

A Work Project, presented as part of the requirements for the Award of a Master's degree in
Finance from the Nova School of Business and Economics.

Private Equity in Portugal –

How do different Private Equity Funds perform and what impacts their performance?

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Abstract:

The purpose for this work project was to understand which variables could impact a private equity fund's performance. Using 2 funds with different investment policies and three variables (operating revenue, number of employees and remuneration of employees) it was possible to conclude that the operating revenue always influences the performance and has a positive impact, whether the remuneration of employees only has an influence in the performance when the fund invests in growing companies. The number of employees never influences the fund's performance.

Keywords:

Private Equity; Fund Performance; Early Stage; Growth Stage

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1. Introduction and purpose of the project

The aim of this directed research internship was to evaluate the performance of two private equity funds with different policy investments and understand which variables impact this performance. I was lucky enough to work with a fund management company, which, at the time of my internship, had a total of four private equity funds under management. However, since two of them had just entered the capital raising stage, I only collected data from two of the funds for this report.

These two funds from which the data was gathered have different investment policies and I would like to start by revealing their policies as well as the companies they invested in and their industries.

The first fund under analysis, Fund 1, had an investment policy such that its capital was intended to be invested in the acquisition of participations in the capital of enterprises, with headquarters in Portugal, eligible under the PRIME Program - Incentive Program for the Modernization of the Economy¹, with or in the development of new products, services or technologies, and with high growth potential services or technologies, and with high growth and valorization potential, and provide them, in any form allowed by law, funds for their start-up, development and expansion. The fund invested mainly in start-ups and companies in their early stage.

The fund started investing in companies in 2005 and had a total invested capital of €5.026.813,72 (five million twenty-six thousand eight hundred and thirteen euros and seventy-two cents), which was invested in a total of 16 companies:

¹ This program's goal was to promote the productivity and competitiveness of the Portuguese economy.

The program aimed to pursue the following objectives:

- a) To support investment generating national added value;
- b) To foster risk capital;
- c) To reinforce SMEs' permanent capital;
- d) To invest in internationalization, namely through the promotion of companies, Portuguese products and tourism;
- e) To support innovation, research and technological development;
- f) To encourage the qualification of human resources in SMEs.

1. Company A: a developer of integrated circuits in the microelectronics area. The fund invested a total of €328.534,00 in this company, which was representative of 15,51% of the company's capital. The fund first invested in the company in 2005 and sold its participation in 2007.
2. Company B: a healthcare company, specialized in the design, manufacture and sale of calcium phosphate devices for orthopedic, spine and dental applications. The fund invested a total of €26.708,00 in this company, which was representative of 24,52% of the company's capital. The fund first invested in the company in 2010 and sold its participation in 2022.
3. Company C: develops its activity in the biomaterials area, being specialized in coatings for medical devices. Its services include Thermal Spraying Coatings of medical implants, Physical Vapor Deposition of surgical instruments and implants as well as anodizing (titanium coloration) and cleanroom cleaning. The fund invested a total of €798.292,00 in this company, which was representative of 49,31% of the company's capital. The fund first invested in the company in 2006 and sold its participation in 2016.
4. Company D: a pioneer company in the delivery of innovative e-Learning infrastructure for the next generation of schools, especially in challenging environments. The company has joined industry leaders like Intel and Microsoft in creating an e-Learning architecture to drive global learning on a local scale, even in low-connectivity environments. The fund invested a total of €1.078.742,00 in this company, which was representative of 13,20% of the company's capital. The fund first invested in the company in 2007 and remains invested in the company.
5. Company E: a designer and developer of calculation software as well as a consultant for engineering projects. The fund invested a total of €433.000,00 in this company,

which was representative of 35% of the company's capital. The fund first invested in the company in 2006 and sold its participation in 2011.

