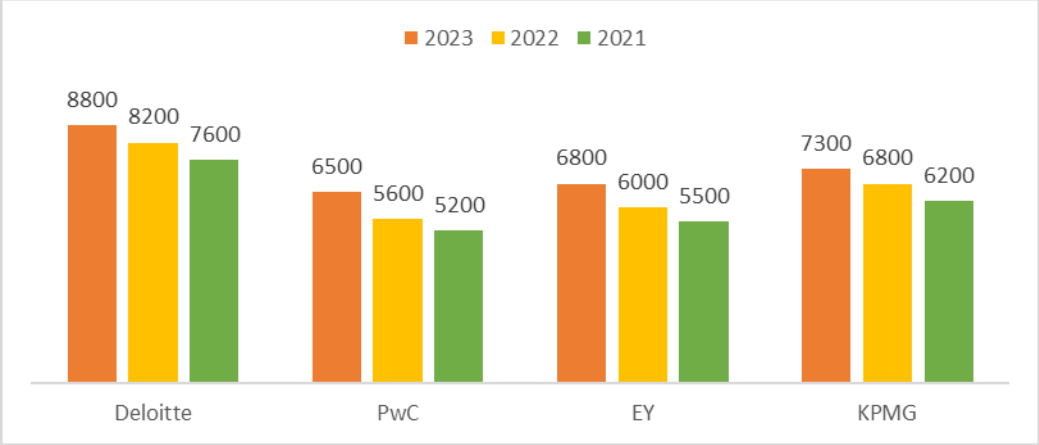

Figure 5. Evolution of average training expenses per employee in the Big Four between 2021-2023
Source: own processing

The data presented in figure 5 reflects an increasing trend in the average training expenses per employee in the Big Four over the 2021-2023 period. The highest level of analysed expenses was recorded by Deloitte in 2023 in the amount of 8800 USD, and the lowest level of training expenses was recorded in 2021 in PricewaterhouseCoopers in the amount of 5200 USD. The increase in training and learning expenses is closely related to the increase in development and innovation expenses that requires advanced digital skills in order to implement and exploit digital technologies. They are also correlated with aggregate global revenue.

Based on the data in appendix 2, we can say that the change in the level of training expenses recorded in 2023 experiences the highest relative increase compared to 2022 of 128.91% in PricewaterhouseCoopers, while the highest relative increase compared to 2021 of 188.59% was recorded by Ernst & Young. Over the 2021-2023 period, the rate of growth in training expenses of Big Four exceeds the rate of growth in aggregate global revenue. This suggests that the Big Four entities have a strategy geared towards training employees to mitigate the challenges posed by

future technologies, ensuring the competitiveness and relevance of financial services in the face of global change. In the audit, tax advisory and financial services niche, compliance with legislative changes and advanced digital technologies that require high technical skills is essential. Staff training costs are becoming a priority over other cost areas. In light of the above, we can say that, the faster growth in staff training expenses than aggregate global revenue is explained by the need for entities to invest heavily in employee training to adapt to new digital technologies, regulations and customer requirements.

To supplement the data on the impact of training expenses on aggregate global revenue, we use the analysis of the efficiency rate of annual training expenses as shown in appendix 3. The data are presented in figure 6.

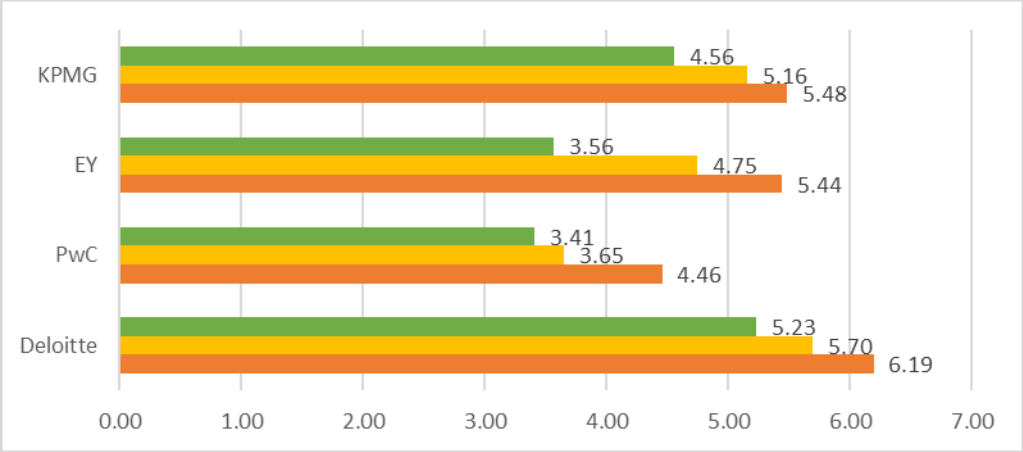

Figure 6. Efficiency rate of Big Four training expenses in the period 2021-2023
Source: own processing

