Foreign Direct Investment and its Role in the Development of Greece

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ABSTRACT

A distinctive characteristic of Global Economy over the last few decades has been the rising rate and impressive increase in Foreign Direct Investment (FDI) globally. Due to the potential role that foreign direct investment may play in accelerating the growth rate and re-shaping the economy, many developing countries are seeking such types of investment that can multiply efforts being made towards the growth of their economy. Consequently, foreign direct investment has become an important source of private external finance for developing countries. For this reason, countries like Greece are attempting to focus on the implementation of policies that can attract specific FDI and thus achieve high rates of growth. Attracting FDI and the subsequent creation of sustainable enterprises that will provide an increase in jobs and will reinforce the productivity of the country, is today a national target.

KEYWORDS: *foreign direct investment, economy, development*

JEL Classification: E22, O16

Introduction

Foreign Direct Investment is defined as the Long-term investment by one enterprise in an enterprise which functions within another national economy (OECD, 2008). Also, according to UNCTAD (1999), FDI is defined as a long-term investment by a dominant company in its country of origin, in a subsidiary, a controlled enterprise or sector of an enterprise in a foreign host country. It includes the equipment, the land used and/or investment capital (a percentage greater than 10% of the total holdings of a company), capital for re-investment (which may come from the retained-undistributed profits of a controlled company or from inter-company loaning), and debit transactions (long-term loaning or other loans) between the enterprise and its subsidiaries.

In Kirkilis (2009) it is shown that multi-national companies under foreign direct investment are now the most dynamic factor in economic globalization. The internationalization of the production process, with the establishment of subsidiaries of the same parent company in different countries and the cross-border transport of goods and inputs, deepens the integration of the global market. At the same time, these transfers of goods and inputs are carried out within the global network of the parent company. Thus, they replace the markets and their distributional role with the internal system of management, decision-making and resource allocation of the multinationals. What are the cost and the benefits of this process in the growth of countries and in particular Greece is the question that this study aspires to answer.

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1. Foreign Direct Investments in the Global Markets and Greece

Foreign Direct Investment (FDI) has become one of the most important factors in modern-day economies, since it first began to appear in a global context at the beginning of the 20th century. It is interwoven with the existence of Multinational Companies, while historically the increase in the number of the latter worldwide coincides with the general establishment of FDI as a method of funding their operations.

FDI include the transportation, beyond national borders, of a package of productive resources/inputs. These inputs may be either intangible (know-how, marketing, etc), or physical (share capital, raw materials, etc). The transfer of inputs/resources occurs without the intervention of the market, that is, it takes place between two companies which are linked by ownership (Sofoudis, 2008).

Over the last few decades, companies in mainly developed economies have been aiming at expanding internationally, in order to increase both their turnover as well as their profits. The method they choose in order to extend their activity into new markets depends on multiple factors, such as the business and investment environment in the host country, any existing investment incentives, business risks, profit margin, labour costs, the company's overall strategy, the expected return on capital. No country can ignore the foreign capital handled by 65,000 multi-national companies with 850,000 subsidiaries scattered all over the globe, which make sales amounting to 19,000 billion dollars (more than twice the amount of world exports) and employ more than 54,000,000 people. The expansion of multi-national companies within the framework of a global economy is a given fact and accelerating at a rapid rate.

Recognizing the important role played by private capital flows and particularly Foreign Direct Investment (FDI) in the development process of an economy, has affected the attitude of most countries, making them adopt liberal policies in order on the one hand to attract new investments, and on the other hand to enhance the extroversion of domestic companies. This policy is linked to expectations for the dissemination of many advantages in various sectors of the economy and society, thus contributing to economic growth, increased employment, productivity and the competitiveness of an economy, as well as to the spread of expertise and knowledge of exports and tax revenue, an improvement in domestic entrepreneurship, the transfer of innovations and new technology, as well as management models, accounting standards and legal tradition. For each country and much more for Greece which is a small country and therefore a small market, FDI both domestically (FDI inflows) and abroad (FDI outflows) is a crucial factor in the development and progress of the Greek economy.

FDI has the characteristic as compared with all other forms of capital of being «cold» and not «hot» money. In other words, it flows into an economy with the aim of staying and not leaving when the first problems arise. This characteristic of the FDI constitutes an important bulwark for the economy in times of economic crisis.