6. Company F: consultant in information technology and information systems as well as a supplier of computer services. The fund invested a total of €350.000,00 in this company, which was representative of 40% of the company's capital. The fund first invested in the company in 2007 and sold its participation in 2011.
7. Company G: a provider of cloud-based digital marketing software and services that help hoteliers promote their brand, drive direct bookings, and connect with customers on all digital platforms. Its all-in-one platform provides hotels with the only unified solution for managing their guests' online journey. The fund invested a total of €650.000,00 in this company, which was representative of 8,81% of the company's capital. The fund first invested in the company in 2007 and remains invested in the company.
8. Company H: consultant in the development, editing, and commercialization of multimedia and audiovisual content in several technological platforms. The fund invested a total of €324.850,00 in this company, which was representative of 49% of the company's capital. The fund first invested in the company in 2006 and sold its participation in 2008.
9. Company I: focused on the construction, assembly, and representation of industrial equipment. The fund invested a total of €300.000,00 in this company, which was representative of 20% of the company's capital. The fund first invested in the company in 2005 and sold its participation in 2017.
10. Company J: a creative agency. The fund invested a total of €750.000,00 in this company, which was representative of 14,09% of the company's capital. The fund first invested in the company in 2007 and sold its participation in 2014.

11. Company K: helps innovators in important social change institutions deliver on the promise of digital engagement to grow influence, raise funds, build power, and strengthen movements. The fund invested a total of €122.000,00 in this company, which was representative of 30% of the company's capital. The fund first invested in the company in 2005 and sold its participation in 2011.
12. Company L: it offers efficiency, speed, safety, and reliability to its customers, converting information into critical insights that differentiate in a highly competitive market, either through innovative analysis, neuroscience technology or other technological platforms. The fund invested a total of €500.000,00 in this company, which was representative of 40% of the company's capital. The fund first invested in the company in 2007 and sold its participation in 2009.
13. Company M: operates in the areas of research, development and design of solutions and programs that promote the market of products, equipment, preparation and execution of programs of selective collection, valorization and recycling of sorted waste (oils, olive oils and derivatives). In addition, it also promotes awareness and environmental education actions among consumers. The fund invested a total of €850.003,00 in this company, which was representative of 10,72% of the company's capital. The fund first invested in the company in 2008 and sold its participation in 2011.
14. Company N: offers Solutions and Services combined with IT and IS consulting. The fund invested a total of €200.000,00 in this company, which was representative of 13,05% of the company's capital. The fund first invested in the company in 2008 and sold its participation in 2010.
15. Company O: performs all types of activities and services proper or related to the production, transformation, distribution and commercialization of electric power or

electricity derivatives, their applications and the materials or primary energies necessary for their creation. It also provides services in the areas of energy, engineering, telecommunications, water treatment and distribution, gas distribution, and the production and distribution of renewable energy. The fund invested a total of €380.000,00 in this company, which was representative of 64,65% of the company's capital. The fund first invested in the company in 2007 and remains invested in the company.

16. Company P: created the World's 1st Plug-in Electrical system targeted for transportation markets. With its patented technology, transportation companies with refrigeration units can use electrical energy to reduce diesel dependence, the level of noise and the CO2 emissions during its operation. The fund invested a total of €363.391,00 in this company, which was representative of 18,63% of the company's capital. The fund first invested in the company in 2006 and sold its participation in 2016.

The second fund under analysis, Fund 2, had an investment policy such that its capital was intended to be invested in the acquisition of participations in the capital of companies, headquartered in Portugal, with high potential for growth and appreciation, and to provide them, in any way permitted by law, with funds for their start-up, development and expansion. The fund falls under the Regulation of the “Sistema de Apoio ao Financiamento e Partilha de Risco da Inovação²”. This fund invested mostly in companies already in their growth stage.

² Program which aims to boost the dissemination of financing instruments that provide better financing conditions for companies, with the following objectives in mind, among others:

- Stimulate the intervention of venture capital in supporting SMEs, privileging the early stages of their life cycle and investment in innovative projects;
- To reinforce the mutual guaranteed system and to promote the widening of its intervention to companies and projects that, due to their risk or innovative nature, present greater difficulties in obtaining bank financing;
- Promote the contracting, with the financial system, of lines of credit to facilitate access to financing by SMEs;
- Stimulate the use of new instruments, namely the activity of risk capital investors (Business Angels) in order to potentiate the financing of small SME projects;
- Support the financing of SMEs and innovation in an integrated perspective of capital and debt components;
- Encourage entrepreneurship, ensuring capital and management skills required in higher risk initiatives.

