ERSA Congress 2002 – Paper # 89

Structural Changes in the Defence Industry – Opportunity or Risk for Regional Governance Capacities?

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- abstract -

The defence sector lost its unique status and approached civil production conditions. Nevertheless regions with a high concentration of defence industry still face a specific framework for their governance processes marked by insufficient information, a strong involvement of national institutions, unapproachable major companies with national orientations and a traditionally passive regional level relying on the external initiatives. Two European regions, Midi-Pyrénées in France and the South West in England, with a high concentration of defence production in the field of aerospace are compared. Their experiences give insight into which factors are decisive for regional governance capacities, and into which strategies efficiently lead to a more endogenously based, long-term innovative development of their regional economies.

1 Introduction

Regional development, military production and governance processes build up the three dimensions of this study. In the last decades the traditional way of regional planning was discussed with multifaceted arguments. One point, however, was always stressed: the crisis of top-down, hierarchical decisions and implementations. Bottom-up based, horizontally oriented and softer modes of governing seemed more efficient in reaching innovation, adaptability and sustainability of regional economies. Consequently, co-operative procedures and networking are among the favoured governance instruments. They currently dominate regional development in theory as well as in practice.

Traditional characteristics of military production like the strong national involvement, the secrecy, or the hierarchical structure of the production contradict these endogenous and horizontal approaches. In spite of this, for many years the development of regions with a high concentration of defence industry was guaranteed[1]. The national commitment to financially and politically support activities in the field of military production ensured the technologically progressive and innovative industrial base and created *"state-dependent high-tech regions"* (STERNBERG 1995:302). Less stability, dependency on external non-influencable determinants and a lack of momentum were the price to be paid for fast growth and a dynamic regional economy.

More than a decade has passed since the end of the Cold War. These years have shifted the framework for the defence industry, at the political side by a smaller commitment to the protection of the national military production, at the industrial side by far reaching structural changes and concentration processes. Today the military industrial base presents itself in a different manner. Former peculiarities are less pronounced and conditions of defence production have been partially adjusted to commercial ones. Thus, also governance processes in regions marked by a strong defence industry are facing new challenges. In this context the paper focuses on the following three particular questions:

- First, do regional economies with a high proportion of defence activities possess specific conditions for regional governance processes?

[1] For studies of the relation between defence spending and the economic growth of the benefiting regions cf. for instance BREHENY 1989.

- Second, which governance capacities are at the regions' disposal considering the characteristic features of regional defence production and the national interest in it?
- And third, which governance strategies provide an efficient way of implementing an adaptable and long lasting innovative development of these defence regions?

Therefore, Midi-Pyrénées in France and the South West in England as two examples for regional economies with a high concentration of defence activities are compared. Both are marked by an important proportion of military production in the field of aerospace, but their institutional, political and cultural frameworks for regional governance processes differ. In the following, before presenting the situation of the two regions, some general explanations about governance and defence production in relation to regional development will be given.

2 Regional Governance Processes

Governance processes can be described in a simplified way as problem based resolution oriented activities. They comprise different phases, the perception of the problem, the definition of aspired objectives, the recognition of capacities of action, the choice of strategies, their implementation and their acceptance by the addressees, the evaluation of achieved effects and their feed-back. Each of the single phases is multi-determined. Classifications of governance processes as linear, mono causal and rational therefore do not meet the complexity of the superimposed and interwoven steps, decisions, and influences in governance reality (SABATIER 1993:117/118).

The development of governance theories reflects the stepwise consideration of this complexity in which governance processes are embedded and by which they are significantly determined. From the planning euphoria and planning optimism in the 60ies to the analysis of political steering processes in the 70ies and early 80ies, the first paradigm was policy development and policy implementation with a top-down, or legislator's perspective. Subsequently, attention to policy failures rose and led to an extension of the first theories. Now, the addressees of political control and herewith a bottom-up perspective were included. Nevertheless, central policy effectiveness was increasingly questioned[2] and the emphasis of governance theories changed from the state as the steering centre to alternatives of societal governance. Market principles on one side and horizontal self-organisation on the other side constitute the dominating alternatives in governance discussions (MAYNTZ 1998). The latter co-operative and horizontal forms of self-regulation and policy development induced a redundant use of new and soft modes of governing, especially at the regional level. This integrative *governance* approach, which covers all forms of social coordination, trans-sectoral and trans-institutional, gained importance and has become the prevalent form of public problem solving.