Attracting foreign business capital particularly for direct investments can play an important role in the attempt to tackle the development weaknesses in the economy and to reshape the productive structure, so that it may be more competitive within changing international economic conditions (Ministry of Trade, Industry and Tourism, 1999).

In today's continuously developing global market, we have already left behind the time when international transactions were considered unimportant and have reached an age when

«power has been transferred to business units that are responsible for carrying out cross-border functions worldwide and emphasis is now placed on optimizing processes on a global scale» (Habash, 2007).

Throughout the history of FDI, the most important role in their development has been played by Multinational Companies. More specifically, entities in FDI and international capital in the global market are the Multinationals. FDI first made its appearance after 1830, as a form of cross-border activity between the parent Multinationals and their subsidiaries. Examples are the establishment of subsidiaries of Swiss textile companies in southern Germany, of the German Siemens in Russia, etc. (Sofoudis, 2008). According to the latest estimations by international financial houses, the prospects for the growth of the global economy continue to be regarded as positive, yet the risks of a possible slow-down in growth rates are greater. The risks of a slow-down began to appear on the one hand following the crisis in the mortgage market in the USA, which had a negative effect on credit markets throughout the world, and on the other hand, due to the rapid increase in the price of oil. Despite this, the impact of an impending slow-down in the USA economy on global growth rates seems to be counterbalanced to a great extent by the strong growth in other regions of the world, mainly in Asia. Thus, the growth rate of the global GDP closed at 5.1% for 2007, 4.7% for 2008, improving slightly to 4.8% in 2009 (UNCTAD, 2009).

The increase in FDI global flows originated partially from the increase in company profits worldwide, meaning higher share prices and an increase in the value of cross-border mergers and acquisitions. Mergers and acquisitions continue to take up a large part of the allocation of FDI flows especially in developing and transition economies. As a result of greater company profits, the benefits from their re-investment constituted an important component of external FDI: 30% of overall inflows worldwide in 2006 and approximately 50% in developing countries (Sofoudis, 2008).

While FDI inflows in developing countries increased by 45%, a rate much greater than the corresponding one in previous years, the flows in developed and transition economies reached their greatest ever levels (379 billion and 69 billion respectively). The USA was reinstated as one of the greatest FDI host countries, followed by England and France. The greatest inflows among developing nations took place in China, Hong Kong and Singapore.

In 2007, developed countries remained the main sources of FDI, with 84% of global outflows. It is telling that approximately half of global outflows originated from the EU (mainly from France, Spain and the United Kingdom) at the same time as the USA was enjoying conditions of recovery in FDI inflows (UNCTAD, 2007).

As opposed to the sharp increase in mergers and acquisitions at the end of the 90's, these transactions are mainly financed in our days by cash and loans and involve a wide range of areas and sectors. In North America, cross-border mergers and acquisitions have doubled. In Europe, the United Kingdom remains the main target-country, whilst Spanish companies are proving particularly active in acquisitions. Cross-border mergers by Spanish companies are estimated to amount to the value of 78 billion, a record level for the country. Companies from developing and transition countries are also participating more and more actively in such transactions (UNCTAD, 2009).

As in previous years, services amounted in 2007 to 2/3 of internal FDI, an increased percentage in relation to the 40% in 1990. Indeed the section concerning industrial infrastructure increased both in absolute and relative terms. Constructions were the second

largest sector, but their share decreased from 41% in 1990 to 30% in 2007 (UNCTAD, 2008).

The introduction of foreign investment into Greece was the country's post-war strategy for entry into the international market. From 1953 onwards, the policy of liberalizing the economy was put into operation, which included the gradual elimination of trade barriers, the devaluation of the drachma and a trend towards export-oriented industrialization by means of a policy of incentives, subsidies and tax exemptions and the introduction of a protective legislative framework for FDI. The inflow of foreign capital would finance industrialization without the need for funding through national resources, it would transfer technology and contribute to the distribution of investments according to the internationally comparative advantages of the Greek economy.

It was believed at that time that the country was in an advantageous position in the manufacture of agricultural products, in the production of consumer goods and in a series of intermediate manufacturing sectors, such as chemicals, fertilizers for agriculture and metallurgy (OECD, 1994).