The fund started investing in companies in 2011 and had a total invested capital of €3.820.000,00 (three million eight hundred twenty thousand euros), which was invested in a total of 5 companies:

1. Company Q: company dedicated to the international trade of food products as well as a representant of a wide range of products from Portugal and Brazil. The fund invested a total of €600.000,00 in this company, which was representative of 49% of the company's capital. The fund first invested in the company in 2011 and sold its participation in 2021.
2. Company R: focused on the purchase and sale of vehicles, new or used, as well as providing automotive technical consultancy and automotive market studies. The fund invested a total of €1.000.000,00 in this company, which was representative of 25,08% of the company's capital. The fund first invested in the company in 2014 and remains invested in the company.
3. Company S: company dedicated to the research, development, production and commercialization of resins and their derivatives. It is the only producer of White-water Rosin in both the national and in the European market. The fund invested a total of €400.000,00 in this company, which was representative of 11,25% of the company's capital. The fund first invested in the company in 2015 and sold its participation in 2022.
4. Company T: responsible for the first complete solution for modern tax, combining tax determination, e-invoicing compliance, and tax reporting on its reliable, scalable, and secure S1 Platform. The fund invested a total of €500.000,00 in this company, which was representative of 20% of the company's capital. The fund first invested in the company in 2015 and sold its participation in 2018.

5. Company U: develops and builds systems for Energy Production and Environmental Treatment, with more than 40 years of experience gained in building more than 1,000 systems worldwide for various industries, including wood, ceramics, cork, agriculture, cement, paper, metallurgy, foundry, food, and textile. Its product range covers all aspects of solutions for energy production and environmental treatment, including biomass boilers, filters, and wood dryers. The fund invested a total of €1.320.000,00 in this company, which was representative of 31,46% of the company's capital. The fund first invested in the company in 2014 and remains invested in the company.

2. Brief introduction to Private Equity Funds

Before diving deeper into the analysis of the performance of the two private equity funds presented above, I would like to introduce briefly what a Private Equity investment is and what type of investments exist.

A Private Equity investment is considered to be “a medium or long-term equity investment that is not publicly traded on an exchange” (*Cendrowski et al. 2012, 5*), which is visible in the description above of the companies where the funds invested and have remained invested for a certain period of time. The goal for this investment is usually to buy a business or a percentage of the capital of a company and then sell it with profit at a certain time in the future.

These investments are usually held for a period of three to seven years, while private equity funds normally last longer, for a period of eight to twelve years (*Cendrowski et al. 2012, 7*). This happens because before committing to an investment, the fund first need to raise capital, i.e., the investors need to give the fund money for it to invest, as well as going through a process of sourcing potential investments and performing due diligences.

There are also two types of Private Equity investment: direct investing and fund investing. Direct investing happens when investors invest their money directly in a business. In fund

investing, investors place their money in a Private Equity fund and it is the fund and the managing team that decide where to invest the investors' money. This latter type of funding is the one under analysis in this work project.

3. Research Method

When conducting research around these private equity funds, one of the main limitations I was faced with was the lack of data. This happened especially with the older fund, the Fund 1, as many of the investments made date back to the early 2000's, when the annual reports of the invested companies weren't saved digitally.

The management company had access to most of these annual reports, however, whenever that wasn't the case, it was possible to reach out to the company and ask for these reports, namely the IES (Informação Empresarial Simplificada) form³. For the most recent years, it was possible to gather data from the Orbis website (from year 2012 onwards), whose data is also based on the IES form from each company.

Like mentioned previously, the goal for this DRI is to evaluate the performance of two different private equity funds and understand which variables may impact this performance. To do this, I gathered information relative to each of the aforementioned companies during the years the fund was invested in them, namely, the operating revenue, the number of employees, the remuneration of employees and the added value.

The operating revenue is the revenue generated by a company from its primary business activities. The remuneration of employees is the total amount of compensation that a company pays to its employees for their services and the number of employees consists of the total number of people working for a company at a certain moment in time.

3 Informação Empresarial Simplificada (IES), created through Decree-Law No. 8/2007 of January 17, is a statement aggregating declarative information, both at the accounting, tax, and statistical levels. This is an obligation of companies and of some professional individuals with organized accounting.
Source: Figueiredo, Natacha. 2022. "IES – Informação Empresarial Simplificada: O que é esta declaração?" *Doutor Finanças*. Accessed November 23, 2022. <https://www.doutorfinancas.pt/empresas/ies-informacao-empresarial-simplificada-o-que-e-esta-declaracao/>

Finally, the added value reflects the value of the labor and capital needed to produce gross output and is, therefore, the difference between gross output and intermediate inputs. The total added value across all industries equals the economy's gross domestic product and, hence, why I considered this variable as the one representing the performance of each of the funds. The other three variables (operating revenue, number of employees, and remuneration of employees) were considered as possible explanatory variables for the fund's performance.

