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How Strong Were the Finances of DTIB Companies Before the War in Ukraine?

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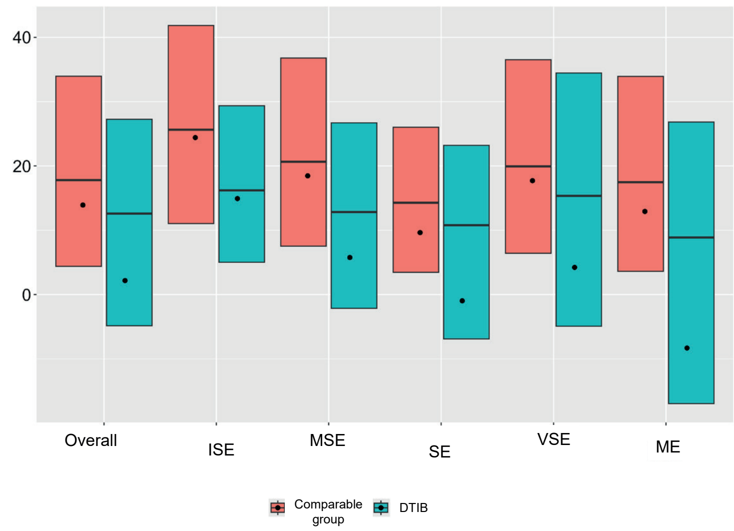
- At a time of increasing international tension, the economic and financial position of companies "that help to design and produce equipment for armed forces" (i.e. the "defence technological and industrial base" or DTIB) is a major concern, particularly as regards small- and medium-sized enterprises.
- To analyse the economic and financial position of these companies, France's Economic Observatory for Defence and the Directorate General of the Treasury carried out a study covering the period from 2016 to 2021, looking at a sample of 2,072 companies (intermediate-sized, medium-sized and small enterprises) operating in sectors most closely associated with the DTIB.
- During that period, DTIB companies (excluding large corporations and micro-enterprises) had a weaker financial and economic position than companies in the rest of the economy: they had thinner margins, were less able to create value, had higher debt levels and were potentially undercapitalised.
- DTIB companies' ability to repay debts was lower than that of comparable companies in the rest of the economy, but they had higher debt levels, suggesting that they had sufficient access to bank credit.
- They made greater use of external funding in their equity capital formation, partly because they were less able to generate profits capable of strengthening their equity base.
- However, since 2021, the increase in European defence budgets in response to the war in Ukraine, along with several public-sector initiatives – such as the creation of the European Defence Fund and the loosening of the European Investment Bank's funding rules – have improved their growth outlook and therefore their financial health, although increased demand is also leading to increased funding needs.

Profit margins of intermediate-sized enterprises and SMEs in the DTIB and of comparable companies by size of company in 2021 (%)



Source: Fare, calculations by the Directorate General of the Treasury and the Ministry for the Armed Forces.

How to read this chart: This bar chart shows a comparison by company size between SMEs and intermediate-sized enterprises in the DTIB (green) and comparable companies (red). The upper end of each bar represents the 75th percentile, the lower end represents the 25th percentile, the midline represents the median and the dot represents the mean. For example, intermediate-sized enterprises in the DTIB have a median margin of 18%, while for comparable companies it is 24%.

1. Intermediate-sized enterprises and SMEs in the DTIB have a weaker economic and financial position than comparable companies outside the DTIB

Even before Russia invaded Ukraine, concerns about the ability of defence companies to finance themselves arose regularly in public discussions. During the COVID-19 pandemic in 2020/21, a brief parliamentary fact-finding mission took place[1] in response to a memo from the French Land and Air-Land Defence and Security Industries Association (GICAT) setting out the funding issues experienced by these companies. In that memo, defence companies stated that accessing bank finance was increasingly difficult, although this was disputed by French banks, which stated that, on the contrary, they were doing more for the defence industry than banks in other European countries. At the same time, intermediate-sized enterprises and SMEs in the DTIB (see Box 1) seemed to be increasingly marginalised by funding providers because of environmental, social and governance criteria. The mission concluded that the situation was "under control" overall, but that there was a trend towards funding becoming more difficult, creating a risk for France's strategic autonomy. To address those concerns, it was necessary to carry out an objective review of these companies' economic and financial health.

