Chapter 4

Offsets and Weapons Procurement: The Belgium Experience[1]

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4.1 The Economic Constraints Imposed by Belgium's Weapons Procurement

Before the crisis of the 1970s, the Belgian armament industry was relatively prosperous and offered close to 30,000 units of direct employment and more than 40,000 of indirect employment. However, employment levels fell dramatically in the 1980s, as is shown by Table 1.

Table 1: Employment in the Belgian Defence Industry

Year	Total Employment	Direct Employment
1980	42000	27000
1981	45000	28000
1982	37000	27000
1983	44000	27000
1984	39000	28000
1985	33000	25000
1986	28000	22000
1987	26000	18000
1988	23000	17000
1989	20000	15000
1990	17000	13000
1991	15000	11000

Source: Memento défense-désarmement 1992 — L'Europe et la sécurité internationale, Les Dossiers du Grip, No. 168–171, Avril-Juillet 1992, p. 259.

Direct employment refers to persons who:

- are active in the production of goods and services in companies that deliver specifically military final goods to the MoD,

- directly deliver to the MoD goods and services that differ only slightly from those offered on civilian markets; logically, sub-contractors and those who deliver supplies to sub-contractors could also be included in this category.

Indirect employment includes:

- persons active in the production of goods and services offered upstream from companies providing direct employment,
- employment generated by the purchases of those who have received revenues linked to defence expenditures.

4.1.1 Characteristics of the Belgian Defence Industry at the End of the 1970s

Like other European countries, Belgium has a fragmented defence market and a national defence base that is limited by its relatively small defence budget. Before the drastic cuts of the 1990s, the MoD's budget was approximately BEF 103 billion. Since the definitions of the national defence budgets diverge radically from country to country, comparisons are only possible when using a common interpretation. In order to underline the modest defence effort of a small country, we can use the NATO definition of defence spending to compare Belgium's budget with the defence expenditures of France, the UK and the USA: in 1990 Belgium spent BEF 155.21 billion, France spent BEF 1426.81 billion, the UK spent BEF 1336.29 billion and the USA spent BEF 10229.14 billion.

Unlike their counterparts in larger countries, defence firms in Belgium cannot survive on domestic weapons procurement alone. They specialise in light armament and ammunitions (see Table 2) and export mainly to Third World countries (see Table 3). Their degree of specialisation is so high that they are

Table 2: Belgium's Defence Turnover: Estimated Distribution by Sector

Sectors	Average Turnover 86–87 (in BEF billion)	%
Small arms and ammunition	20.2	50
Vehicles and mechanical engineering	8.2	20
Electronics	6.4	16
Aeronautics	4.2	10
Shipyards	1.5	4
Total	40.5	100

Source: Adam B, La production d'armements en Belgique, GRIP, Dossier "Notes et Documents", No. 139, Bruxelles, Novembre 1989, p. 19.

Table 3: Belgium's Defence Production and Exports

Production and Export of Armaments in Belgium (in BEF billion and in constant 1990 prices)			
Year	**Turnover**	**Total Export**	**Share of Export to the Third World**
	(1)	**(2)**	**(3)**
1980	56.3	20.3	87%
1981	60.5	25.1	89%
1982	53.7	21.3	86%
1983	64.7	34.3	86%
1984	58.0	28.5	79%
1985	52.4	21.5	84%
1986	46.6	14.8	75%
1987	43.9	14.6	70%
1988	42.0	12.8	na
1989	37.2	10.3	na
1990	32.6	6.5	na
1991*	31.4	7.3	na

Note: *The 1991 figures are estimates.

Sources:

(1) and (2) Memento défense-désarmement 1992 – L'Europe et la sécurité internationale, Les Dossiers du GRIP, No. 168–171, Avril-Juillet 1992, p. 259.

(3) Ministry of Foreign Affairs and GRIP. Table published in Adam, B. Zaks, A. et De Vestel, P., Contexte et perspectives de restructuration de l'industrie de l'armement en Wallonie, GRIP, Dossier "Notes et Documents", No. 161–162, Bruxelles, Septembre–Octobre 1991, p. 9.

extremely vulnerable to fluctuations in military demand. For most of them, even the support of substantial exports is, however, too limited to make their defence activities profitable in a competitive market. As a result, the defence industry depends heavily on government contracts or on subsidies.

Belgium's defence industry is, for an important part, composed of companies that manufacture minor military products and firms that are heavily involved in producing or assembling parts, components and sub-systems into final military goods. The level of concentration is very high: in the 1980s, the four biggest firms accounted for more than 60% of the total defence turnover, and the top ten firms for more than 80%. Due to its modest size (see Tables 1 and 3), and to the time-lags between uncertain orders, the defence industry is very sensitive to cyclical fluctuations. Not only is the market for defence equipment bound to be

uncertain, it is also more and more constrained by severe competition. Today, defence production is estimated at some 0.2 to 0.3% of GDP, versus 1% ten years ago.

The defence industry's relatively small size is responsible for obvious fundamental weaknesses such as limited production runs, diseconomies of scale, and a lack of social flexibility. The existence of only limited co-operation on an *ad hoc* basis (e.g. subcontracting for the production of parts or sub-systems in the framework of only one contract) has also contributed to the weakness of the defence industry.

Table 4 provides information on the size and significance of defence work for the most important defence companies prior to the major changes that

Table 4: Description of the Largest Belgian Defence Firms

	Employment (1987–1989)		Average Total Turnover (in BEF billion) 1986–1987	Estimated Share of Defence Work (in %) 1986–1987
	Total	Defence		
Small Arms and Ammunition				
FN Group	6016	4456	17.9	60
PRB	1500	1500	4.4	90
MECAR	295	295	1.5	100
FZ	561	561	1.8	100
CMI	1932	386	7.3	20
Vehicles and Mechanical Engineering				
BMF	300	300	6.3	100
Aeronautics				
SABCA	1542	879	3.4	70
SONACA	1316	921	2.4	57
Shipyards				
Mercantile-Beliard	2201	440	5.4	20
Electronics				
ACEC	3778	567	11.7	15
MBLE	724	250	11.3	8

Source: See Table 2

occurred at the end of the 1980s and the beginning of the 1990s. All these firms were privately owned, with the exception of SONACA, a semi-public company, and CMI, a completely State-controlled firm. Until 1987, most of the defence industry was controlled by Belgian capital; two-thirds of all defence activities belonged to the largest holding company in the country, the Société Générale de Belgique (SGB). MECAR was a 100% subsidiary of Allied Research Corporation (USA), MBLE belonged entirely to Philips (Netherlands), and of SABCA's capital, 53% was held by Dassault Belgique Aviation, a subsidiary of Dassault (France), and 42.8% was held by Fokker (Netherlands).

A small country like Belgium cannot afford to maintain a defence industry capable of producing a complete range of weaponry. Entire programmes, covering the research, development, and production of defence goods, are prohibitively expensive for Belgium. The domestic market is too small, and the export opportunities are limited. As a result, indigenous development and production would be excessively costly. Moreover, the risks involved with R&D projects, taking into account the available resources, would also be excessive. Indigenous programmes are, therefore, not feasible.

However, the procurement of armaments from countries with a large defence base provides Belgium with access to sophisticated, relatively low-cost weapon systems. In the past few decades, most of the foreign acquisitions originated in the USA. When buying US weapons, one of two procedures can be chosen: Foreign Military Sales (FMS) which have to be negotiated with the Defense Security Assistance Agency (DSAA) or direct commercial procurement from US firms. Being a government-to-government transaction in which a foreign government transmits a letter of intent to buy a specified weapon system, a FMS is similar to a domestic US procurement inasmuch as the same regulations cover both. FMS is also useful for foreign governments that feel more comfortable with a process in which the DoD handles all of the administrative work.