This recognition of the specific governance capacities of all kinds of corporate actors was accompanied by the steady rise of the regions. The regional level provides the required position between proximity and distance for effective networking and co-operation processes. Therefore existing potentials can be used optimally in a political, in a social, and in an economical sense. In this context *regional governance* processes were emphasised as one substantial contribution for mobilising endogenous potentials in the region to ensure an innovative development (e.g. FÜRST 2001:3).

Regional governance in many aspects shows determinants similar to the ones stressed by the theories of regional development in general. Significant influence is admitted to the social, cultural, and institutional environment. Governance efforts are embedded in the tacit norms and values of the region, which facilitates the compatibility of single strategies and approaches. Regional identities and the development of a kind of collective thinking additionally foster the coherence of individual interests in the region. All of these characteristics are equally underlined in the so-called *Milieu*-studies of regional development theories. Regional governance is moreover based on co-operative and co-ordinative procedures requiring interaction and communication between the different actors with their diverse interests. These processes are further elaborated in the networking theories, which particularly highlight the importance of trust and credibility. Moreover, information, knowledge, creativity, and ideas are considered as substantial prerequisites for effective regional governance. These features facilitate firstly to understand faced governance partners, secondly to remain up to date in one's strategies permitting

[2] In this context the argumentation of Luhmann (1981) and Willke (1987) is of siginificant importance.

immediate adaptation to changing circumstances,[3] and thirdly to take full advantage of the scope of action placed at the region's disposal (SABATIER 1993:137).

Governance capacities are defined by objective external restrictions, by their subjective perception as well as by individual, social, and cultural conditions. All governance processes are evolving in the tense field between the advantages of co-operative processes and co-ordinated strategies on one side and the need for democratic legitimisation and hierarchical normative fixation of negotiated results on the other side. Yet, hierarchical control and horizontal approaches are not mutually exclusive (e.g. SCHARPF 1993:70). They are distinguished by different advantages and the combination of their specific capacities may be more efficient than the application either of both alone. These factors are altogether influencing regions' capacities to govern their economic development. Thus, no unequivocal definition of governance capacity can be given. Instead, governance as a functional variable, remains strongly dependent on its specific context.

3 Defence Production and the Regional Level

To understand the specific context of regional military production and its impact on regional governance strategies, the following aspects and changes of the defence sector in the aftermath of the Cold War have to be considered:

- Defence production is a supra-regional policy issue. For a long time it was exclusively nationally determined, even excluded from jurisdiction by the European Commission (art.223 of the 1958 Treaty of Rome, art.296 Treaty of Amsterdam) (LOVERING 1999:336). Decreasing military budgets and the strong competition with the United States induced a stepwise Europeanization of defence industrial matters (e.g. "*Organisation conjointe de coopération en matière d'armement/OCCAR*").
- Demand did not only decrease but also shifted from traditional military goods to more knowledge driven productions, where new technologies were integrated especially in the field of aerospace. Additionally, the political support of defence industry in general diminished due to a difficult public justification considering the im-

[3] The theories of the "Learning Region" have accentuated this for the regional development in general (cf. MORGAN 1997).

proved international security. Military production partially lost its exceptional position in national economies and approached conditions of commercial production. Nevertheless, some of the traditional features prove pertinacity and remain part of the defence production. This includes high research intensity, little consideration of cost aspects in development and production, the orientation towards state orders, few other marketing experiences, inflexible and hierarchical organisation of the production chain, secrecy rules and aversion against information transfer (KÜCHLE 2001).

- Even if structural changes in the defence industry are politically intended and induced, they develop a momentum on their own. Companies not only react to political decisions but also initiate them. Therefore, objects and subjects of strategies are interwoven and sometimes blurred, building up the much cited defence industrial complex with its tight interrelations at the national level.

