

Summary

Sweden's military equipment supply is facing a large number of structural challenges and strategic choices, during as well as beyond the coming defence policy period, 2021–2025. This study describes, discusses and analyses the current situation of and challenges for equipment supply. It also proposes possible future courses of action. A series of previous studies, and no fewer than four government inquiries, have contributed to the subject within recent years. The purpose of this study is to build upon the results of previous work, by contributing with further input to next year's defence policy bill and the coming equipment supply strategy.

Due to the deteriorated security environment in our neighbourhood, Sweden has increased its defence spending over the past decade. This trend will most likely continue, and strengthen further, during the next defence policy period. However, these increases come after decades of decreasing or stagnant defence expenditure, which has led to extensive unmet needs to maintain, replace and procure military equipment. These unmet needs must now be addressed at the same time as the Armed Forces need to expand in order to meet a deteriorating security environment.

Despite recent increases Sweden's military expenditure as share of GDP remains the lowest among the Baltic Sea countries. However, this share only gives an indication of how high defence is prioritised in relations to the wider economy, and says nothing directly about the level of a nation's military capability. The absolute level of military expenditure is also a measure of added resources rather than military capability. These perspectives are often overlooked in the public debate. Adding equipment quantities gives a further perspective to the balance of power and the capabilities of different countries around the Baltic Sea. When equipment quantities are compared, Russia's dominant position becomes even more

apparent. Russia accounts for 44 per cent of total military expenditure around the Baltic Sea, but between 62 and 81 per cent of equipment volumes, depending on weapons system. Within military equipment supply there has been a clear long-term trend towards decreasing quantities of equipment, as smaller numbers of advanced and more expensive systems replace a greater number of older and cheaper ones. In Sweden this trend has, however, been accelerated by the pursuit of high-quality systems while maintaining a wide array of military capabilities.

The Swedish defence industry has become increasingly consolidated and internationalised as domestic demand has decreased. During the 1990s and 2000s, foreign ownership increased within the Swedish defence industry, and exports as a share of company revenue have also increased steadily. In 2016, the export market accounted for two-thirds of the defence and security companies' total revenue. However, Sweden's domestic equipment market continues to be dominated by domestic companies, especially Saab, whose market share has increased as the market consolidated. Sweden currently has a relatively large defence industry in relation to the country's defence expenditure. This provides a number of specific opportunities, but also presents the country with a number of specific challenges. The foremost challenge is how to maintain industrial capability in a cost-efficient manner.

Sweden's close defence industry relations with the United Kingdom and the United States are complicated by the increased defence industrial integration within the EU, most recently exemplified by the initiative to establish the European Defence Fund. Sweden's newly signed cooperation agreement on developing a new combat aircraft together with the UK is taking place while Brexit looms on the horizon. At the same time, France and Germany are cooperating on a competing combat aircraft project, the development of which will most likely be partly financed through the defence fund. This creates a substantial risk that Sweden could come to contribute financially to two combat aircraft projects.

The organisational structure of the Swedish equipment supply is subject to several reforms proposed in previous reports and inquiries. It is important that these reforms should now be implemented and allowed to become established. Furthermore, the defence agencies need to take into account that the Ministry of

Defence has limited resources to conduct in-depth analyses of their budget reports and financial statements. These must therefore be as understandable and transparent as possible. At the same time, the Government must be clear regarding its expectations of the agencies' reports, and must focus on overarching governance rather than management on a detailed level.

The Armed Forces are currently facing considerable equipment needs, and will continue to do so in the coming decades. This study discusses the equipment needs identified by the *Equipment Need Inquiry* and the Armed Forces' *Perspective Study* from 2018, as well as the Defence Commission's report from 2019. This study shares the Defence Commission's own assessment that a majority of the Commission's proposals could be executed no earlier than in the next defence policy period 2026–2030. The reason for this is that most of the financial scope for reform during the period 2021–2025, is planned with previously decided maintenance and procurement of equipment. In the short term, the priorities of the needs identified by the Equipment Need Inquiry, Perspective Study and Defence Commission all focus on remedying present shortcomings, primarily by strengthening the 'base platform' and adding resources to maintain the current organisation. In the long term, however, the three reports differ. Most markedly the Perspective Study envisions a substantially expanded organisation. However, these ambitions are characterised by economic over-optimism and are practically impossible to produce. The main purpose of the Perspective Study is to describe a vision rather than an economically realisable plan, but the problem is that the study does not clarify which needs should be removed if the over-optimistic economy is not realised. Meanwhile, the priorities of the Defence Commission and the Equipment Need Inquiry mean that several larger systems will need to be replaced during the 2030s.

The supply of Sweden's military equipment faces several structural challenges. This study makes no claims to present a complete picture of all the challenges, but aims at describing some of the most important. These include the management of equipment supply, cost escalation and the replacement rate of equipment as well as shortcomings in the current Equipment Procurement Strategy and a lack of long-term perspective. In its report from 2018, the Swedish Agency for Public Management listed a large number of proposals

meant to address shortcomings within the management structure of the Armed Forces. For instance, planning has often been characterised by short-sightedness and over-optimism, which has led to over-planning and negative surprises. The proposals by the Agency for Public Management are currently being implemented, which is a step in the right direction.