The results obtained and presented in figure 6 reflect the highest rate of annual expenses efficiency on employee training for the period 2021-2023 for Deloitte, which ranked first during this period based on the absolute value of annual professional training expenses and revenue. In other words, the professional training expenses recorded by Deloitte in 2023 contributed to a 6.19 percentage point increase in revenue. A significant impact was also noticed for KPMG, followed in the ranking by Ernst & Young, with an estimated impact of 5.5 percentage points on revenue in 2023. Despite PricewaterhouseCoopers ranking second in the global revenue ranking for the period 2021-2023, it recorded the lowest values of professional training expenses, which resulted in a lower impact rate on aggregate global revenue. However, these remain correlated with the low level of innovation expenses.

According to the above, the answer to the second research question Q_2 – *Does an increase of training expenses lead to the highest level of aggregate global revenue?* indicates that increasing professional training expenses leads to higher aggregate global revenue.

In order to answer the final research question, research and development expenses of the Big Four were analysed. The evolution of development and research expenses (appendix 1) is illustrated in figure 7, with data expressed in billions of USD. Regarding the research and development expenses of the Big Four entities, a major effort is noticed to increase and maintain an upward trend for all entities during the period 2021-2023. Thus, based on the data presented in figure 7, it can be said that the highest level of the analysed expenses is recorded by Deloitte during the period 2021-2023, amounting to 2.4 billion USD. Additionally, Deloitte shows the largest increase in expenses compared to 2022, amounting to 300 million USD. The high level of research and development expenses reflects the effort to understand and implement disruptive technologies.

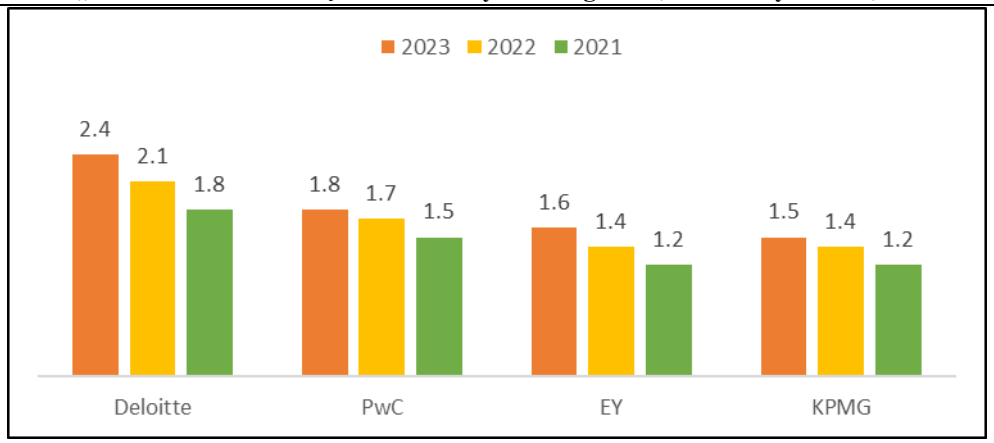

Figure 7. Evolution of R&D expenses of the Big Four between 2021-2023
Source: own processing

Based on the data from appendix 2, we can say that both the research and development expenses recorded by Deloitte in 2023 and those of Ernst & Young increased by 14.29% compared to the expenses levels of 2022, and by 33% compared to 2021. Regarding the growth rate of the analysed expenses during the period 2021-2023, it exceeds the growth rate of aggregate global revenue. However, this situation is explained by the phase of intensive technological transformation, which does not immediately yield financial results but sets the stage for better long-term performance.

To complement the previously presented data, the efficiency rate of research and development expenses was also analysed by comparing them to aggregate global revenue (appendix 3). Based on the data presented in figure 8, it can be noted that the highest efficiency rate of the analysed expenses was recorded during the period 2021-2023 by KPMG at 4.12 percentage points, followed by Deloitte with 3.70 percentage points. Thus, for the entities in the Big Four, the efficiency of research and development expenses reflects on operational efficiency and aggregate global revenue.