The Belgian government, however, never seriously considered FMS purchases as a regular way of buying weapons, even if downright FMS procurement offers, at first sight, numerous interesting advantages: the risks are minimal, it is easier to write-off the investment, and the army could operate a sophisticated weapon system that Belgium could not afford to develop itself. The reason for the rejection of the FMS option is that the secondary effects of weapon procurement are extremely important for Belgian industry. Since the most important economic aspect of defence is found in the field of armaments' acquisition, Belgium's economic policy has always included the need to ensure some economic fall-out for the national economy, instead of entirely "exporting" it to the seller's country.

As a result, and taking into account that opportunities to participate in an integrated R&D and production programme are very rare, successive Belgian governments have, since the 1960s, chosen to deal directly with foreign suppliers. This enables domestic industry to participate in the production of weapon systems. In most cases, this participation has been based on integrated international production, without participation in the R&D phase.

In the beginning, some emphasis was laid on production under licence, which can be advantageous when generating exports to third countries. However, because of the limited production run for the domestic market, this approach often entailed considerable additional expense. Moreover, the rather well developed Belgian industry was frustrated by the fact that it had to produce according to foreign plans and engineering data only. The rising cost of equipment, and mounting competitive problems, led Belgium to broaden its demand for economic compensation, with demands for technology transfer, import substitution and co-development economic offset agreements.

Since the late 1960s, Belgian decision-makers have increasingly resorted to co-production on the basis of bilateral and multilateral agreements. In these cases, R&D is centralised, and the production is distributed among several participants in the programme. This formula is more profitable, since it can be combined with an offset policy, which implies that new orders can be placed with Belgian companies within the framework of the procurement contract.

As a consequence, Belgium has become a champion of procurement abroad with offsets.[2] This solution involves large international production projects based on a common need. The achievement of part of the activities is entrusted to one or more Belgian firms. Due to the scope of the project and the amount of sub-assemblies to be produced, these projects are very much appreciated by the industry. They create an opening in the international market and pave the way for later co-production.

Table 5 shows the recent major acquisition programmes of the MoD, with their distribution of offsets between direct and semi-direct on the one hand, and indirect on the other hand, as well as the regional distribution. Due to the fact that the offset policy is always subject to heavy criticism, no official figures could be provided by the authorities. The offset shares reported in Table 5 originate from the press. Since the 1970s, Belgium's offset requirements have been set at a minimum of 50%, but actual agreements often achieved between 70 and 100%. In recent years, even these higher figures have been surpassed, as shown in Table 5.

Table 5: Recent Major Acquisition Programmes and Associated Offsets

Year	Programme	Original value (in BEF billion)	Offset value (in %)	Offset distribution (in % of total offsets)		Regional distribution (in % of total offsets)		
				Direct and semi-direct	Indirect	Brussels	Flanders	Wallonia
1976	CMT	12.4	96	58	42	—	—	—
1980	AIFV	21.8	100	70	30	8	50	42
1983	M 109	6.5	90.6	100	—	3	65	32
1983	F-16 FOB	45.3	58.8	62.7	37.3	14.5	37.5	48
1985	Iltis Jeeps	2.1	300	6.5	93.5	7	52.4	40.6
1986	Volvo Trucks	4.3	500	21.6–32	68–78.4	0–5	80±3	20±2
1988	Mistral	2.9	100	75	25	7.82	52.75	39.43
1988	Agusta Helicopter	11.9	73	63	37	6–10	45–55	35–45
1989	Carapace Msl	5.3	80	66	34	6–10	53–63	30–40

Source: Belgian Press

4.1.2 The Recent Upheaval of the Belgian Defence Sector

It was already essential at the beginning of the 1980s to rationalise production and the allocation of resources in the field of armament production, but the sector had to wait until 1988 to undergo drastic changes. After most defence firms recorded losses in 1986 and 1987, it became clear in 1988 that the defence industry could not continue to function as it had done, given its structural handicaps. At the same time, Belgium witnessed the aborted take-over bid for the SGB by Carlo de Benedetti, followed by the acquisition of a majority shareholding in the capital of SGB by the French Group Suez. Subsequent to these events, important rationalisations started to take place in the defence sector.

Profound restructuring led to a spectacular sale of shares to foreign firms, mainly French, British, American and Dutch. Since 1989, more than 50% of the turnover of the "Belgian" defence industry has been under the direct or indirect control of French financial groups. FN-Moteurs, the aero-engine department of the FN Group, was sold to SNECMA (France) in June 1989, and changed its name to Techspace Aero in October 1992. At the time of writing, SNECMA holds 51% of the capital, the other shareholders being the Walloon Region (30%) and Pratt & Whitney (19%). FN re-organised its other activities around its "Defence and Security" department and its subsidiary Browning. The civilian production departments were eliminated and their activities gradually abandoned. In order to

avoid winding up the business, FN Herstal was sold to Giat in December 1990. A new company was created: FNNH (Fabrique Nationale Nouvelle Herstal) took over all Defence and Security activities. Most (90%) of the capital of FNNH is owned by the French firm Giat with the remainder held by the Walloon Region.

PRB (Poudreries Réunies de Belgique) was Belgium's second largest armaments manufacturer and produced ammunition and propellant charges for guns, howitzers and mortars. It had five production facilities. It had a subsidiary, FZ (Forges de Zeebrugge), a manufacturer of missiles and ammunition. However, SGB, its major shareholder, neglected PRB's strategy and management. At the beginning of important financial difficulties in 1986, SGB pooled PRB with its other chemical activities in a new company, GECHEM. In the meantime, in December 1988, new capital was injected into the GECHEM Group, with SGB increasing its ownership share from 80% to 90%.

Unfortunately, the pooling of PRB with GECHEM turned out to be a disaster. The GECHEM Group decided, in November 1988, to sell off PRB which employed 1,900 persons after laying off 330 employees in 1987. In 1989, PRB was sold to the British Astra concern, which induced more dismissals, bringing down the number of employees to some 1,500 (from 2,500 in 1983). FZ was taken over by the French Thomson Brandt Armaments in the same year.

After examining PRB's debts and investment requirements, Astra proclaimed that it had been misled by PRB's management. As a result, SGB and Astra quarrelled continuously about the financial terms of the deal, and Astra eventually refused to finance any further investment in the company, which led, in 1990, to bankruptcy and the dismantling of PRB. Its assets were sold off piece by piece. The factory in Matagne was sold to MECAR, the facilities at Clermont were sold to the French firm SNPE (Société Nationale des Poudres et Explosifs), Kaulille was "demilitarised" and sold to a civilian firm, and Balen and Kaulille were dismantled.

ACEC (Ateliers de Construction Electriques de Charleroi) was near bankruptcy in 1988. In 1989, the company's activities were gradually dismantled and sold in four parts. The transportation and energy departments were acquired by the French Alsthom, a subsidiary of CGE. The defence division of ACEC, ACEC-SDT (Space, Defence, Telecommunications) merged with Alcatel-Bell, entirely belonging to the Dutch Alcatel NV, that was in turn controlled by the French firm CGE with 61.5% of the shares. At first, ACEC kept a minority share of 20% in the new Alcatel Bell-SDT company, which tried to focus its activities more on the civilian market, especially in the field of mobile telecommunications and space electronics. The other shareholders were Alcatel Bell Téléphone (55%) and the SRIW (Société Régionale d'Investissement de Wallonie — Walloon Regional Investment Company) (25%). Today, Alcatel Bell Téléphone owns 75% of the shares and the SRIW 25%.

MBLE was a 100% subsidiary of Philips. In January 1990, Thomson CSF (France) acquired close to 50% of Philips' defence activities. In the framework of this agreement, MBLE Défense (military telecommunications) was created with Thomson CSF becoming a 40% shareholder and Philips 60%.