- Adaptation and restructuring at the defence industrial side concentrates on strategies also chosen in the commercial production. Many of the processes are focused on diversification to strengthen or to reduce the defence dependency. Export strategies are intended to enlarge the market, mergers and internal restructuring to broaden production lines. International concentration processes are dominating, beginning at the prime contractor level and continuing at lower tiers of the supply chain[4]. For most companies involved in defence business, military production continues as only one part of total turnover, hardly any of them is 100% dependent on defence production any longer (DITTMAR/ZAHLNER 2001). Conversion, as a definite and deliberate exit of defence production by using existent resources for civil purposes, was only applied in a few cases. These were mainly small projects without substantial diffusing effects on regional economies. Thus, conversion remained rather a theoretically desirable concept, discussed by scientists and politicians.

- In most countries, defence production is regionally concentrated. Nevertheless defence companies are often not well integrated in their regional production environments. Important relationships like input or output interactions, exchange of human capital, and of know-how or other formal and informal connections are lacking

[4] The German DASA, the Spanish CASA, and the French Aerospatiale merged in 2000 to form the EADS (European Aerospace and Defence Systems). Likewise, British Aerospace merged with the defence division of GEC Marconi in 1999 and with Matra Dynamics in 2001 and became BAe Systems.

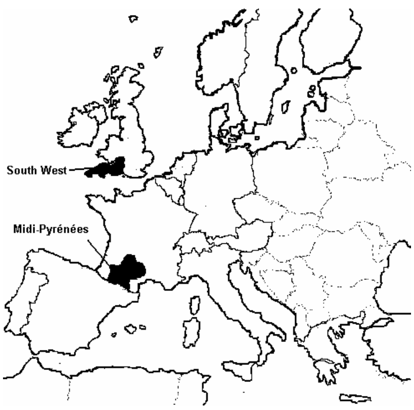
(LOVERING 1989). Their relations and orientations are above all nationally focused. Inter-firm contacts are determined by technological and not by geographical proximity. Besides, these relations are quite selective but strong, hierarchically organised with a clear division of responsibilities (RAVIX 2000).

- Even if most of the competences relating to defence production are kept on the national level, central governments show only small engagement to intervene supportively in regional development problems related to the defence production. Some small programs were launched. All of them are caught in the dichotomy between the effort to reduce the (regional) defence dependency on one side and to maintain innovative and competitive defence companies on the other side.

4 Empirical Experiences of two European Regions

The empirical experiences of Midi-Pyrénées in France and the South West of England (see Illustration 1) give insight into the link between governance and defence production in relation to regional development.

Illustration 1
The regions Midi-Pyrénées in France and the South West of England



Source: author's own illustration 2002.

4.1 The Region of Midi-Pyrénées

Covering more than 45.300km², Midi-Pyrénées is the largest region of France. More than half of the 2.55 mio. inhabitants (1999) as well as a significant part of the regional industrial activities are concentrated in the few urban areas of the region. Well into the 80's, Midi-Pyrénées was characterised by its rural tradition and the weakness of its industrial sector. Since then, the influences and stimuli of high-tech activities, especially of those linked to the regional aerospace and defence industry, led to important rearrangements of the economic structure with a significant rise of electronics, communication technologies and services (SGAR 2000).

Defence production constitutes an integral part of the regional aerospace industry. Activities date back to the strategic position of the region during both World Wars, far away from the front. Over the ensuing years, military and commercial production in this field were continued with mutual enrichments. National research funds, acquisition contracts, state-owned companies and a strong national interest in protecting its defence industry paved the region's way to its renowned place in the international aerospace production of today. The defence and aerospace industry in Midi-Pyrénées consists of about 20 major companies with more than 13.000 employees and of more than 490 small and medium sized companies (SMEs) with about 23.000 employees. Alltogether, approximately 65.000 jobs in the region are directly or indirectly dependent on the aerospace sector (MP-EXPANSION 2000:20). Concentrating on the "pure" defence production 8.500 regional employees in about 180 companies (5,75% of the regional industrial employment) may be classified as defence dependent (see Table 1) (DRIRE 1997:9ff).