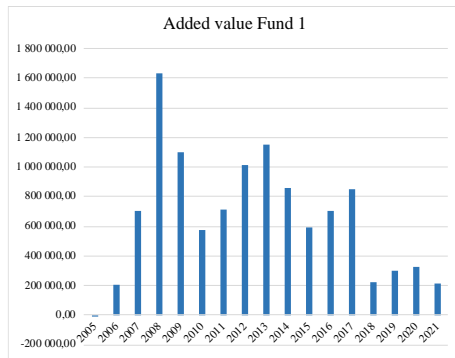
These explanatory variables were chosen with the purpose to understand how the performance of the invested companies could exclusively impact the performance of the fund. Considering that both the funds under analysis are managed by the same managing company and managing team, invest in the same location and have invested in similar periods of time, these variables did not seem relevant to consider for understanding the funds' performance.

It is important to notice that all the gathered data was related to the company as a whole, i.e., for 100% of the capital of the company. For that reason, to obtain the values related solely to the investment of the fund for each of the variables, I performed a weighted sum for all the years by multiplying each of the original values of the variables by the percentage of capital from each company the fund owned and summing everything.

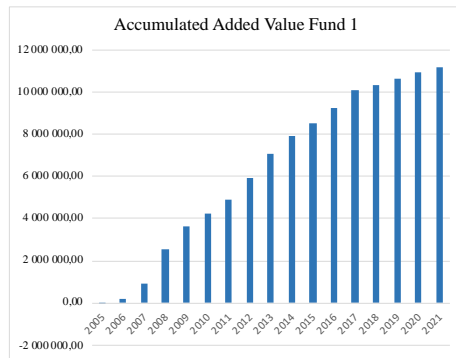
To evaluate the impact of each of the explanatory variables on the added value, I performed a multiple linear regression analysis.

4. Analysis

Before going through the analysis to try to understand which variables might impact each of the fund's added value, I believe it might be interesting to first go through the evolution of the fund's added value through the years and how this value accumulated throughout the fund's investment period.

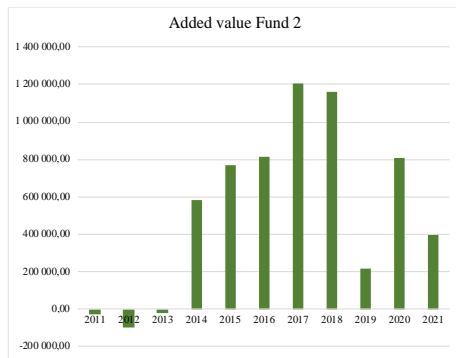


Graph 1: Added value for Fund 1 2005-2021

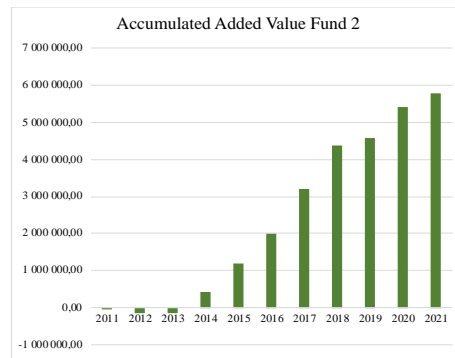


Graph 2: Accumulated added value for Fund 1 2005-2021

Analyzing the graphs above, we can observe that Fund 1 reached a peak in its added value in 2008 with a value of € 1.635.942,85 (*Graph 1*) and, throughout its 17 years of existence, has accumulated a total added value of € 11.156.582,11 (*Graph 2*).



Graph 3: Added value for Fund 2 2011-2021



Graph 4: Accumulated added value for Fund 2 2011-2021

For Fund 2, its added value reached a peak in 2017 with a value of € 1.204.720,76 (*Graph 3*) and, throughout its 11 years of existence, has accumulated a total added value € 5.794.844,79 (*Graph 4*).

Even though the investing period under analysis is different, we can see that the Fund 1 after 11 years (the same period as Fund 2) had an accumulated added value of € 8.534.606,37 (*Graph 3*), which is 47% higher than the value for the same period for Fund 2.