France's Economic Observatory for Defence and the Directorate General of the Treasury therefore carried out a study that covered the period from 2016 to 2021, looking at a sample of companies operating in sectors most closely associated with the DTIB. In that study, the economic and financial characteristics of 2,072 intermediate-sized enterprises and SMEs making up the DTIB (referred to hereinafter as the "DTIB" or "intermediate-sized enterprises and SMEs in the DTIB") are compared with those of a reference group consisting of 88,637 intermediate-sized enterprises and SMEs operating in the same sectors (see Box 2).

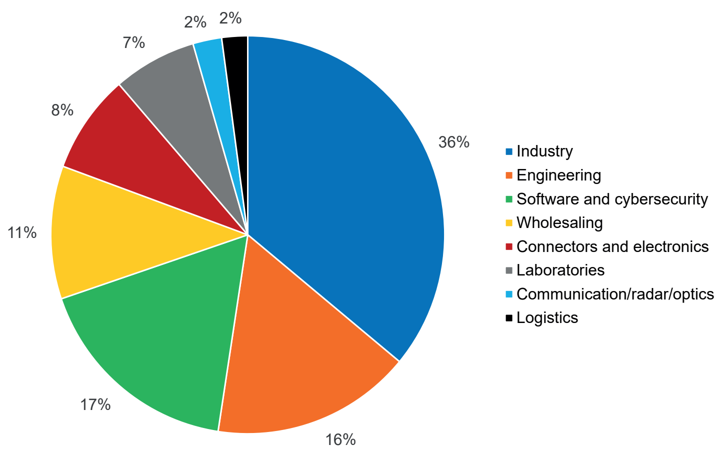
Box 1: Definition of the "defence technological and industrial base"

There is no single definition of the DTIB. In particular, France does not have a specific NAF business code used to identify defence companies. The approach used in this study is that of the Defence Procurement Agency (DGA), which defines the DTIB as all companies that "help to design and produce equipment for armed forces". In addition to the largest arms producers,[a] the DGA relies on a network of more than 4,000 public-interest companies across France. This list of companies was compiled on the basis of Siren legal-entity identification numbers and does not feature dates.[b] It was provided to France's Economic Observatory for Defence and Directorate General of the Treasury for the purposes of preparing the present study.

The list underwent several adjustments.

- Firstly, companies were "profiled" so that the analysis could be carried out on a consistent set of entities.[c]
- Next, large corporations and micro-enterprises with one or no employees were excluded from the list, in order to remove outliers.
- Lastly, companies were screened so that only those operating in sectors most closely associated with the DTIB were included.

Chart 1: Breakdown of profiled companies in the DTIB by business sector



Source: Fare, calculations by the Directorate General of the Treasury and the Ministry for the Armed Forces.

a. Airbus Defence & Space, Ariane Group, Arquus, Dassault Aviation, MBDA, Naval Group, Nexter, Safran and Thales.
b. Since the list does not feature dates, we cannot identify when a company became part of the DTIB.
c. Statistical profiling was used to take into account ownership links within a group of companies, focusing on the links between a company and its parent. The aim was to exclude intermediate-sized enterprises and SMEs that belong to a large group and lack autonomy in terms of decision-making.

(1) See F. Ballet-Blu and J.-L.Thiériot (2021), "Mission 'Flash' sur le financement de l'industrie de défense", report by the French National Assembly.

At the end of these adjustments, the DTIB companies analysed in the study consisted of 2,072 intermediate-sized enterprises and SMEs, while the comparable group consisted of 88,637 intermediate-sized enterprises and SMEs. The sector breakdowns are presented in Chart 1.

Table 1: Breakdown of DTIB companies and the comparable group by company category

Size of company	Definition thresholds	Number of companies	
		DTIB	Comparable group
Intermediate-sized enterprises (ISE)	Fewer than 5,000 employees and revenue of less than €1.5bn or total assets of less than €2bn	287	1,405
Medium-sized enterprises (MSE)	Fewer than 250 employees and revenue of less than €50m or total assets of less than €43m	463	4,775
Small enterprises (SE)	Fewer than 50 employees and revenue or total assets of less than €10m	376	6,620
Very small enterprises (VSE)	Fewer than 20 employees and revenue or total assets of less than €10m	421	13,736
Micro-enterprises (ME) (*own definition*)	Between 2 and 9 employees and revenue or total assets of less than €2m	525	62,101
	Total	2,072	88,637

Source: Fare, calculations by the Directorate General of the Treasury and the Ministry for the Armed Forces.