The recent picture of Greece as far as the inflow and outflow of foreign direct investment is concerned, is a characteristic indication of the investment prospects developing in the Greek investment environment and is clearly the key to the future of the Greek economy.

The outflows of Foreign Investment from Greece have decreased by about 50% in relation to 2007 – from this point of view the country is in the 39th place out of a total of 158 countries, while in 2007 it was in 37th place. For example, the acquisition of OTE Hellenic Telecommunications by Deutsche Telekom is classified among the 73 largest investments worldwide that occurred in 2008. In terms of inflows of Foreign Investment in the greater agricultural sector, Greece was in 8th place during the period 2005 – 2007.

1.1. The Geographical Distribution of FDI in Greece

Foreign investment in Greece is mainly directed towards Eastern Macedonia and Thrace, due to their proximity to the other Balkan countries and Europe, as well as towards Central Greece and Attica, due to their proximity to the capital. A significant amount of capital from FDI is also invested in the central area of Macedonia (OECD, 1994).

The conclusion to be drawn is that FDI tends to be found in areas with a relatively high growth rate. This can be explained if we realize that these areas are consequently developing the highest percentage of infrastructure, business activity and market potential. More specifically, these areas have various general economic and social features that make them attractive to FDI (Sofoudis, 2008).

Foreign investors tend to set up their activities in areas already under development, so as to take advantage of their economic features, of the economies of scale and the results of concentration. Consequently, foreign investors do not appear to depend on the Greek Incentives Law for their choice of business location, given that the afore-mentioned three leading FDI host areas do not belong to the leading areas with priority for support from the incentives law.

The only area attracting FDI programmes that is not among the leading ones from the viewpoint of GDP per capita is Eastern Macedonia – Thrace. This area has a low GDP percentage and is included among those areas linked by the strongest incentives for

investment. Even if the growth rate is low, the area attracts FDI, which makes us suppose that it is the incentives law and not the development in the area that promotes the attraction of FDI (Sofoudis, 2008).

Eastern Macedonia and Thrace are situated in the north-eastern part of Greece, bordering on Bulgaria and Turkey. The area provides easy access to neighboring countries via its road and rail networks. It has two airports, two ports and an extensive rail network, linking the area to mainland Greece, the Greek islands and Turkey. Apart from having electricity, the area is also supplied with natural gas as Thrace is the gateway for the import of this fuel. Primary industries are agriculture, which is followed by food and drink manufacturing, clothing and textiles, metal products and wooden furniture, and the tourist industry in the area. During this period of time, investment opportunities are to be found in organic farming and livestock, along with food and drinks, clothing and textiles, metal products and carpentry. As far as the metal industry is concerned, there are exploitable deposits of lead, gold, perlite, zeolite, granite and marble. In the tourism industry, there is room for development in alternative forms such as agro tourism, golf and winter tourism (OECD, 1994)

2. The Contribution of Foreign Direct Investment in the Greek Economy

There was a marked rise in Greece's classification on the basis of Foreign Direct Investment (FDI) for 2008, climbing to 49th place from 71st place where it was in 2007. During the period examined, FDI reached 5.09 billion dollars, a rise of approximately 165% in relation to the immediately preceding year. At the other extreme, outflows of foreign direct investments for Greece amounted to 2.65 billion dollars in 2008, approximately 50% less in relation to 2007. Countries holding top positions are the USA, France, Germany, Japan and Britain (UNCTAD, 2009).

Stocks of FDI inflows in Greece as a percentage of the GDP were 10.3% in 2008 in relation to 17% in 2007, distinctly lower than the average in the European Union (35.1% in 2008). In terms of stocks of FDI inflows Greece was in 57th place out of a total of 206 countries in 2008 in relation to 48th place in 2007. The stocks of FDI outflows as a percentage of the GDP were 9.1% in 2008 in relation to 10.1% in 2007, distinctly lower than the European Union average (44.2% in 2008). In terms of stocks of FDI outflows, Greece was in 36th place in 2008 (out of a total of 153 countries) in relation to 37th place in 2007.