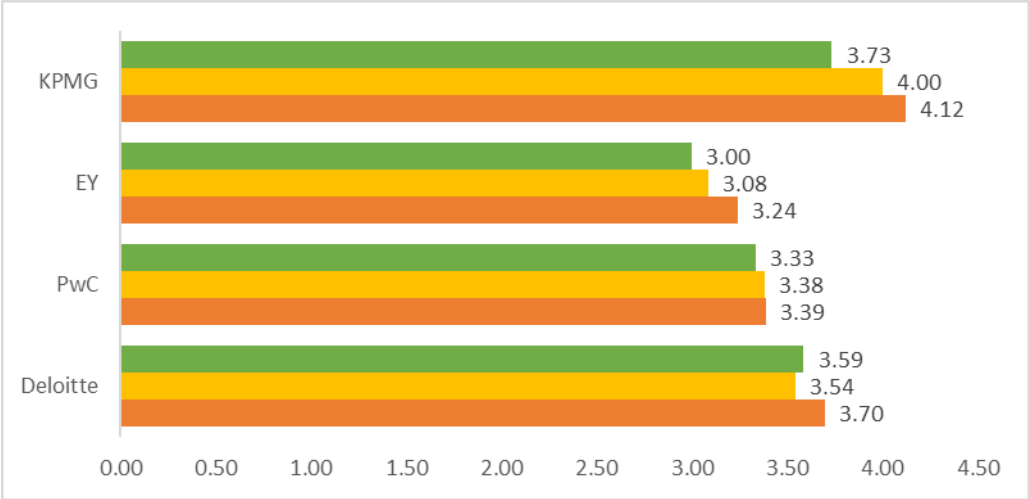

Figure 8. Efficiency rate of Big Four R&D expenses in the period 2021-2023
Source: own processing

According to the information presented earlier, the answer to the second research question Q_3 – *Does an increase in development expenses lead to the highest level of aggregate global revenue?* reflects that an increase in research and development expenses leads to a higher level of aggregate global revenue.

4. Conclusions

This study examined the relationship between innovation expenses, professional training expenses, and development expenses on aggregate global revenue for the Big Four entities during the period 2021-2023. Through dynamic analysis, a series of findings emerged regarding the effects of digital economy expenses on the field of financial, tax, and audit consulting services, represented by the Big Four.

The data presented in appendix 2 reflect a general trend among the Big Four entities, where the growth rate of the analysed expenses during 2021-2023 exceeds the growth rate of aggregate global revenue. This condition suggests inefficiency in obtaining financial benefits from these expenses. However, in the changing conditions imposed by the digital economy, this situation associates innovation, research and development, and professional training expenses with the status of essential elements of a long-term strategy. Additionally, these expenses lay the groundwork for future financial benefits by providing value-creating infrastructure for entities in the financial services, audit, and tax consulting sectors.

Based on the data obtained in appendix 3, we can conclude that within the Big Four entities, professional training expenses are more efficient and have a greater impact on aggregate global revenue compared to other expenses. An exception is KPMG, which in 2021 and 2023 recorded a high efficiency rate for innovation expenses compared to professional training and research and development expenses. These aspects highlight the importance of adopting a strategy that aligns with the entity's needs and market demands.

Thus, based on the results obtained in this study, we can say that innovation expenses play a catalytic role in generating financial benefits for entities in the financial and tax consulting sectors. They stimulate the development of digital solutions, creation of new services, and optimization of processes to meet client needs. The study data showed that changes in the value of innovation expenses do not directly and immediately influence aggregate global revenue. These expenses will generate benefits when transitioning to the implementation and exploitation of digital technologies and will create added value for accounting professionals.

Professional training expenses represent an essential element in an economy and society that are continually changing. The increase in these expenses has consequently led to an increase in aggregate global revenue. In the financial services and tax consulting sector, possessing digital competencies is an asset for both the company and the client. Updating skills and professional knowledge reflects on the quality of services provided and the revenue earned.

Regarding research and development expenses, they directly impact the operational efficiency and financial performance of the Big Four entities and all entities engaged in financial services. The study data showed that increasing research and development expenses leads to higher aggregate global revenue.

These expenses elements drive entities towards economic growth in a digital economy, but detailed forecasting is needed to align the desire to implement digital technologies with the desire to meet client needs.