1.1 Intermediate-sized enterprises and SMEs in the DTIB are less profitable...

Between 2016 and 2021, intermediate-sized enterprises and SMEs in the DTIB appear to have been less profitable than other comparable companies. We can see that the mean and median profit margins of intermediate-sized enterprises and SMEs in the DTIB are lower than those of other companies (see chart on page 1). The same difference can be seen in EBITDA (earnings before interest, tax, depreciation and amortisation) margins.[2]

These observations are corroborated by econometric analysis (see Box 2 for the method): assuming comparable revenue, value added, sectors and ages, intermediate-sized enterprises and SMEs in the DTIB generate lower EBITDA (and are therefore less profitable) than the reference group.

In addition, the difference between mean profit margins in the DTIB and in the reference group has been increasing since 2016 (see Chart 2). This is reducing the ability of companies in the DTIB to generate cash, and could be limiting their ability to invest.

In addition to lower profitability, intermediate-sized enterprises and SMEs in the DTIB seem to have less control over their operating cycle. As a result, operating profit – which measures profits from their core businesses before financial expenses (e.g. interest on debt) and tax – as a proportion of revenue is lower for intermediate-sized enterprises and SMEs in the DTIB. Similarly, their return on capital employed[3] and return on equity[4] is significantly lower in all size categories and sectors, suggesting that they are less able to generate profits and create value (via operating profit) from their assets and equity.

1.2 ... more indebted ...

Intermediate-sized enterprises and SMEs in the DTIB are more indebted than other companies. Their debt ratios[5] are higher than those in the comparable group. The difference in gross debt ratios is greater in the industry, engineering and cyber sectors (see Chart 2). Here again, econometric analysis confirms that debt ratios (gross and net) are higher in the DTIB for companies with comparable characteristics. However, part of the aggregate difference is attributable to the sectors in which companies operate and their age

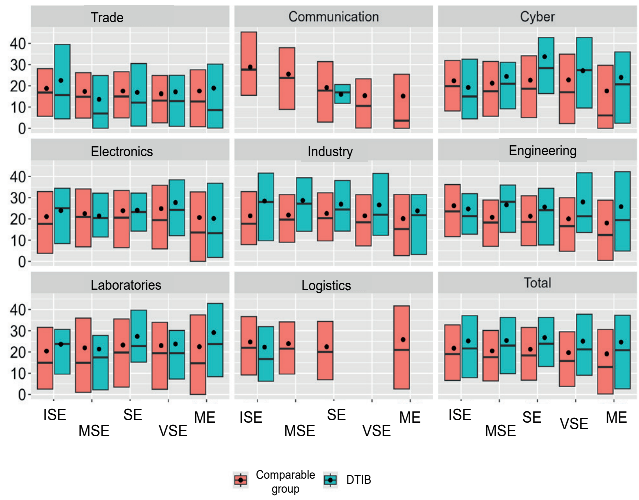
(2) Profit margin is defined as EBITDA divided by value added. EBITDA margin is defined as EBITDA divided by revenue. There are few sub-sectors and size categories that do not show this difference: the greater variability in EBITDA among very small enterprises in the DTIB produces a higher median figure than in the comparable group, although the mean remains lower. Companies regarded as laboratories are also more profitable on average than their equivalents in the comparable group.
(3) Net operating profit after tax divided by capital employed.
(4) Net profit divided by equity.
(5) The gross debt ratio is defined as gross financial debt / total liabilities, and the net debt ratio is net financial debt (minus liquidity, which includes cash and equivalents) / total liabilities.

category. This means that within individual sectors, the difference in debt ratios between a company in the DTIB and another company of the same age is smaller.

These higher debt ratios are cause for concern, given that intermediate-sized enterprises and SMEs in the DTIB have lower margins, and therefore a lower ability to repay debts, than companies in the reference group on average. Interest cover ratios[6] among DTIB companies are lower and their ability to repay their debts[7] is higher than those in the reference group, which indicates that interest expenses are higher relative to profits generated.