Cost escalation of military equipment constitutes a considerable challenge in itself, where unit costs for certain types of equipment have doubled every ten years. This is no easy challenge to resolve, but a first step should be to better understand what cost escalation actually entails. This study proposes a framework on how cost escalation should be understood and handled. Customer-driven cost escalation depends on increased demands regarding equipment performance and contribution to overall capability. This constitutes increases in ambition, which should be financed through politically decided increases in the defence budget. Defence-specific inflation or pure price increases depend on the market conditions of the defence sector, which could lead to higher inflation compared to the rest of society, and should be handled through a price compensation system, known in Sweden as Försvarsprisindex (FPI, defence price index). Furthermore, there are escalations in cost which are caused by an inability to foresee or handle financial risks, in this study called under-pricing. This can be a matter of unforeseen price and currency fluctuations. In practice it is extremely difficult to separate customer driven cost escalation from defence specific inflation, which makes it difficult to predict what share of the cost escalation that FPI should compensate for. This study concludes that decision-makers should not rely on FPI, even a readapted FPI, to solve the problems related to cost escalation. In the defence policy debate the reintroduction of the 'technical factor' sometimes appears as an alternative to explicitly decided budget increases. The technical factor was designed to 'compensate' for technological improvements. This study strongly advises against the reintroduction of a technical factor. It is quite absurd to compensate for an increased capability, and it deprives political decision-makers of economic responsibility for the defence they have ordered. It would also create incentives to push up costs and could create defence-specific inflation rather than managing it. However, the most critical

message is that the defence budget must meet the defence political ambitions, and if not, then the ambitions need to be adjusted.

Replacement of military equipment is necessary as systems reach the end of their technical or operational lifespan. An excessively high replacement rate, however, risks incurring unnecessary costs for the Armed Forces and Government. Sweden's combat aircrafts have historically displayed a relatively high rate of replacement and several systems have been decommissioned before the end of their operational lifespan. Submarines have not been replaced faster in Sweden than in other comparable countries. However, Sweden operates more submarine classes with fewer numbers of submarines in each class, which reduces the benefits from economies of scale. As the JAS 39 Gripen C/D will be kept operational simultaneously as the Gripen E version becomes operational, it seems that combat aircrafts will transition to a procurement pattern similar to the submarines. This reduces the risk of combat aircraft being decommissioned prematurely, meanwhile parallel versions will mean reduced economies of scale. Both the high replacement rates of combat aircraft and the parallel classes of submarines can be understood in the light of the defence industrial need to have a steady flow of incoming orders.

The Armed Forces' current equipment supply strategy is under review at present. The Defence Commission proposes that the Government lead the work on producing a new equipment supply strategy. To better understand the problems which the coming strategy will face, this study describes the problems with the current strategy. First and foremost, the strategy is a product of its time with a focus on international missions. The term 'security of supply' is not even mentioned, and this needs to be addressed. This study also questions the purposefulness of the order of priority, which is prescribed in the strategy and in the Government's principles for equipment supply, where maintenance should be chosen ahead of procurement, and procurement of equipment off-the-shelf ahead of new development projects. Firstly, this order of priority has not been followed. Secondly, there is no goal in itself to maintain and acquire off-the-shelf. A cost-efficient equipment supply of the Armed Forces' operational capability needs is and should be the overarching goal. It needs to be made clear that the order of priority in the current strategy is a method rather than a goal. The order of

priority should be reformulated or at least reinterpreted so that maintenance *should always be considered* before procurement, and that procurement of equipment off-the-shelf *should always be considered* before developing new equipment. But agencies should not be directed towards or evaluated on the degree of maintenance or off-the-shelf equipment procured. Furthermore, the upcoming equipment supply strategy needs to take into account the supply at the component or sub-system level. Procurement of components off-the-shelf could contribute to the cost efficiency of newly developed equipment, too. Therefore, even on a sub-system level, maintenance and procurement of components off-the-shelf *should always be considered* before developing new components.

The current equipment supply strategy advocates international cooperation. However, this approach has the potential to lead to delays and unforeseen costs, even if it does not necessarily have to be the case. A clearly defined customer and a clearly defined main supplier with a clear mandate to develop one main version seems to contribute to the success of international cooperation. Unclear leadership among participating companies and unclear demands from the customer seems to lead to cost escalation and delays. Therefore, the coming equipment supply strategy should not advocate international cooperation without caveats. However neither should it disregard international cooperation as a possible method to achieve cost efficiency through economies of scale or access to technology. Instead, the coming equipment supply strategy should take previous experience from international cooperation into account and identify factors which has contributed to the success or setbacks.

The coming equipment strategy needs to be complemented by a defence industrial strategy that defines the relationship between the state and the industry, which should also include a definition of the term 'essential security interests'. This study suggests that essential security interests should be defined as areas of capability and be held separate from the systems entailed within them. This difference should constitute a first step and make it easier to evaluate the equipment cost associated with the essential security interests, but it remains to be defined which role the central government, defence agencies, industry and rest of society have within each capability area.

There is a need for long-term planning and clearer priorities within equipment supply. This is not least because of the long lead times of military equipment. The Defence Commission advocates a preliminary policy period to direct defence planning in a more long-term direction, a proposal that this study supports. However, there are currently no mechanisms for clear economic management beyond the upcoming defence policy period, 2021–25. This creates a planning vacuum. The model suggested by the Investment Planning Inquiry could form a basis for solving this problem. More long-term planning, even if preliminary, would improve the planning conditions for the Armed Forces. At the same time, the economy envisioned by the Perspective Study up to 2035 rests on optimistic assumptions and limited realism when it comes to the ability to deliver its proposals. This is especially clear given the extensive needs for replacing equipment during the 2030s. It is important that the Armed Forces develop an 'economic reserve plan' in connection with the next Perspective Study, where it makes clear which needs should be prioritised if the economy does not meet the level envisioned by the Perspective Study.

In recent years, several reforms have been suggested with regard to the Swedish military equipment supply. Once implemented and allowed to become established, these have the potential to improve governance of this area. The military equipment supply will also receive added economic resources in the near future. Despite improved conditions, several needs and challenges remain within this area. Hopefully, this study can help to clarify these challenges, and contribute suggestions on possible ways forward.