OIP went bankrupt in December 1988 and was bought by Oldelft (Netherlands). A new firm, owned by Oldelft with 52% of the shares, OIP-INSTRUBEL, was created.

It is interesting to observe that SONACA has been one of the few Belgian companies which has successfully reduced its exposure to defence contracts. SONACA is now almost entirely State-owned (95% owned by the Walloon Region and 5% by the SRIW (Société Régionale d'Investissement de Wallonie — Walloon Regional Investment Company)). SONACA managed to increase its civilian production through its participation in the Airbus project.

4.2 Economic Compensations (Offsets) and the Belgian Economy[3]

4.2.1 Definition and Classification

The result of the above-mentioned policy is that offsets (called "economic compensations" in Belgium), permitting a high degree of local content, have become a prerequisite in Belgium's armament procurement policy. The only important exception was the procurement of M109 155 mm artillery guns, which were bought off-the-shelf. From the viewpoint of Belgian industry, offsets allow participation in the production of the purchased equipment by producing material or components at different stages of the production programme. They are in fact a modern kind of barter, but from the Belgian point of view, offsets are preferable to other forms of countertrade, because they can promote industrial and trade development on a long-term basis.

Within the framework of Belgian economic policy goals, offsets are thus to be considered as deals struck between the Belgian government and companies, that require an equipment supplier to buy goods from its client country or company at a value equal to a certain percentage of the primary sale's cost. As a result, the prime contractor commits himself to make purchases from Belgium sub-contractors rather than from those in the producing country.

In Belgium, there are three sorts of offsets:

- **Direct offsets** represent the national economy's shares in producing the equipment and in the supplies, work and services incorporated in the defence equipment that is the subject of the contract and is being produced

only to meet the needs of the Belgian army. Direct offsets are directly related to the product delivered.

- **Semi-direct offsets** characterise the workload of the national economy in producing the equipment and in the supplies, work and services incorporated in identical equipment to the equipment specified in the contract, but being produced either for the originating country or for third countries. Semi-direct offsets are thus also directly related to the product delivered.
- **Indirect offsets** represent the products, supplies, work and services intended for the countries that awarded the contract, in any field of activity other than those which form the subject of the contract. Hence, indirect offsets embody the purchase of unrelated products or services.

4.2.2 Advantages of Offsets

The main objective of arms' procurement is, of course, the fulfilment of defence needs. This aim can, however, be combined with the pursuit of other economic policy goals. Belgium considers offset agreements politically and strategically advantageous for both governments and companies. For governments, offsets represent a means of ensuring economic development while exercising a certain degree of leverage over the contractor. Indeed, the aim is usually not to improve the political acceptability of the foreign source, or even to procure arms at cost-effective prices; these objectives are in fact secondary. After the satisfaction of military needs, the main goal is the achievement of important cyclical macroeconomic advantages such as an improvement in employment levels, the economic growth of domestic defence and other industries, and improvements in the distribution of income and the balance of payments. In addition, the Belgian decision-makers repeatedly mention the following main features of offsets deals:

- the promotion of the growth and the development of high technology industries thanks to the transfer of advanced military technology;
- the compensation of trade imbalances created by large arms sales;
- the creation or preservation of foreign exchange;
- the achievement of competitive advantages;
- the access to new commercial opportunities thanks to the transfer of international marketing expertise and global reach of large companies;
- the promotion of investment in local industry and of local value-added programmes; and
- the creation of jobs at the local level.

Indirect offsets allow the Belgian economy to benefit from indirect and induced effects in all its sectors. They can be achieved through trade, development, work force training, and they can include ventures in high-technology

manufacturing, environmental efforts, health care projects, telecommunications, or anything that brings value-added to the Belgian economy. The political, economic and even psychological importance of offsets in Belgium can be confirmed by the fact that whenever an important defence contract is signed, the media never fails to call it the "contrat du siècle", the deal of the century!

Since the investments are partially financed from abroad, their risks are low and their costs rather limited. Consequently, offsets have also been responsible for structural macro-economic advantages. Without offsets, Belgium would never have been able to sustain aircraft or engine manufacturers, and the acquisition of know-how in advanced modern technology would have remained a dream.

Belgium views offsets as a benefit to both parties in defence arms deals. Without offsets, the government would never have been able to afford expensive foreign weapon systems; offsets are considered as a way of doing business. This view has been supported by suppliers. In the past, the US industry repeatedly expressed its worries that amendments stiffening requirements for reporting offsets on defence exports would hamper efforts to export US defence goods in a competitive world market.

4.2.3 Disadvantages of Offsets

From the economist's point of view, direct and semi-direct offsets present significant handicaps as well. They are antithetical to free trade and they can alter the nature of sales transactions by including terms unrelated to price and performance of the product or services. Offsets can introduce market rigidities, cause growing state intervention, and create distortions in the world economy and trade.

Offsets are not only market-distorting, but also economically inefficient, especially in the long-run. Whereas southern NATO nations have used offsets extremely well as an industrial development tool, Belgium used them more as a means to maintain its defence industrial activities and to improve its technical quality. They are, however, short-term solutions of little use in the long-run. Offsets operate on a contract-by-contract basis, with sub-contracting benefits drying up once the foreign supplier has completed its offset obligations, because compensation contracts do not compel the principal contractor to maintain industrial ties with the subcontractors. Offsets are evidently more efficient in order to help an infant industry to establish new technological activities, to grow and to mature, than in a well established economy, subject to structural difficulties and to considerable competition.

Offsets have led to limited co-operation on an *ad hoc* basis, thereby weakening the Belgian defence industry. Priority was given to short-term protectionist

behaviour of firms versus a long-term cost-efficiency rationale. It is hardly surprising that offsets gave rise to heavy lobbying, and consequently to an overprotection of national enterprises and to the existence of an overcapacity in the production of arms systems, taking into account the small size of Belgium's defence industry. Offset orders became essential for political and protectionist reasons and led to adverse effects in the long-run, because direct and semi-direct offsets do not encourage diversification. The firms that profit from the existence of offsets become dependent on them, eventually relying completely on them, and perpetuating their underdevelopment or dependence by masking the need for rationalising or to restructuring. As a result, offsets masked shortcomings and prevented management from taking appropriate measures. Direct and indirect offsets favoured the persistence of surplus or competing capabilities, non-profitable activities, piecemeal contracts and of firms lacking initiatives. Considering that Belgium never developed a coherent network of major defence firms and subcontractors, the defence production sectors were not restructured in time and the technological revolution did not give way to the expected qualitative results. Belgium's defence firms were largely offset dependent. Realising this after a few weeks in office, Mr Delcroix, the new Minister of Defence declared that he intended to abandon any offset policy in the future.[4]

But even on a contract-by-contract basis, the advantages are not ubiquitous, since offsets are not costless. More often than not, the decision to purchase equipment was made at a point when it was no longer possible to share in its research and development. In addition, production costs in Belgium tend to be higher than in big weapon producer countries, especially due to higher labour costs. Belgium is thus forced to pay an estimated 20 to 30% penalty for the purchased equipment. Moreover, the burden of this additional cost is carried by the MoD alone. However, offsets also pursue purely economic goals, which would justify funding by other departments (such as Economic Affairs, the Treasury, and/or Employment and Labour) as is general practice in the Netherlands. As a result, the offset policy diminished the purchasing power of already scarce defence resources.