As a result, intermediate-sized enterprises and SMEs in the DTIB seem to have sufficient access to credit: although their ability to repay debts is lower, their debt levels are higher than those of the comparable group.

Chart 2: Gross debt ratios of intermediate-sized enterprises and SMEs in the DTIB and in the comparable group, by sector and category of company in 2021 (%)



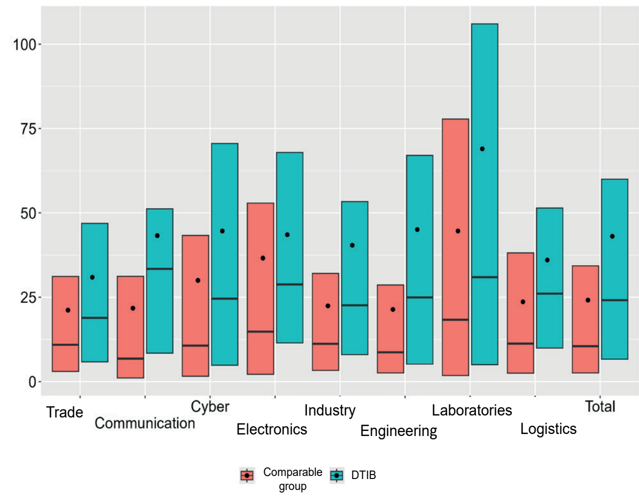
Source: Fare, calculations by the Directorate General of the Treasury and the Ministry for the Armed Forces.
How to read this chart: This bar chart shows a comparison by company size between SMEs and intermediate-sized enterprises in the DTIB (blue) and comparable companies (red). The upper end of each bar represents the 75th percentile, the lower end represents the 25th percentile, the midline represents the median and the dot represents the mean. Some categories that do not contain enough DTIB companies are not shown, because of statistical confidentiality rules.

1.3 ... and make more use of external capital

As regards the equity[8] of intermediate-sized enterprises and SMEs in the DTIB, the analysis seems to confirm the sector's weak financial position, although it does not provide conclusive evidence of widespread undercapitalisation. For companies in the DTIB, external capital (see Chart 3) makes up a higher proportion of their equity, while retained earnings make up a lower proportion. This could suggest that these companies do not generate enough profits to be able to add to retained earnings, or that shareholders are injecting capital in order to counterbalance high debt levels.

However, econometric analysis does not suggest that belonging to the DTIB has any specific impact on total equity.[9]

Chart 3: Direct shareholder contributions as a proportion of companies' equity in 2021 (%)



Source: Fare, calculations by the Directorate General of the Treasury and the Ministry for the Armed Forces.
How to read this chart: This bar chart shows a comparison by company size between SMEs and intermediate-sized enterprises in the DTIB (green) and comparable companies (red). The upper end of each bar represents the 75th percentile, the lower end represents the 25th percentile, the midline represents the median and the dot represents the mean.

(6) EBITDA/financial result.
(7) Net debt/cash flow ratios.
(8) A company's equity includes share capital (money paid in by shareholders) plus retained earnings. It should be noted that as well as the debt and equity figures analysed in this study, the equity and liabilities side of the balance sheet includes other items such as trade payables, tax and social-security liabilities and loss provisions, which may explain why higher debt levels do not necessarily translate into a shortage of equity.
(9) The significance of belonging to the DTIB disappears when we adjust for amount of assets (see the table in the Appendix). This could be because the effect is generally small, or because it varies widely within the sample. The present analysis does not allow us to determine which explanation is correct.

3. However, the current economic situation is conducive to DTIB companies becoming stronger

2.1 Funding providers gradually becoming more positive on the defence industry

Since Russia began its campaign of aggression against Ukraine in 2014, the assessment of security threats has changed and mechanisms specifically aimed at supporting the DTIB have been reinforced. This trend accelerated in 2022, when attitudes to defence among the general public also changed. Politicians are now making pro-defence comments more frequently, particularly in Europe.[10] The DTIB is regarded as an essential tool for ensuring national and European sovereignty, and therefore worthy of support.