As regards acquisitions and mergers in Greece, sales were made valued at 6.04 billion dollars and purchases valued at 2.63 billion dollars. Inflows are expected to fall from 1.7 trillion dollars in 2008 to less than 1.2 trillion dollars in 2009. Slow recovery is expected in 2010 with a rise in FDI inflows to a level of 1.4 trillion dollars approximately, which according to estimations will soar to 1.8 trillion dollars in 2011.

3. Econometric Model

In this section an econometric investigation is carried out into the correlation (dependence) between Foreign Direct Investment (FDI) and various selected quantitative variables, in order that an overall interpretation may finally be given of the reasons that lead to the fluctuation in FDI inflows in Greece over the last few years. The programme used for the econometric model is MiniTab ver. 15.

3.1. Foreign Direct Investment Inflow and Productivity

Table 1 contains the value of the two variables being correlated:

1. The Inflows of Foreign Direct Investment (FDI) in millions of dollars according to data from UNCTAD (2009).

2. Labour productivity per person employed - GDP in Purchasing Power Standards (PPS) per person employed relative to EU-27 (EU-27 = 100) (EUROSTAT, 2008). This indicator has been rescaled, i.e. data is expressed in relation to EU-27 = 100. Thus, they are not comparable with previous releases based on EU-25 = 100. Gross domestic product (GDP) is a measure for the economic activity. It is defined as the value of all goods and services produced less the value of any goods or services used in their creation. GDP per person employed is intended to give an overall impression of the productivity of national economies expressed in relation to the European Union (EU-27) average. If the index of a country is higher than 100, this country's level of GDP per person employed is higher than the EU average and vice versa. Basic figures are expressed in PPS, i.e. a common currency that eliminates the differences in price levels between countries allowing meaningful volume comparisons of GDP between countries. Also note that 'persons employed' does not distinguish between full-time and part-time employment.

Table 1. FDI inflow and productivity data for the period 1976 – 2008

Year	FDI in mil Dollars*	GDP productivity/person empld**
1976	295	-
1977	363	-
1978	410	-
1979	593	-
1980	598	-
1981	489	-
1982	399	-
1983	423	-
1984	474	-
1985	431	-
1986	463	-
1987	675	-
1988	896	-
1989	740	-
1990	991	-
1991	1082	-
1992	1082	-
1993	946	-
1994	956	-
1995	1040	-
1996	1044	-
1997	967	93,2
1998	-	90,9
1999	681	91,2

Year	FDI in mil Dollars*	GDP productivity/person empld**
2000	953	93,7
2001	1504	97,3
2002	277	99,6
2003	1244	101,3
2004	-	101,2
2005	606	98,8
2006	5364	99,6
2007	1918	101,3
2008	5093	101,9

* Source: UNCTAD (2009); **Source: EUROSTAT (2008)

Following the construction of the contingency table which gives us a concise description of the joint distribution of the variables, what must be investigated is whether the two variables are independent, that is whether either of the variables affects the distribution of the other. Testing independence is carried out with the statistical χ^2.

Correlations: FDI IN MIL DOLLARS; GDP PRODUCTIVITY/PERSON EMPLD

- Pearson correlation of FDI IN MIL DOLLARS and GDP PRODUCTIVITY/ PERSON EMPLD = 0.420
- P-Value = 0,174
- a (alpha, also a-level)= 0.05

Interpretation: The linear correlation between the two variables is positive (0.420) which means that FDI increases linearly when the productivity of the Greeks increases with a degree of correlation 0.420 (Figure 1). However, since the P-Value is greater than 0.05 we cannot reject H_o. There is no linear correlation between FDI inflow and productivity.