As far as indirect offsets are concerned, the economic rewards seem to be the most interesting, because they can be spread through the entire economy. In reality, their drawback is in fact even greater than that associated with direct offsets. As offsets move into the civil sector, an increasing number of third parties become involved in economic compensation agreements, with the execution of offsets programmes increasingly being extended beyond the main contractors and sub-contractors. This is a convenient way for the main contractor to fulfil its obligations to the Belgian economy only in part, in quantitative as in qualitative terms, since it is extremely difficult to assess whether a foreign

procurement is a consequence of the 'offset' contract: the same purchase could have been placed in the receiver's economy anyway! In one important case, the prime contractor demanded that purchases made prior to the expression of the need for a particular capability be accepted as an indirect offset. Belgium eventually partially accepted this claim, after much political and diplomatic debate, although such purchases had clearly not resulted from the offset agreement!

Contractors can also rely on several manoeuvres to dilute the impact of offsets on their profits, such as trading offset credits with other firms or overestimating the US$ value of the technology they are transferring.

Finally, it should be emphasised that offsets also represent a serious handicap for the selling country. Even if it is true that there is a long-standing industry position that the benefits of the sale of armament would be lost without offsets, government officials often add that offset arrangements erode the selling country's industrial base as technology and component production are transferred to foreign sources. Without the offsets associated with the sale of the European F-16's, for instance, the US defence subcontractors would have had the opportunity to compete for more of the subcontract work associated with this programme.

4.2.4 Control and Management of Offsets

The economic disadvantages associated with offsets can only be overcome through the careful management and control of offset-related activities. Both companies and politicians need to be reassured about the benefits of what is essentially a long-term commitment. In this respect, governments need to establish institutional and legislative frameworks for operating offsets agreements, and take into account all aspects of an economic compensation commitment, including the enforcement of offsets obligations, technological and intellectual property rights, and technology performance.

The final decision on Ministry of Defence purchases is made by the CMCES (Comité Ministériel de Coordination Economique et Sociale — Ministerial Committee for Economic and Social Co-ordination). This co-ordinates the acquisition process and makes its decision according to operational, financial and economic criteria. With regard to contract management, a section within the Ministry of Economic Affairs, called Defence and Industry, is responsible for the economic aspects of each contract. It specialises in the analysis of the economic and industrial aspects of defence purchases. Its objective is to promote the participation of Belgian industry both in the development and production of material corresponding to the MoD's needs and in co-operation programs between NATO member countries. In order to perform this duty, the Defence

and Industry Service keeps an inventory of the capacity of the defence industry and participates in national and international working groups when economic aspects of the equipment programs are concerned. It collects and conveys documentation and information to Belgian firms who wish to take part in defence programs and promotes multinational co-operation in defence production.

The responsibility for controlling the implementation of offsets remains with the Industrial Economy Section of the OBEA (Office Belge de l'Economie et de l'Agriculture — Belgian Bureau of Economy and Agriculture). Created in 1967, the OBEA takes into account the following criteria:

- Effectiveness: are the orders actually placed?
- Novelty: do the purchases represent new or additional business for the Belgian firms?
- Belgian value added: what percentage of the value of these orders is manufactured in Belgian plants?
- Technology: What technological improvement or renewal is brought about by this production?
- Employment: how many jobs are created or preserved and what is their specific value?
- Regional distribution: what is the regional distribution in terms of production sites?

The OBEA reports to the Minister of Economic Affairs through Defence and Industry; over the last 25 years, it has had to control over BEF 308 billion worth of offsets precipitated by some 320 contracts.

4.3 Offset Policy and Federalisation

Although Belgium is a small country, for historical reasons its defence industry is unevenly distributed across its three regions. The industrial revolution and the subsequent economic development in the secondary sector largely took place in the southern part of the country. The defence industry grew up in the same location. Table 6 clearly shows the discrepancy between the general distribution of population and estimated employment in the defence-related industry in 1991. The latter has always been largely located in Wallonia (70% of total direct manpower) and Brussels (8% of total direct manpower), with the remainder being in smaller companies and sub-contractors in Flanders. For obvious geographic reasons, the shipbuilding sector is exclusively located in Flanders. As a result, each region approaches the problem of economic compensation in a different way.

Table 6: Regional Distribution of Defence Production in Belgium

	Brussels	**Wa**llonia	Flanders
Population	11%	33%	56%
Direct employment in the armament industry	8%	70%	22%

Source: See Table 2

Since Flanders lacks a military industry, the offsets that it seeks encourage future technological development. It is interested in spin-offs from defence purchases because they enable local companies to become more independent from military contracts. Furthermore, by insisting on high quality offsets, the Flemish industry obtains the basic technological knowledge to foster new high technology products. The Flemish defence firms generally consider direct and semi-direct offsets as more interesting from a technological point of view in the short-run, but as a poor solution in the long-run, since they rarely offer follow-up contracts. Indirect offsets generate more (non-military) future contracts.

Wallonia and Brussels have to deal with a completely different situation. Their companies operating in the defence industry are highly specialised in the production of military goods, and lay emphasis on direct and semi-direct offsets. They also try to stretch the contracts into the future by negotiating as many semi-direct offsets as possible. In recent years, Wallonia has become more interested in using R&D subsidies for civil programmes to fill the gap between military contracts or to compensate for lost military production.

Since the beginning of the 1970s, Flemish companies have begun lobbying in order to obtain more offsets and to penetrate the aerospace market. An industrial pressure group, the FLAG (Flemish Aerospace Group), succeeded in persuading the government not to take the existing production capacities into account and to spread the economic compensation associated with defence contracts across the three regions according to their population and their economic capacity. The offset associated with the second buy of 44 F-16s clearly shows the impact that this policy change has had, as well as the differences between the regions. The initial F-16 buy did not provide for any regionalisation of the offsets. As a result, the natural distribution of production activities resulted in Wallonia and Brussels receiving some 90% of the total offset. For the follow-on purchase, however, FLAG succeeded, thanks to heavy lobbying, in having restrictions imposed on the regional distribution of offsets (see Table 7).

Table 7: Total Offsets and Regional Distribution (in %) of the F-16 Follow-on-Buy

	Wallonia	Flanders	Brussels	Total Value
Direct and semi-direct offsets	48	0.2	14.5	62.7
Indirect offsets		37.3		37.3
Total	48	37.5	14.5	100

Source: MoD and Ministry of Economic Affairs.

In the 1980s, Belgium's constitutional changes towards a three-way federalisation of the state, implied an important shift in economic and industrial policy decision-making, away from national and towards regional authorities. Different interests and the absence of any political and financial co-ordination led to completely different industrial strategies.

After long years of laborious discussions, a political agreement was reached in 1985 on the distribution of future offsets: 54 to 56% would go to Flanders, 34 to 36% to Wallonia, and 9 to 11% to Brussels. The FLAG, however, immediately claimed a share of at least 65% for Flanders. Just as each firm tries to outbid its rival, so each region tried to do the same. As a result, the decision-making process, even for minor equipment, became very slow and all Belgian defence companies became shackled by the handicaps of fragmentation and regional division. In addition, the regional distribution of offsets generated some perverse incentives. Some companies decided to open additional production facilities in other regions in order to benefit from higher offset orders, which led to even more excess capacity. Another unwelcome response was that foreign firms began to make their proposals directly to Belgian firms and not to the MoD, hoping that local authorities, newly-endowed with cash under the country's regionalisation policy, would be far more willing to fund a project rather than the financially strapped military. Moreover, it is not always obvious whether an offset should be considered beneficial to Flanders, Wallonia or Brussels. The offset activities of SABCA in Haeren, near Brussels, are an example of the complexity of the matter. If the location of the head office determined the beneficiary of the offset, it would be imputed to Brussels. If the language spoken by the workers was the criterion, 73% would be credited to Flanders since 800 of the 1,100 workers are Flemish. Another distribution would be possible if the overall activities of SABCA, including those in Wallonia, were to be considered.

More recently, substantial reductions in demand, as well as the growing constraints on available resources, have led the politicians in Flanders and Brussels to abandon all important economic support for the defence-related

industry. Only the Walloon region continues to support its defence industrial activities, though in a fairly moderate way.