Efforts to strengthen tools for supporting the DTIB have included the creation of funds focusing on the defence industry, such as Definvest in 2018. The purpose of this €100m investment fund managed by Bpifrance is to make equity and near-equity investments in strategic DTIB companies. The European Defence Fund, created in 2021 with a budget of €200m, also acquires stakes in companies showing major potential to develop dual-use technologies. However, these funds have limitations, such as the fact that they can only acquire minority interests.[11]

Investing in the defence sector has also become one of the main priorities of the European Union, as confirmed by Ursula von der Leyen, President of the European Commission.[12] In late 2024, for the first time in its history, the European Union created the role of Commissioner for Defence and Space, which is currently held by former Lithuanian prime minister Andrius Kubilius. In 2024, the EU also rolled out its first industrial strategy for the European defence industry,[13] supplemented by fiscal and regulatory measures known as the European Defence Industry Programme. The strategy's aim is to "spend more, better, together and European" in order to make the European Union a world leader in terms of competitiveness and innovation in the defence sector via the European DTIB.

Against that background, on 8 May 2024 the European Investment Bank (EIB) relaxed its rules about financing security and defence for dual-use projects. The EIB has a variety of financial tools (loans, guarantees, WCR funding, etc.) at its disposal, including certain types of equity funding (through the Defence Equity Facility).[14] This new stance[15] is likely to encourage other funding providers to follow the EIB's example.

2.2 Historically, however, certain factors have held back the funding of defence activities

Defence markets have ingrained characteristics that are off-putting to investors. They include long operating cycles, heavy investment requirements[16] – particularly in research and development[17] – and thin margins. In addition, because defence assets are strategically important for national security, it is less easy for investors to sell stakes in DTIB companies to foreign entities than other investments.[18] Finally, there may be fewer funding providers willing to invest in defence companies because of ethical criteria or reputational risk.[19] To address some of these difficulties, which may arise occasionally when a company is putting together a funding application, in 2023 all of France's largest banks appointed "defence correspondents" to liaise with defence companies via the Defence Procurement Agency. More generally, developments in the security situation and changes in the EIB's approach to the sector could reduce reputational risk.

(10) Ursula Von der Leyen (2024), "Central Europe to play key role in EU defence", Euronews.
(11) According to a report by the French Government Audit Office, Definvest is not sufficient to meet all the needs of France's strategic defence SMEs: French Government Audit Office (2023), "Le fonds Definvest".
(12) Euractiv (2025), "Réarmer l'Europe: Ursula von der Leyen annonce un plan de 800 milliards d'euros pour financer la défense".
(13) Joint communication by the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy of 5 March 2024 to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions entitled "A new European Defence Industrial Strategy: Achieving EU readiness through a responsive and resilient European Defence Industry".
(14) EIB, "Strengthening Europe's security and defence industry".
(15) A. Brunetti, A. Pugnet (2024), "La BEI approuve un assouplissement de ses règles de financement de la défense", Euractiv.
(16) "L'innovation de défense, un outil d'indépendance stratégique et économique à renforcer", French Government Audit Office (2021), Public annual report 2021, volume II.
(17) S. Moura (2018), "Les entreprises d'armement brevètent-elles ?", *Écodef*, no. 105.
(18) F. Ballet-Blu and J.-L. Thiériot (2021), "Mission 'Flash' sur le financement de l'industrie de défense", report by the French National Assembly.
(19) For example, representatives of an NGO filed a complaint with the International Criminal Court in 2019 against French companies that supplied arms used against civilians in the conflict in Yemen. See Amnesty international (2022), "Yémen : Trois entreprises d'armement françaises soupçonnées de complicité de crimes de guerre".