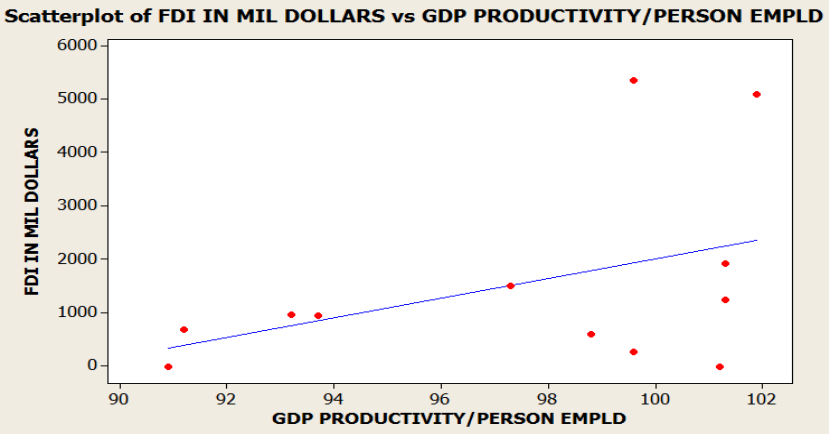

Figure 1. Scatterplot of FDI vs GDP productivity per person employed

3.2. Foreign Direct Investment Inflow and Gross Domestic Product

Following the same methodology, the two variables being correlated are:

1. The Inflows of Foreign Direct Investment (FDI) in millions of dollars according to data from UNCTAD (2009).

2. Gross domestic product at market prices - at current prices (PENN WORLD TABLES, 2009). GDP (gross domestic product) is an indicator for a nation's economic situation. It reflects the total value of all goods and services produced less the value of goods and services used for intermediate consumption in their production. Expressing GDP in PPS (purchasing power standards) eliminates differences in price levels between countries, and calculations on a per head basis allows for the comparison of economies significantly different in absolute size. Data are presented in Table 2.

Table 2. FDI inflow and GDP data for the period 1976 – 2008

YEAR	FDI in mil Dollars*	GDP mil Euros**
1976	295	-
1977	363	-
1978	410	-
1979	593	-
1980	598	7942,36
1981	489	8544,12
1982	399	8764,84
1983	423	8885,02
1984	474	9198,36
1985	431	9674,89
1986	463	10061,29
1987	675	10085
1988	896	10971
1989	740	11664
1990	991	12066
1991	1082	12856
1992	1082	13070
1993	946	13090
1994	956	13598
1995	1040	14162
1996	1044	14735
1997	967	15431
1998	0	16019
1999	681	16776
2000	953	17737
2001	1504	18886
2002	277	20170
2003	1244	21965
2004	0	23750
2005	606	25467
2006	5364	27531
2007	1918	29482
2008	5093	34832

* Source: UNCTAD (2009); **Source: PENN WORLD TABLES (2009)

Following the construction of the contingency table which gives us a concise description of the joint distribution of the variables, what must be investigated is whether the two variables are independent, that is whether either of the variables affects the distribution of the other. Testing independence is carried out with the statistical χ^2.

Correlations: FDI in mil DOLLARS; GDP MIL EUROS

- Pearson correlation of FDI IN MIL DOLLARS and GDP MIL EUROS = 0,661
- P-Value = 0,000

Interpretation: The linear correlation between the two variables is significantly positive (0.661) which means that FDI increases linearly when the Greek GDP increases with a degree of correlation 0.661 (Figure 2). As the P-Value is smaller than 0.05 we can reject the H_o (H_o: there is no linear correlation between the FDI inflow and productivity) and conclude that there is in fact linear dependence between FDI and GDP.

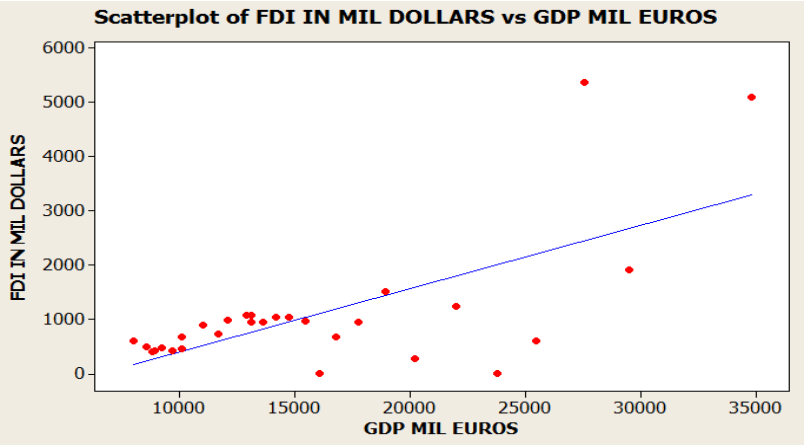

Figure 2. Scatterplot of FDI vs GDP

3.3. FDI inflow and Gross Domestic Expenditure on R&D

Following the same methodology, the two variables being correlated are:

1. The Inflows of Foreign Direct Investment (FDI) in millions of dollars according to data from UNCTAD (2009).

2. Gross domestic expenditure on R&D (GERD) by source of funds - Percentage of GERD financed by industry. Short Description: The four indicators provided are GERD (Gross domestic expenditure on R&D) as a percentage of GDP, percentage of GERD financed by industry, percentage of GERD financed by government and percentage of GERD financed from abroad. Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications. R is an activity where there are significant transfers of resources between units, organizations and sectors and it is important to trace the flow of R funds.
Data are presented in Table 3.