4.4 Case Study: The F-16 Program

4.4.1 The Requirement

In 1973, the Government expressed the need to replace the Air Force's F-104G Starfighter combat aircraft from the early 1980s. Similar statements were made by the governments of Norway, Denmark and the Netherlands. The four countries decided to pool their purchases and buy the same aircraft in order to benefit from longer production runs and the better offset that would follow from their increased bargaining power. To present themselves as a buyer's cartel in front of the potential sellers, they formed a common steering committee.[5]

4.4.2 The Choice

Taking into account the needs of the four Air Forces, it was rapidly established that only three fighter aircraft came into consideration: Dassault's Mirage F1 M53 (France), Saab-Scania's Viggen (Sweden) and the winner of the American contest between General Dynamics' F-16 Fighting Falcon and the Northrop Cobra; the USA chose the F-16 in 1975.

For political and military reasons, the Viggen never had a real chance in Belgium. Since Sweden was a neutral country, the supply of aircraft and spare parts in periods of crisis would have been too hazardous. In fact, the government of Sweden never expected to sell its aircraft to Belgium and France. It only hoped that the consortium of the four buying countries would fall apart, in which case they were confident of being able to sell the Viggen to Norway and to Denmark.

Being a neutral country, Sweden could not comply with another European demand. The seller country was asked to commit itself to put a certain number of the same aircraft that the European consortium would buy at the disposal of European defence. France promised to engage as many aircraft as the largest number that would be bought by a single country, and the USA committed itself to 240 aircraft to be stationed in Europe.

After thorough testing and evaluation, it appeared to the Belgian MoD that the F-16 presented slightly better technical and military characteristics than the Mirage F-1, but probably not in a decisive way. The final decision would clearly depend on the economic analysis of the offsets proposed by the USA and France.

In May 1975, the three other countries decided in favour of the F-16. In Belgium, the Flemish pressure groups supported the American case, while the aerospace industry, which already had experience of co-operating with Dassault after a purchase of Mirage V fighter-bomber aircraft, was in favour of the French aircraft. This led to several delays, and to the other countries pressing the Belgians to follow their decision as soon as possible. In the end, after several visits by the Belgian Minister of Defence to Paris and Washington, the government opted for the F-16, mainly for two reasons: first, a possible decision not to follow the other three countries would have led to a rupture of the consortium and would have compelled Belgium to accept all of the disadvantages of a small scale deal; and second, the offsets offered by the USA were undoubtedly more attractive than the French proposal.

During negotiations, the French government argued that the consortium should purchase the Mirage in order to facilitate the development of a real European aerospace market. Impressed by this argument, three members of the consortium decided that a certain number of the proposed aircraft purchases were subject to confirmation by their respective governments prior to 31 May 1978: Belgium 14 F-16As; Denmark 10 F-16As and the Netherlands 16 F-16As and 2 F-16Bs. The value of these aircraft was meant to give birth to a common fund in order to finance joint R&D projects in Europe. Attempts were made to include the UK and Italy but these failed, and the three countries decided to take up their respective options and to buy all F-16s.

4.4.3 The Specifics of the Contract and its Offsets

In the MOU[6] (Memorandum of Understanding) between the US government and the four EPGs (European Participating Governments), the parties planned the following F-16 purchases:

- United States: 650 (of which 15% were two seats)
- Belgium: 116 (of which 12 were two seats)
- Denmark: 58 (of which 12 were two seats)
- The Netherlands: 102 (of which 12 were two seats)
- Norway: 72 (of which 12 were two seats)

The prices, based upon January 1975 US$, extended by the US government for the airframe, engine, duplicate tooling and industry management, were contractually established NTE (Not To Exceed) prices contained and defined in signed agreements between the US government and General Dynamics Corporation (GD) and United Technologies Corporation (UT). The FSD (Full Scale Development) share was firm and fixed by the US government. The radar and GFAE (Government Furnished Aerospace Equipment) prices were estimates

added to the contractors' NTE prices. The foreseen unit price of the F-16 was US$6.091 million, with the following breakdown of the NTE price:

- Airframe: US$3.450 million
- Engine: US$1.445 million
- Radar: US$0.372 million
- GFAE: US$0.153 million
- FSD Share: US$0.470 million (including engine)
- Industry management: US$0.005 million
- Duplicate tooling: US$0.196 million

The EPGs and their industries were assured that they would be offered the opportunity to participate in and obtain maximum benefit from work performed during full scale development. This would facilitate the preparation of drawings and production tooling for the European industries to meet jointly established production schedules.

The US government provided data for and encouraged participation in future aircraft, engine, avionics and munitions updates or modification programs for the F-16 aircraft. The US also promised to utilise the EPGs' depot level maintenance and overhaul facilities, and industry maintenance facilities in these countries on a mutually agreed basis for USAF F-16 aircraft operated in Europe. Authorisation was also given to GD and UT to place contracts with EPG subcontractors for the US requirements and for third country sales as was mutually agreed between GD, UT and their respective subcontractors.

The US government guaranteed European industrial participation by ensuring offsets for the initial EPG purchase, defined as 100% of the procurement value[7] of up to 348 aircraft, according to the following obligations imposed upon the contractors:

- 10% of the procurement value of USAF purchases of the F-16 aircraft totalling 650 aircraft (final assembly of the USAF F-16 aircraft was to be in the US).
- 40% of the procurement value of all EPG purchases of the F-16 aircraft (final assembly of the EPG aircraft and engine assembly was to be in Europe).
- 15% of the procurement value of all third country purchases of the F-16 aircraft. For any sales to third countries, the US government was to incorporate in the price of the aircraft the average 15% EPG co-production commitments (by procurement value). Non-participation of a European country in a particular third country sale would be compensated for by a larger percentage participation in other third country sales. The US government agreed to continue this 15% participation arrangement beyond the 100% offset commitment, provided reasonably competitive terms prevailed.

Based upon US Government and EPG purchases of 650 and 348 F-16 aircraft respectively, the US Government committed itself to a combined US industry and DoD offset on the F-16 program of 58% of the initial EPG F-16 procurement. Furthermore, assuming third country purchases of 500 F-16 aircraft (total purchase 1,500), the US Government was to provide a target offset of 80% of such initial EPG F-16 procurement. The US government commitment was primarily to be fulfilled with co-production within the F-16 program. However, if this was impossible for any reason, the difference up to the committed offset percentages was to be filled by other compensatory work of comparable technology. It should also be noted that the parts and components which the industries in the EPGs are specifically instructed by the US government or the US prime contractors to buy and to incorporate in European co-production items, were not counted as offsets.

In Copenhagen, the representatives of GD found more than 40 firms that could participate in the production of components and parts for the F-16, but most of these companies were too small. Their industrial structures were below "critical mass" standards and the required capital investments would largely have exceeded their financial capabilities. In Norway, the selection of the participating firms was easier. For these two countries, the MOU stipulated that since Denmark and Norway did not have a genuine aerospace industry, a possible problem in providing sufficient offsets should be compensated by any production work, provided it was at a comparable technological level as the F-16 program.

The US government agreed that insofar as Belgium and the Netherlands were concerned, the first priority for alternative compensation arrangements would be the aerospace industry. Two production lines were constructed: Fokker (the Netherlands) and SABCA (Belgium). In Belgium, the main participants to the F-16 contract and their US contractors are listed in Table 8.