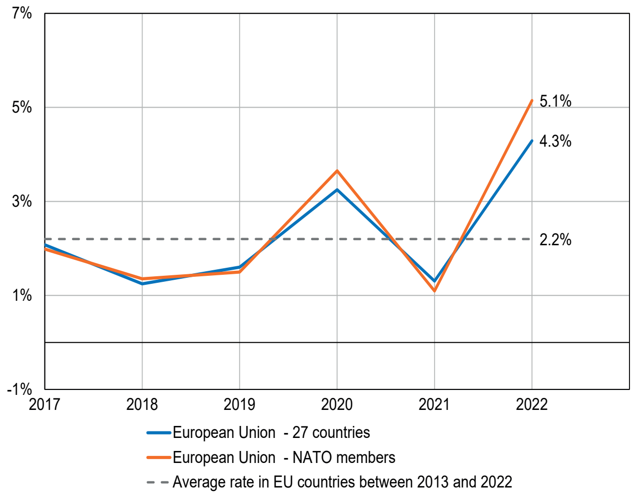
Finally, compliance procedures imposed on companies regarding exports of war material have been gradually strengthened, particularly since the Sapin II Act came into force.[20] Although large corporations have legal departments capable of complying fully with these procedures, this is sometimes not the case for intermediate-sized enterprises and SMEs in the DTIB, which have to acquire new expertise and seek support in this area, otherwise the development of their export business will be limited.

2.3 Strong growth potential at a time of increasing European defence budgets

The potential revenue growth of DTIB companies depends partly on European and international government orders. As a result, the economic outlook of those companies is likely to improve. While European defence budgets have been growing since 2014 (see Chart 4), that growth has accelerated significantly since 2022, partly due to spending on military equipment.[21]

These favourable market conditions for the DTIB, compared with other industrial sectors, are also shown by the results of the French National Statistics Institute's (INSEE) business surveys (see Chart 5).[22] In particular, while 60% of legal entities in the DTIB taking part in the survey said they had insufficient demand in early 2021, that figure had fallen to 20% in 2024.

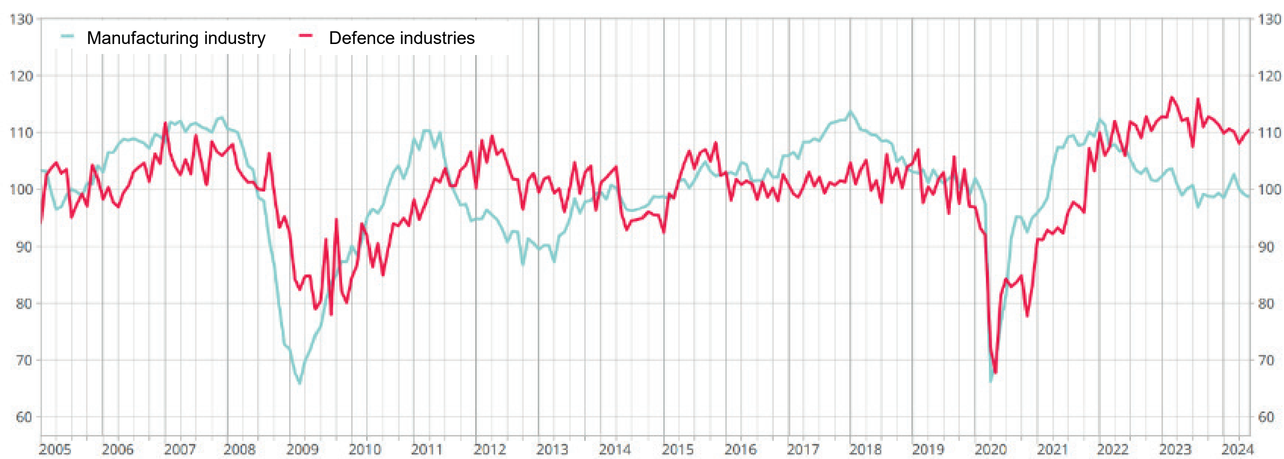
Chart 4: Annual real-terms change in government defence spending in the European Union between 2013 and 2022



Source: Eurostat – General government expenditure by function (COFOG) 2022.

Since most European countries were still failing to hit the target of spending 2% of GDP on defence in 2023,[23] defence budgets are highly likely to continue growing in the next few years, particularly given announcements[24] by the European Commission on 4 March 2025 about increasing investment in defence, resulting in orders for companies in the DTIB.

Chart 5: Business climate index in the defence market and the manufacturing sector



Source: INSEE, Monthly tendency survey in industry; OED, Defence Industries Businesses Survey (EID) 2018.

Last updated: June 2024.