Regarding the analysis executed, like previously mentioned, I performed two different multiple linear regressions, one for each of the funds.

Multiple regression analysis allows the understanding of the impact of more than one explanatory variable on the dependent variable at the same time. Considering n the amount of observations, this linear relationship respects the following equation:

$$Y_i = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} + \beta_3 x_{3i} + \dots + \beta_n x_{ni} + e_i \quad (1)$$

The α and the β s are the coefficients, which have constant values, and must be estimated. In the equation (1) above, x_{1i} , x_{2i} , x_{3i} , ..., x_{ni} are the explanatory variables, where x_i is the i th observation of the dependent variable. The last variable in the equation, e_i , is the error term. This represents not only the variance in the equation that cannot be explained by the other variables, but it is also the difference between the observed Y and the estimated Y .

In this analysis, our dependent variable is the fund's performance, i.e., the fund's added value, and we have three explanatory variables: operating revenue, the number of employees and the remuneration of employees. Therefore, the equation for the analysis performed will be the following:

$$\text{Added Value}_i = \alpha + \beta_1 \text{Operating Revenue}_{1i} + \beta_2 \text{Number of Employees}_{2i} + \beta_3 \text{Remuneration of Employees}_{3i} + e_i \quad (2)$$

For each analysis performed, we also have two hypotheses that accompany it, namely:

H_0 : $\beta_1 = \beta_2 = \beta_3 = 0$. This hypothesis translates into an expectation of no relationship between the explanatory and dependent variables in the model.

H_A : One or more slope coefficients (β_1 , β_2 , β_3) influence the independent variable.

Starting with the analysis for Fund 1, the statistics of the regression are as follow:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>P-value</i>	<i>Multiple R</i>	<i>R Square</i>	<i>Observations</i>
Intercept	26 249,28	77 791,17	0,7412	0,9482	0,8991	17
Operating Revenue	0,4915	0,1094	0,0006			
# of Employees	-4 085,47	8 740,29	0,6479			
Remuneration of Employees	-0,1233	0,3169	0,7036			

Table 1: Summary Output for the Multiple Linear Regression for Fund 1

From the information above we can investigate the Goodness of Fit of the regression, which is evaluated by the R Square, and which represents how much of the variation of the

dependent variable is explained by the independent variables. The value for this analysis is of 0,8991 (*Table 1*), which means that 89,91% of the variation in the added value for Fund 1 can be explained by the operating revenue, the number of employees and the remuneration of employees.

One can also look into the Correlation Coefficient, represented by the Multiple R, which measures the strength of a linear relationship between variables and is a value between 0 and 1. The closer to 1, the stronger the relationship between variables. Considering that the Multiple R for this regression is of 0,9482, one can conclude that exists a strong relationship between variables.

The number of observations is the number of years the fund has been investing in the companies. In this case, it's seventeen years (from 2005 to 2021).

It is also possible to create the regression equation for the regression analysis performed for Fund 1 from the intercept and the coefficients for each of the variables:

$$\text{Added Value}_i = 26\,249,28 + 0,4915 * \text{Operating Revenue}_{1i} - 4\,085,47 * \text{Number of Employees}_{2i} - 0,1233 * \text{Remuneration of Employees}_{3i} \quad (3)$$

Each of the coefficients above can be interpreted as the change in the variation based on a one unit change in the corresponding explanatory variable, keeping all the other explanatory variables constant. With this being said, it can be concluded that, keeping everything else constant, a one unit change in the operating revenue has a positive impact of 0,4915 units in the added value of Fund 1. On the other hand, both the number of employees and the remuneration of employees have a negative impact on the added value of Fund 1, with one unit change impacting the fund's added value negatively in 4.085,47 units and 0,1233 units, respectively.

From the table above, it is also possible to take a conclusion regarding the hypotheses mentioned above regarding whether exists a relationship between the explanatory and

dependent variables in the model. This conclusion can be taken looking at the p-value for each of the variables (*Table 1*). Taking into consideration that this analysis was made with a 95% confidence level, for the coefficients to be statistically significant, i.e., to be possible to reject the null hypothesis and say that the coefficient is significantly different from zero and, therefore, it influences the dependent variable, the p-value needs to be lower than 0,05.