Table 8: F-16 Direct and Semi-Direct Offsets: Items and Main Participants

Item	Belgian Sub-contractor	US Contractor
Aft fuselage and vertical fins	SONACA	General Dynamics
Wings	SABCA	General Dynamics
Final assembly	SONACA/SABCA	General Dynamics
Integrated servoactutor	SABCA	National Waterlift
F100 engine parts	FN	United Technologies
Radar computer	MBLE	Westinghouse
Operational flight trainer	SABENA	Singer Link
F110 engine parts	FN	General Electric
INS Lamina	MBLE	Singer Kearfott

Source: MoD and Ministry of Economic Affairs

4.4.4 Conclusion

As shown in Table 9, the commitment to a minimum offset level of 58% of the cost of the F-16 procurement to the EPGs as a whole was more than satisfied. The target offset of 80% (including third country purchases) was also reached. The distribution of the offset between the EPGs was however unequal, due to their divergent aerospace capabilities. Denmark and Norway, especially, had some difficulties to meet "reasonably competitive terms" as defined by the principles and procedures laid down in Annex A to the F-16 MOU.

Apparently, only Belgium obtained the promised offsets. It should however be stressed that the mentioned percentages refer to turnover figures; in terms of value added activities, the differences between the EPGs seem more reasonable. Nevertheless, Belgium certainly came out of this contract as the principal beneficiary, thanks to the fact that the US government ensured the implementation of the F-16 co-production participating plan, even when the resulting offset exceeded the US government offset commitments. Belgium obtained 35 to 40% of the promised 15% of the procurement value of all third country purchases of the F-16 aircraft. Since — at least theoretically — the third country sales have not come to an end yet, this percentage could rise further. The production sharing commitment established in the MOU remained even in effect for the Belgian follow-on F-16 aircraft purchase of 1984.

For Belgium, the only serious drawback was the final cost of the aircraft. This had over-run by about 30 to 35% and was almost entirely due to the offset. Despite the fact that all terms and conditions applicable to the NTE price, secured for the US government from its prime contractors GD and UT, were accorded to the EPG, the 'Not To Exceed' prices were exceeded. The US government stressed the fact that this was mainly due to significantly higher production costs in Europe than in the USA.

Table 9: Actual Offsets Associated with the F-16 Purchase

Participant	F-16 Offsets (as a % of the cost of aircraft purchased)	F-16 Offsets (third country purchases included)
EPG	58.8%	81.0%
Belgium	77.8%	103.5%
Denmark	53.3%	65.8%
The Netherlands	52.8%	76.1%
Norway	44.8%	67.2%

Source: MoD and Ministry of Economic Affairs

4.5 Case Study: The AIFV Procurement Program

4.5.1 The Requirement

On the eve of the 1980s, the main AIFV (Armoured Infantry Fighting Vehicles) used by Belgium were its 771 M-75 and 534 AMX-13, acquired as early as 1958. Their economic lifetime had already been stretched and the obsolescence of the M-75 was compounded in 1975 when its manufacturer terminated the production of spare parts. In addition, the maintenance costs of the AMX-13 were found to be excessive in relation to its utility. If the Belgian Army was to pursue its mission into the 1980s and beyond, it would need 1,189 new armoured vehicles.

It was assessed, according to NATO recommendations, that the new vehicle would have to meet the following protection, mobility, armament and transport capacity criteria:

- protection from conventional and non-conventional attacks,
- the mobility of a Leopard tank coupled with amphibian capacity,
- endowment with an anti-armoured vehicle gun,
- and the capacity to transport 10 equipped men with a load of about a ton.

4.5.2 The Choice

It was important to acquire only one vehicle for reasons of economies of scale in use and maintenance. It was also desirable to buy a vehicle already in service in other NATO countries, with limited functioning and training costs. Given these constraints, the choice was between the French AMX-10 (a 14-ton aluminium armoured vehicle with a 20 mm gun), the US M113 A1 (11 tons, aluminium-made, and already used by several armed forces), the US AIFV (a 13 ton steel and aluminium vehicle with an optional 25 mm gun) derived from the M113 and manufactured by FMC (Food Machinery Corporation), the French VAB 6×6 (13 ton, in steel) and the Swiss Piranha 6×6 (9.6 tons, in steel). The first three vehicles are full-tracked, the other two equipped with regular wheels. Before submitting their proposals to the government, the military had a long technical and tactical debate on the respective pros and cons of full-tracked and wheel vehicles, and eventually decided to go for the full-tracked solution. Consequently, they proposed a procurement mix of 514 AIFV and 675 M113 A1.

The Belgian government decided in 1979 to purchase 514 AIFV and 525 M113 A1, which did not concur with the planned total of 1,189. The decision to purchase only 525 M113 A1 instead of the 675 initially planned was motivated by the government's desire to reserve the production of 150 vehicles for the Belgian manufacturer ACEC (Aciéries et Constructions Electriques de

Charleroi). Since the Army did not mention ACEC as a potential contender when submitting its preliminary request to the Ministry of Defence, the participation of ACEC in this market surprised more than one observer. It was actually the Ministry of Economic Affairs that introduced ACEC to this market, knowing that the company had been developing an electrical transmission vehicle with the French manufacturer of the AMX-10. However, this project failed although ACEC maintained its ambition to develop a vehicle with electrical transmission and designed the "Cobra" in early 1977. Although the Cobra was not technically ready, the services of the Prime Minister in charge of industrial promotion requested in November 1978 that an order of 100 to 150 vehicles be set aside "in order to give the opportunity to a Belgian company to submit a tender". This was in contradiction with the military's desire for a homogeneous supply of vehicles and for fast delivery (ACEC was believed to need two years for the development of the Cobra) and did not contribute any additional employment to the economy. For the government, however, this seemed to be an interesting opportunity to let a Belgian company design and produce an entirely Belgian-made vehicle, provide a showcase for world markets, and generate technological spin-offs for the civilian industry. In spite of the negative advice of the military, the government awarded a BEF 1 billion "prototype development credit". The decision was made to reduce by 150 units its order of AIFV and M113 A1, leaving it thus at 1,039 vehicles. At the same time, the government took an option on another 150 M113 A1 until 31 December 1980.

The development of the Cobra turned out to be a technical failure and the production stage was never reached. The Army was eventually left 150 vehicles short of its stated needs because the deadline went by without the government realising its option on an additional 150 M113 A1.

4.5.3 The Specifics of the Contract and its Offsets

The initial contract value was BEF 22.1845 billion (in 1986 prices). Apparently, this choice represented the most expensive of the solutions proposed by the military, but it was very attractive in economic terms. Direct offsets to the Belgian industry were set at 70% of total costs (BEF 15.529 billion). Under certain restrictions, 50% of new investment in infrastructure and expenditure on heavy equipment and construction could be counted towards the offset. Direct offsets were to take into account only the first level subcontractors. Indirect offsets were set at 30% of total contract value (BEF 6.66 billion). To be eligible, such contracts had to generate new or additional business and were to be at the same technological level as the object of the deal. Indirect offsets were principally meant to cover production contracts given to BMF by FMC for third country clients. The basis for the computation of the economic offsets was not the

turnover, but the **added** value, i.e. the additional activity for the Belgian economy. The contract also stipulated that if direct offsets were higher than 70%, the obligations regarding indirect offsets could be reduced accordingly.

In 1977, a new company had been formed, Belgian Mechanical Fabrication (BMF), in anticipation of the offset associated with the AIFV program. Its shareholders were ASCO[8] (owning 55% of the capital), CMI[9] (37%) and the holding Groupe Bruxelles-Lambert (8%). This company became FMC's licensee, with its main plant in the industrial zone of Aubange, near Athus (southern Luxembourg province, in the Walloon region). The shells of the vehicles were to be manufactured in Aubange, providing employment during production phase for slightly over 300 employees (150 productive and 50 administrative personnel). The engines and the transmission gear of the vehicles would be imported from the USA, and the guns from Örlikon (Switzerland). The management of the program would be located in the Liège region.