(20) The Sapin II Act, which came into force in 2016, requires large corporations to combat corruption, influence peddling, unlawful taking of interest, embezzlement and money laundering.
(21) Ministry for the Armed Forces (2024), "Les dépenses des administrations publiques en Europe poursuivent leur hausse en 2022", *Écodef Statistiques,* no. 251.
(22) INSEE (2024), "Since the invasion of Ukraine, the French defence industry has seen increased orders and has stepped up production, however, it is coming up against supply constraints", *Economic Outlook.*
(23) Toute l'Europe (2025), "Les dépenses militaires des pays de l'Union européenne".
(24) Euronews (2025), "Ursula von der Leyen propose un programme de 800 milliards d'euros pour la défense européenne".

Companies in the DTIB, because of their long-term development model and their need to innovate, could have major funding needs given growing demand for military equipment. These companies are often highly technology-intensive, with large initial investment needs. Our analysis confirms that companies in the DTIB are more capital-intensive[25] across all sectors and categories of company. In addition, the rate at which assets are replaced[26] is also higher for companies in the DTIB than for equivalent civilian companies.

However, the present study, which focuses on the period from 2016 to 2021, does not enable us to determine how the new context is affecting the financial and economic health of defence companies. Additional work could assess whether the new context has enabled companies in the DTIB to reduce debts or whether, on the contrary, new investment requirements have been hampered by undercapitalisation.

Box 2: Database, descriptive statistics and regressions

The work underlying this publication is based on a sample of companies produced by cross-referencing financial and economic data from the Fare databases,[a] provided by INSEE and published with a time lag of around two years, and an undated list of legal entities identified by the DGA as belonging to the DTIB (see Box 1). The present study relates solely to the period from 2016 to 2021, because more recent data is not available. Data from 2020 has been excluded because the COVID-19 pandemic may distort its interpretation.

The work focuses on intermediate-sized enterprises and SMEs. Large corporations are monitored separately because of their position within the DTIB. To ensure comparability between companies in the DTIB and outside it, micro-enterprises with one or no employees are excluded from the analysis, because their distribution between the two groups is very uneven.

The figures are analysed using a combination of two approaches:

Firstly, descriptive statistics compare companies in the DTIB with comparable companies outside the DTIB (which we refer to as the “comparable group” in this study) with respect to a list of indicators related to financial health. To make those comparisons, we initially look at how certain indicators (means and deciles) relating to DTIB and non-DTIB companies are distributed within the main business sectors and size categories.

Differences in the financial positions of companies in the DTIB and of comparable companies outside it may arise from the former being overrepresented in certain regions or size categories, or in specific sectors related to the DTIB, giving rise to a production structure that is different from that of most comparable companies.

We therefore supplement the first approach with an econometric analysis controlling for a set of factors that may affect the financial health of companies, in order to separate compositional effects from the effect of belonging to the DTIB:

$$y_{isdt} = \beta_1 DTIB_i + \beta_2 X_{it} + \mu_d + \rho_t + \gamma_s + \varepsilon_{isdt}$$

Where y_{isdt} is the level of one relevant financial variable in year t for company *i* in sector *s* and located in French département *d*, $DTIB_i$ is a dummy variable that equals 1 when company *i* is part of the DTIB, X_{it} is a vector of company-level variables that allows us to take into account a company’s age, size category (one of six) and, sequentially, the size of its workforce (FTE), its revenue and the value of its assets. Finally, μ_d, ρ_t and γ_s are fixed effects that control for the *département* in which the company is located, the year and its sector (NAF group).

The coefficient β_1 tells us the specific penalty or gain arising from a company’s membership of the DTIB, all other things being equal.

Since information provided by the DGA regarding companies’ membership of the DTIB is not dated, caution prevents us from adopting a causal interpretation of the coefficient. The coefficient β_1 may indicate an effect arising from a company’s membership of the DTIB in the year in question, or a specific and pre-existing characteristic common to companies operating in defence-related markets.

a. Fare is the individual accounting dataset that plays a central role in the ESANE system, which combines administrative data and data obtained from a sample of companies surveyed via a specific questionnaire in order to produce company-related statistics.

(25) Non-current assets per full-time-equivalent staff member.

(26) This is the ratio of the net carrying amount of non-current assets to their gross carrying amount. It measures a company's ability to maintain and modernise its productive assets. A high ratio may imply that companies in the DTIB are investing actively and maintaining their assets more effectively.

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