Looking at the data gathered in table above, one can conclude that only the coefficient from operating revenue is statistically significant and influences the added value (p-value = 0,006 < 0,05) (*Table 1*). The p-values for the coefficients of the number of employees and the remuneration of employees are well above 0,05 (p-value (number of employees) = 0,6479 > 0,05 and p-value (remuneration of employees) = 0,7036 > 0,05) (*Table 1*) and, therefore, the null hypothesis cannot be rejected.

Regarding the analysis performed for Fund 2, the following data was obtained:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>P-value</i>	<i>Multiple R</i>	<i>R Square</i>	<i>Observations</i>
Intercept	-77 926,31	36 070,02	0,068	0,9934	0,9868	11
Operating Revenue	0,061	0,016	0,006			
# of Employees	-25 176,15	11 019,28	0,056			
Remuneration of Employees	2,322	0,494	0,002			

Table 2: Summary Output for the Multiple Linear Regression for Fund 2

For Fund 2, we have a R Square of 0,9868 (*Table 2*), which means that 98,68% of the variation of the fund's added value is explained by the explanatory variables. Regarding the Correlation Coefficient, we have a Multiple R of 0,9934 (*Table 2*), which is also a value quite close to 1, which translates into a strong relationship between the variables.

This time, the number of observations is eleven, which, once again, represents the total number of years the fund has been investing, in this case, from 2011 to 2021.

From the table above (*Table 2*) it is also possible to create a regression equation for the analysis performed for Fund 2:

$$\text{Added Value}_i = -77\,926,31 + 0,061 * \text{Operating Revenue}_{1i} - 25\,176,15 * \text{Number of Employees}_{2i} + 2,322 * \text{Remuneration of Employees}_{3i} \quad (4)$$

It can be concluded that, for Fund 2, both a one unit change in the operating revenue and the remuneration of employees, keeping all the other variables constant, have a positive impact on the added value of the fund of 0,061 units and 2,322 units, respectively. On the other hand, *caeteris paribus*, a one unit change in the number of employees has a negative impact of 25.176,16 on the fund's added value.

Looking at the p-values for this regression, it is possible to conclude that, for Fund 2, both the coefficients of operating revenue and remuneration of employees are statistically significant and, therefore, have an influence on the dependent variable, i.e., the fund's added value (p-value (operating revenue) = 0,006 < 0,05 and p-value (remuneration of employees) = 0,002 < 0,05) (Table 2). Only the coefficient for the number of employees is not statistically significant (p-value = 0,056 > 0,05) (Table 2), which means that the null hypothesis cannot be rejected, and this variable does not influence the added value.

5. Conclusion

Regarding the impact of the explanatory variables on the fund's performance, it is possible to conclude that these have a different impact depending on whether the fund invests in early-stage companies or growing companies.

One variable that has an influence throughout both funds on the added value is the operating revenue. For both Fund 1 and Fund 2, the coefficient for this explanatory variable has a p-value lower than 0,05 (Table 1 & Table 2), meaning that the null hypothesis is rejected, and that this variable has an influence on the dependent variable. Besides, for both funds, a one unit change in the value of the operating value has a positive impact on the value of the fund's added value, even if this impact is small (for both funds the impact is lower than 0,5,

though it is much higher for Fund 1 than for Fund 2) (*Table 1 & Table 2*). This can be related to the fact that revenue, especially core-business revenue, is always an important metric and one that investors will look closely to as well as the primary driver of profitability (the more they grow their revenue, more likely they are to grow their profits). Therefore, companies have a big focus on their operating revenue, and this reflects on their added value and, consequently, on the fund's added value. This is even more significant for companies in their early stage as it one of the few metrics they have to show, which might explain the difference on the impact of a one unit change mentioned before between both funds.

Regarding the number of employees, through both analyses performed, it was possible to conclude that this variable does not influence the fund's performance for neither of the funds. With p-values higher than 0,05 for both funds (*Table 1 & Table 2*), it is not possible to reject the null hypothesis nor to conclude an influence of this variable on the dependent variable. This is another interesting finding as one might thought that the number of people employed would impact the economy's gross domestic product but apparently, at least for the funds under analysis, that is not the case. What's even more interesting is that a one unit change in the number of employees of the fund would actually impact negatively the added value of both funds. In this case, the impact is more significant in Fund 2 rather than Fund 1 – in Fund 2 the impact is negative of 25.176,15 (*Table 2*) while for Fund 1 is negative of 4.085.47 (*Table 1*). This might be related to the fact that growing companies feel the need to hire more employees to help manage and keep up with the workload and, therefore, the negative impact is accentuated by the increase in the number of employees.