The contract also had a regional distribution requirement, with a margin of ±2%. The Flemish region was to receive 50% of both direct and indirect offsets, the Walloon region 42% and Brussels 8%. Special provisions were made with respect to the allocation of the other activities — and thus the related economic offsets — to one region or another. The regional allocation of production equipment was conceived as follows:

- Equipment produced in Belgium: place of manufacture.
- Equipment produced abroad: if sold through a Belgian company, the headquarters of this company determines the regional location; if the seller is not a Belgian firm or if the equipment is purchased abroad, the regional location is determined by the place where the equipment is installed.
- The sub-contractors' regional distribution is determined by the place of production.
- The regional distribution of offsets is established on the basis of the regional location of the benefiting Belgian companies' production centres, except for orders of a final value greater than BEF 500 million for which the first level of sub-contractors was to be accounted for. BMF's benefits were to be allocated to the Brussels region where it has headquarters.

The AIFV program was also one of the first to present severe cumulative financial penalties. The supplier agreed to a penalty equal to 10% of the amount of the non-respected economic commitments as regards both direct and indirect offsets, taken separately, and to a penalty equal to 5% of the negative spread between the actual regional distribution and the agreed distribution in the contract. A deviation of 2% based on each region's quota was to be tolerated before this financial penalty was implemented.

4.5.4 Conclusion

The contract was signed in 1980 and was supposed to end in 1988. It lasted in fact until 1990, because some direct offsets caused long political discussions on their acceptability. In the end, the government accepted 66.5% direct offsets[10] (thus 3.5% short of the agreed percentage) and BEF 9.5 billion indirect offsets, or 42.8% of the contract value, instead of the promised 30%! As a result, the foreseen penalties on the direct offsets had to be paid. As far as offsets are concerned, the AIFV program can be considered a success.

The MoD considered the cost of the program too high. According to the National Armament Director, the cost over-run of the program came close to 100%, essentially due to the existence of offsets! Moreover, from an economic perspective, the long-run effects are not be so positive either. One of the main reasons for awarding the contract to BMF was the opening of its plant in Aubange, which constituted a real industrial opportunity for this economically impoverished region. But this factory could not be rationalised from an economic point of view since the aluminium input had to be transported from the Antwerp region to Aubange for manufacturing, then back to Antwerp for assembly!

Moreover, after the construction of the 1,039 vehicles for the Belgian Army, the plant has been virtually empty, functioning only for maintenance, though the Americans promised, in addition to the offsets for the Belgian contract, that the Aubange plant would receive all M113 orders for the rest of the world, since FMC was to stop this production and switch to other activities. This promise was, however, never respected. The only order came in August 1989 from the Turkish FNSS (FMC-Nurol Savunma Sanayii A.S.), formed by an association of FMC and Nurol, a local firm. This contract allowed BMF to participate in the supply of components for 285 of the 1,700 AIFVs ordered by the Turkish government.

The question is, of course, whether the construction of the new plant was worth the effort for the production of only 1,039 Belgian AIFVs plus a rather symbolic additional order. In the context of regional employment policy, it can be noted that the plant is still operational. However, only minor contracts have been received and the total workforce has fallen from 300 to 60.

4.6 Appraisal of the Belgian Offset Policy: Asset or Burden for the Economy?

In the opinion of the present author, economic policy goals can be pursued by a defence purchase, on the condition that the primary aim (the acquisition of a

weapon system that responds to military, operational and technical standards) is respected. However, this rationale does not imply that only short-term policies are to prevail. Notwithstanding the benefits that can be generated from *ad hoc* economic offset arrangements, a better approach from the buyer government's point of view is to integrate offset requirements and priorities into development policy.

In the Belgian case, economic offsets have, however, led to limited cooperation on a *ad hoc* basis, which has been responsible for the weaknesses of the defence industry. It is not a surprise that offsets gave rise to heavy lobbying, and consequently to the overprotection of national enterprises and to the existence of an overcapacity in the production of arms systems, even in a small country like Belgium. In the meantime, nothing was done to find a solution for the problems associated with structural disarmament. Belgium never developed a coherent network of major defence firms and subcontractors, the defence production sectors were not restructured soon enough, and the technological revolution did not give way to the expected qualitative results.

It is not extravagant to state that offsets were not only market distorting, but also economically inefficient. Whereas southern NATO nations have used offsets extremely well as an industrial development tool, Belgium used them more as a means to maintain its defence industrial activities and to improve its technical quality. Because the Belgian Government has almost always the required foreign firms from which it bought defence goods to place orders in Belgium as offsets, domestic firms have been overprotected and this has led to overcapacity. In the meantime, little has been done to find a solution to the actual and prospective fall in demand for defence goods. Indeed, there has never been an explicit and rational defence-related industrial policy in Belgium apart from frequent local and regional job-saving actions. Due to the lack of a coherent defence industrial policy, the armament industry therefore went into a crisis more than a decade ago.

The eagerness of the Belgian authorities to protect defence firms against all economic good sense triggered the adoption of belated measures leading to obsolete structures, bad qualitative results and perverse effects, e.g. when the main objective of defence procurement actually becomes the fulfilment of the needs of industrial and employment policy. In this respect, regional or sectoral protectionism plays an analogous role. As a result, costly and excessive production capacities were created or maintained. For example, the decision to buy 44 additional F-16s in 1984 came two years earlier than originally planned in order to assuage the Belgian aerospace industry which lacked other orders to fill the gap.

Belgium's successive governments have not yet been involved with any active conversion-type policy initiative either. They have left it to industry to adjust to market forces. Industrial groups decided to sell their defence activities.

Companies which failed to make profits were sold and several companies were on the verge of bankruptcy. Some were saved; others were merged, swallowed up by foreign firms, or eventually went to bankruptcy. When an important defence firm, PRB, went bankrupt in 1990 and the unions appealed to Wallonia's government for help, the reply was that this was out of the question, because there were no plans to convert the purely military production activities into more stable, civilian markets.

In conclusion, notwithstanding the attractive economic advantages, my assessment is that the economic balance of offsets is negative in the long-run.

4.7 The Future of Economic Offsets in Belgium

As a result of decreasing national defence budgets, the prime contractor base is shrinking drastically in the armaments' market. The future of economic offsets in Belgium is therefore intimately linked with the future of defence procurement. Moreover, another constraint that will undoubtedly affect defence procurement in the long-run is the progress of European integration in the Single Market framework. Its subsequent applications in different sectors[11] will eventually lead to the establishment of a common foreign and security policy and, maybe, to some kind of European armaments market. Just as the nature of NATO can no longer be reduced to a military mould, the role of the EU (European Union) will no longer be limited to the civilian economy. Even if this prospect still seems rather remote, somewhere on the long road to a unified economy, the EU will actively be concerned with the military aspects of the economic relationships within its territory and with foreign countries. Moreover, one of the consequences of détente is that the military component of western security policy yields more and more to political, economic and social considerations. The role of the EU in these areas can no longer be ignored.

This evolution remains, however, at an embryonic stage, and the results today are in no way commensurate with the progress being achieved by the Single Market. Yet, when the time comes for defence to fall under EU regulations, offsets will no longer be admitted as a business practice. Associated with this, the long-awaited suppression of Article 223 of the Rome Treaty — that allows any member state to take measures to protect the essential interests of its security in connection with the production of or trade in armament — will be considered an unavoidable measure in the framework of a common defence policy within the future Political Union.