The main limitations of this study include the number of economic entities in the financial services and tax consulting sector considered, the short time frame analysed, and the dispersion of necessary values in reports and financial news.

This research offers many directions for future study. There is the possibility of complementing this study with qualitative research focused on accounting professionals' opinions regarding innovation, continuous learning, and research and development in digital technologies. A more complex investigation of this topic could be based on an extended database, covering a period before the Covid-19 pandemic and a subsequent period.

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Appendix 1 "Big Four Initial Data 2021-2023"

Year	Aggregate global revenue, billions US				Innovation expenses, billions US			
Big Four	Deloitte	PwC	EY	KPMG	Deloitte	PwC	EY	KPMG
2023	64.9	53.1	49.4	36.4	1.80	2.6	1	2
2022	59.3	50.3	45.4	35	2.00	0	1.4	0.5
2021	50.2	45	40	32.13	1.00	1	1.5	1.5
Year	The average of annual direct training cost per employee, US				Number of employees			
Big Four	Deloitte	PwC	EY	KPMG	Deloitte	PwC	EY	KPMG
2023	8800	6500	6800	7300	456826	364232	395442	273424
2022	8200	5600	6000	6800	411951	327947	359449	265646
2021	7600	5200	5500	6200	345374	295371	259245	236257
Year	Annual direct training costs, billions US				Research & Development expenditure, billions US			
Big Four	Deloitte	PwC	EY	KPMG	Deloitte	PwC	EY	KPMG
2023	4.02	2.37	2.69	2.00	2.4	1.8	1.6	1.5
2022	3.38	1.84	2.16	1.81	2.1	1.7	1.4	1.4
2021	2.62	1.54	1.43	1.46	1.8	1.5	1.2	1.2

Appendix 2 "Results of the Dynamic Analysis for the Big Four"

	Aggregate global revenue					
	Absolute deviation, mld USD		Relative deviation, %		Growth rate, %	
Year	2023-2022	2023-2021	2023-2022	2023-2021	2023-2022	2023-2021
Deloitte	5.60	14.70	109.44	129.28	9.44	29.28
PwC	2.80	8.10	105.57	118.00	5.57	18.00
EY	4.00	4.27	108.81	123.50	8.81	23.50
KPMG	1.40	4.27	104.00	113.29	4.00	13.29
	Research & Development expenditure					
	Absolute deviation, mld USD		Relative deviation, %		Growth rate, %	
Year	2023-2022	2023-2021	2023-2022	2023-2021	2023-2022	2023-2021
Deloitte	0.30	0.60	114.29	133.33	14.29	33.33
PwC	0.10	0.30	105.88	120.00	5.88	20.00
EY	0.20	0.40	114.29	133.33	14.29	33.33
KPMG	0.10	0.30	107.14	125.00	7.14	25.00
	Innovation expenses					
	Absolute deviation, mld USD		Relative deviation, %		Growth rate, %	
Year	2023-2022	2023-2021	2023-2022	2023-2021	2023-2022	2023-2021
Deloitte	-0.20	0.80	90.00	180.00	-10.00	80.00
PwC	2.60	1.60	0.00	260.00	-100.00	160.00
EY	-0.40	-0.50	71.43	66.67	-28.57	-33.33
KPMG	1.50	0.50	400.00	133.33	300.00	33.33
	Annual direct training costs					
	Absolute deviation, USD		Relative deviation, %		Growth rate, %	
Year	2023-2022	2023-2021	2023-2022	2023-2021	2023-2022	2023-2021
Deloitte	0.64	1.40	119.01	153.15	19.01	53.15
PwC	0.53	0.83	128.91	154.14	28.91	54.14
EY	0.53	1.26	124.68	188.59	24.68	88.59
KPMG	0.19	0.53	110.50	136.26	10.50	36.26

Appendix 3 "Expense Efficiency Rate of the Big Four"

Indicator	Innovation Expense Efficiency Rate			Research and Development Expense Efficiency Rate			Professional Training Expense Efficiency Rate		
Year	2023	2022	2021	2023	2022	2021	2023	2022	2021
Deloitte	2.77	3.37	1.99	3.70	3.54	3.59	6.19	5.70	5.23
PwC	4.90	0.00	2.22	3.39	3.38	3.33	4.46	3.65	3.41
EY	2.02	3.08	3.75	3.24	3.08	3.00	5.44	4.75	3.56
KPMG	5.49	1.43	4.67	4.12	4.00	3.73	5.48	5.16	4.56