For the last variable, the remuneration of employees, it has opposite effects in each of the funds. For Fund 1, one unit change in the remuneration of employees affects negatively the added value in 0,1233 (*Table 1*). Besides, for Fund 1, the p-value for the remuneration of employees is higher than 0,05 (p-value (remuneration of employees) = 0,7036 > 0,05) (*Table*

1), which means that it is not possible to reject the null hypothesis and, hence, the remuneration of employees does not influence the dependent variable. On the other hand, for Fund 2, one unit change in the remuneration of employees affects positively the fund's added value in 2,322 (*Table 2*) and the coefficient's p-value is lower than 0,05 (p-value (remuneration of employees) = 0,002 < 0,05) (*Table 2*), which allows to reject the null hypothesis and, therefore, it is possible to say that, for Fund 2, the remuneration of employees is a variable with influence on the fund's added value.

Finally, we can conclude that, throughout the years, Fund 1 has consistently delivered a higher accumulated added value than Fund 2 (*Graph 2 & Graph 4*). This is quite an interesting finding as one would expect the companies on their growth stage to deliver a higher value added than those on their early stage. This might lead to the conclusion that there might be other variable or variables impacting the fund's added value that could possibly have a higher influence in the fund's performance than the ones under analysis in this work project and that might affect funds investing in early-stage companies more than funds investing in growing companies.

Before concluding, I would also like to highlight some points that I believe could create some bias in this analysis. Firstly, the fact that the two funds have invested in a different number of companies could have an impact on the result of the analysis. Secondly, like previously mentioned, both funds have the same managing company and team, invest in relatively the same period of time and location, i.e., Portugal. Lastly, only having two funds for analysis might not be a large enough sample to reach an unbiased conclusion. I think it would be interesting to perform this analysis with funds from other managing companies, with an equal number of invested companies, which have invested for different periods of time or in different locations to see if the conclusions would be the same.

Concluding this working paper with an outlook toward the performance of two different Portuguese private equity funds, it is clear that the variables influencing the fund's performance, i.e., the fund's added value, depend on investment policy of the fund (in this case, early-stage companies or growing companies). The performance of a fund investing on early-stage companies is influenced only by the operating revenue while, for a fund investing in growing companies, its performance is influenced by both the operating revenue and the remuneration of employees. The number of employees does not influence the fund's added value in neither of the funds.

6. References

- Cendrowski, H., Petro, L. W., Martin, J. P., and Wadecki, A. A. (2012). *Private Equity: History, Governance, and Operations*. 2nd Edition. Somerset, NJ, USA: John Wiley & Sons.
- “Bioceramed - Cerâmicos Para Aplicações Médicas, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/BIOCERAMED-reports>
- “Ceramed Coatings, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/CERAMED-reports>
- “Critical Links, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/CL-reports>
- “Feather Systems, Lda. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/FS-reports>
- “Guestcentric Systems, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/GUESTCENTRIC-reports>
- “HeyLife - Consultoria, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/HEYLIFE-reports>
- “Ibermaros - Equipamentos Industriais, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/IBERMAROS-report>
- “MSTF Partners - Agência de Publicidade, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/PARTNERS-reports>
- “Netchange - Consultores em Sistemas de Informação, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/NETCHANGE-reports>
- “Softlimits, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/SOFTLIMITS-reports>
- “Spheraa - Produção de Energia, Lda – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/SPHERAA-reports>

“Wizi to Find, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/WIZI-reports>

“ATP - Atlântico Trade Partners - Importação e Exportação de Produtos Alimentares, Lda – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/ATP-reports>

“ECT, Business Opportunity - Compra e Venda de Viaturas, Lda– Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/ECT-reports>

“Gum Chemical Solutions, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/GUM-reports>

“Petapilot, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/PETAPILOT-reports>

“Torbel, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/TORBEL-reports>

“Greenfiber Tech, S.A. – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/GREENFIBER-reports>

“Turflynx, Unipessoal, Lda – Financials: Global Standard Format” Orbis. Accessed December 6, 2022. <https://bit.ly/TURFLYNX-reports>