If implemented, however, such a measure would raise important problems in the Belgian defence industry. When an industry manufactures complete final

military goods (thus separately marketable), it should benefit from a common defence market, provided there are no national rules or specifications preventing it legally or artificially from competing. Yet, this is not the case of the Belgian defence industry, which is entirely made up of subcontractors for foreign companies. This industry suffers from a fundamental handicap: it does not reach the critical size to be reasonably competitive with massively state-supported competitors. Belgian firms could compete successfully in a common market on the grounds of the efficiency of their research, development and production activities. However, these are fields that are widely influenced by state intervention. Financial support of the defence industry in countries like France and the United Kingdom, or even in a small country like the Netherlands, is considerable compared with the Belgian case. The Belgian defence industry suffers from this situation and would presumably benefit from a European market and from European regulations establishing a level-playing field with regard to state support.

The decision, in 1992, not to suppress Article 223 of the Rome Treaty for the time being, augurs ill for a termination of protectionist behaviour. Indeed, in the past, the lack of state support in the defence industry was counterbalanced by offset orders. The suppression of Article 223 would imply the disappearance of offsets and would threaten the defence sector if no measures were taken to allow small countries' defence firms to redeploy in a new competitive European context.

In the meantime, defence offsets are still allowed. The current Belgian government, however, expressed its view that offsets are not the best way of sustaining the industry's access to sub-contracting and supply contracts. In May 1992, the new Minister of Defence declared that in the future, the armament acquisition process in Belgium would no longer be guided by offset policy, but by the postulate of purchasing the best material at the lowest price. He also declared his opposition to any economic or industrial approach to armament contracts, hence committing himself to purely political decision-making.

This statement, that could have resulted in a rejection of any offset policy and of project-specific offsets in favour of a long-term view of *juste retour* for weapon programs, will probably not survive harsh lobbying from the industrialists. In February 1993, the Minister backtracked to some extent when, in a declaration to the FLAG members, he commented that offsets must pursue prospective goals, and that they must offer a high technological added value to the economy and that claimed offsets must be substantiated by thorough verification. The abandonment of offsets seemed to have succumbed to the pressure from national industries and certain government sectors to increased international defence co-operation. With declining defence budgets there is less work for national defence industries; consequently, many companies want to secure government contracts.

When the Belgian government resumes its purchases of weapon systems, Belgium will probably continue to invite prime contractors to provide offsets until a Single Market for armament exists. The only difference might be that offsets will no longer be project specific, i.e. required and calculated for each order, but package-related, which means that offsets would be determined for a package of several projects together. This might, however, further weaken the purchasing power of Belgium's weapon acquisition budget, even in the short-run. The trend toward internationalisation of weapons systems might not survive the increased calls for protectionism that will likely follow the significant contraction of production brought on by the reduction in purchases by most countries. The prime contractors might have legislation enforced allowing foreign countries to retain offsets, but at a high price. By way of illustration, in the US, a recently proposed bill states that if the DoD enters into a contract with a foreign purchaser or a country that demands a favourable offset, the US Secretary of Defence must require that an arrangement be included in the pact benefiting US firms, especially subcontractors, injured by the offset policy of the foreign firm or country concerned. Should a foreign country or firm that demands favourable offsets purchase a weapon system from a US firm, the President of the United States is to be notified as to the amount of damage the offset will cause US firms. The President would then be required to recover that amount from the foreign government.

Offsets strengthened Belgian defence firms in the short-run, but made them vulnerable to structural changes. The improvement in East-West relations, the fall of the Berlin wall, and the collapse of communism hastened or exacerbated the crisis. Today, the Belgian defence industry is faced with an extremely limited choice. Theoretically, the future could offer three possible strategies: put an increased emphasis on foreign sales, allow national companies to merge or to be sold, or get out of the defence business. The first possibility is no longer a realistic option taking into account the increased competition from Third World countries, from industrialised partners, and from the former Warsaw Pact producers. The phase of mergers and buy-outs has already been largely completed. Since the end of the 1980s, the defence industry has demonstrated its determination to build an improved industrial base for European defence by increasing mergers, teaming and joint ventures. As a result, more than 80% of the "Belgian" defence industry already belongs to foreign investors. The current mergers, regroupings and take-overs by foreign firms will nevertheless, in most cases, not automatically lead to an international division of labour, taking into account the parallel efforts to rationalise, reduce production costs, curtail overall expenses and protect national production capacities. The only remaining option for other companies which cannot adjust to the new situation is therefore to disappear from the defence markets.

Endnotes

1. In Belgium, this topic is extremely sensitive in the political and economic realm. As a consequence, very few official data are published about the impact of offsets on the defence industry, the distribution of offsets (especially among the three regions in the recently federalised country), and the degree of fulfilment of the offset obligation. The author sourced the data that is not publicly available from his personal knowledge, from unofficial statements, from interviews and from inside information. Purely speculative statements or allegations have been discarded.

2. Van der Stichele, M., Commandes publiques et clauses économiques, in Bulletin de Documentation, Ministère des Finances, Bruxelles, Octobre 1983.

3. Struys, W., Aspects économiques de la production de systèmes d'arme dans l'Europe des Neuf, PhD. dissertation in Economics, Université Libre de Bruxelles, Bruxelles, 1977, p. 98–99 and 296–298, and Struys, W., Défense et Economie: Mythes et Réalités, in Sécurité et Stratégie No. 26, Bruxelles, Mai 1989, p. 110–112.

4. Mr Delcroix declared on May 22, 1992, to Belga, Belgium's press agency that "... the choice of [defence] material was all too often determined on economic grounds and that the previous governments used to attach more importance to the economic compensations than to the order itself. I intend to abandon the economic compensations policy; I advocate a political, rather than an industrial approach of purchase of armaments."

5. For the history of the program, see Bontinck, P., Ekonomische aspekten van het F-16 multinationaal produktieprogramma, Koninklijke Militaire School, Afstudeerwerk, Brussel, 1978.

6. Memorandum of Understanding between the government of the United States and the governments of Belgium, Denmark, the Netherlands and Norway relating to the procurement and the production of the F-16 aircraft, signed on 9 June 1975 by the Belgian Minister of Defence, Mr. Paul Vanden Boeynants.

7. The procurement value is defined as the dollar value of aircraft flyaway cost plus initial spares, support equipment, data, training equipment and the pro-rata charge for non-recurring costs. For Belgium, this cost was 878.9 million US$.

8. ASCO, created in 1954, is specialised in precision engineering and received its first defence contract in 1960 for NAMSA. ASCO manufactured a variety of armament and precision mechanical components for missiles and armoured vehicles.

9. CMI (Cockerill Mechanical Industries), is a subsidiary of the steel giant Cockerill-Sambre whose capital is predominantly owned by the Walloon Region (98.2% in 1989). In the defence sector, CMI manufactures a turret and a 90 mm gun for light armoured vehicles. In October 1987, when the order for the Belgian Army was completed, CMI became the only shareholder of BMF, justifying this operation by the fact that BMF's activities were complementary to those of CMI's Defence department.

10. If Economic Affairs had been strict, only 64% would have been accepted. As a result of the political discussions, the currency fluctuations of the US$ and the CHF were taken into account, as well as the bankruptcy of the Forges de Jemappe, a Belgian subcontractor. Note that the Belgian government refused to counterbalance the deficit of direct offsets by the surplus of indirect compensations.

11. For the effects of the Single Market, see Struys, W., The Internal Market for Defence: Implications for the Different Member States, Paper presented at the CEPS (Centre for European Policy Studies) Policy Seminar No. 44, "The Future of the European Defence Industry", Brussels, 5 June 1992, and Struys, W., The Grand Market and Arms Co-operation in the European Community: Problems and Prospects — Le Marché Unique et la Coopération en matière d'armements dans la Communauté Européenne: Problèmes et Perspectives, Paper presented at the "European Security and Defence Economy after 1992: New Challenges and Opportunities" Colloquium, Defence Study Centre (Belgium) and The Institute for Foreign Policy Analysis (USA), Palais d'Egmont, Brussels, 22 June 1990.

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