Table 3. FDI inflow and GERD data for the period 1976 – 2008

YEAR	FDI in mil Dollars**	INT RATES**
1976	295	-
1977	363	-
1978	410	-
1979	593	-
1980	598	-
1981	489	-
1982	399	-
1983	423	-
1984	474	-
1985	431	-
1986	463	-
1987	675	-
1988	896	-
1989	740	-
1990	991	-
1991	1082	-
1992	1082	-
1993	946	-
1994	956	-
1995	1040	-
1996	1044	-
1997	967	21,6
1998	0	-
1999	681	24,2
2000	953	-
2001	1504	33
2002	277	-
2003	1244	28,2
2004	0	-
2005	606	31,1
2006	5364	-
2007	1918	-
2008	5093	-

* Source: UNCTAD (2009); **Source: EUROSTAT (2008)

Following the construction of the contingency table which gives us a concise description of the joint distribution of the variables, what must be investigated is whether the two variables are independent, that is whether either of the variables affects the distribution of the other. Testing independence is carried out with the statistical χ^2.

Correlations: FDI IN MIL DOLLARS; GERD

- Pearson correlation of FDI IN MIL DOLLARS and GERD = -0,733
- P-Value = 0,061

Interpretation:
The linear correlation between the two variables is significantly negative (-0.733) which means that FDI decreases linearly when the Greek GERD increases with a degree of correlation -0.733 (Figure 3). As the P-Value is not (marginally) smaller than 0.05 we cannot reject the H_o (H_o: there is no linear correlation between the FDI inflow and productivity) and conclude that there is no linear correlation between FDI and GERD.

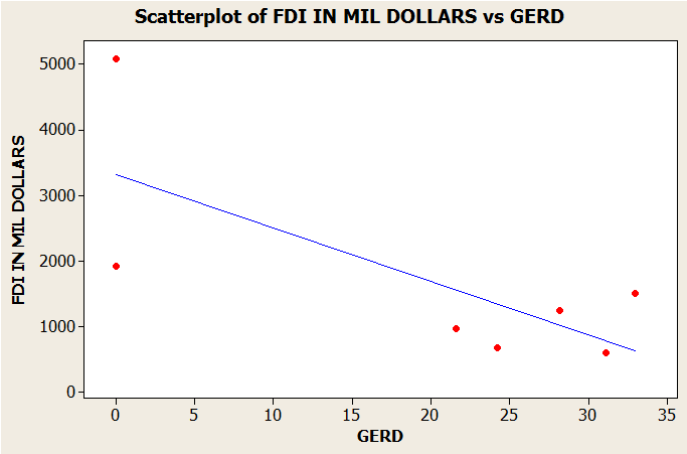

Figure 3. Scatterplot of FDI vs GERD

Conclusion

There are now a sizeable number of studies of developing and developed countries investigating whether there are positive productivity spillovers to the host economy arising from the presence of multinationals. While the empirical evidence has clearly been mixed, reviews of the literature indicate that this is at least in part due to differences in the nature of data and estimation techniques used across the studies conducted making it difficult to draw any more general conclusions. The estimated lack of significant positive spillovers arising from FDI in Greece may be due to many reasons. The large size of firms examined, are found not to be highly interactive with foreign firms in contrast to small firms, which are much more responsive, may be one of them. The stress on majority foreign owned firms may be another. The sectoral distribution of FDI may be important, as we find that, in contrast to for e.g. Ireland and Spain. FDI in Greece is predominantly located in more traditional, low technology sectors. (Barrios et al., 2002, p.13). In these latter type sectors one may suspect that the possibility of technology spillovers is less likely to occur.

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