Table 1
Defence Dependency in Midi-Pyrénées (1997)

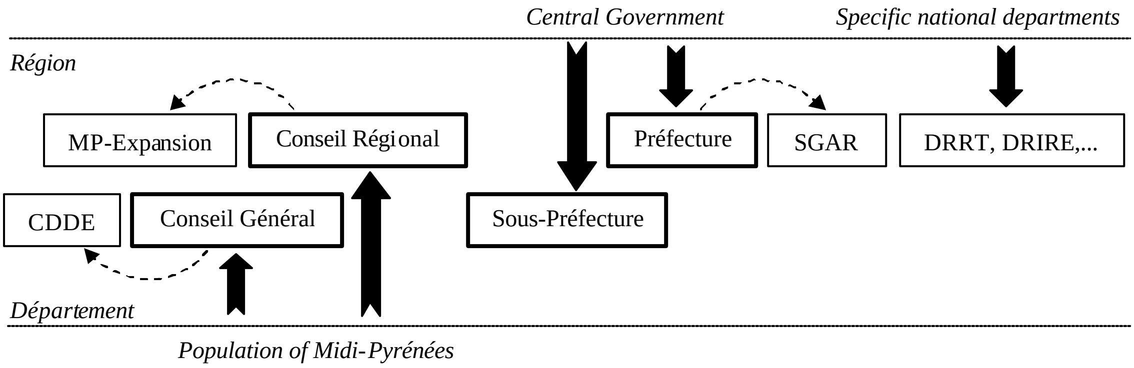
Defence Dependency Groups	**weak (< 10%)**	**medium (10 - 50%)**	**high (> 50%)**
Average defence dependency in the groups	5%	27%	84%
Proportion in regional defence companies	32%	48%	20%
Proportion in regional defence turnover	3%	47%	50%
Proportion in regional defence employment	5%	34%	61%
Average defence employees of the companies	10	47	194

Source: DRIRE 1997:46/47; author's own calculations.

Despite its defence dependency, the region of Midi-Pyrénées did not suffer much from the decreasing defence orders and from the structural changes in the defence sector following the end of the Cold War[5]. This is firstly due to the aerospace sector, which continued to play an important role for national defence strategies and therefore benefited from sustained orders. Secondly, the boom in the commercial aerospace production easily compensated for reduced military activities. Hereby, the strong presence of EADS and Airbus production sites in the region was of essential significance. Thus, the sectoral changes were advantageous for the regional economy and strengthened the region's role as an important aerospace region.

The regional production environment is remarkably dominated by the aerospace and defence activities. Major research institutions, especially public ones (e.g. ONERA, CENA), and several training facilities (e.g. national schools like ENAC, ENSAE or ENSICA) are focused on aerospace and defence requirements. Complementarily, the companies, prime contractors as well as subcontractors, engage themselves intensively in specific research and training activities in the region. Several fairs and exhibitions of national or even international reputation but also street-names, specific museums, motifs of postcards etc. foster the region's identity as an aeronautic and defence region. Likewise, regional politics in an unanimous statement of all different actors are supporting the specialisation of the region's economy in aerospace. This became obvious during the last few years' discussions about the large passenger aircraft, the A380 and the region's engagement for this programme (LESNIEWSKI 2000).

Illustration 2
Public bodies of Midi-Pyrénées and their operative arms for the economic development



Source: author's own illustration 2002.

[5] In France reductions in defence orders occurred especially after 1995. In the beginning of the 90's, France was the country with the least aggressive defence budget cuts in Europe. It was only a few months after the election of President Chirac in 1995 that the restructuring problem of the defence industry was publicly addressed. The government passed a new, six years programming law, which contained binding guidelines for the financial and structural changes in the French defence industry (SERFATI 1997).

In Midi-Pyrénées a multitude of public actors is occupied with economic purposes in general and specifically with the regional aerospace and defence production (see illustration 2). National influence on the economic development is not only channelled through the defence industry but for a good part through a number of top-down organised public bodies in the region. The *Préfecture* as the main representative of central government in the region disposes of the largest amount of competences and financial resources. Additionally, delegations of the different ministerial departments (e.g. *Délégation régionale à la recherche et à la technologie*) fulfil specific tasks. Particularly, their broad efforts for technology transfer are of importance for regional aerospace and defence companies, for their endeavours for adjustment as well as for their innovation capacities. Regional Innovation Centres (CRITT), Regional Technological Research Networks (RRRT) or Technological Platforms focus on the needs of regional SMEs and therefore also on the subcontractors of the regional defence and aerospace production chain. By contrast, National Research Centres (CNRT) and National Research Networks (RNRIT) with their regional sites are intended to reinforce the collaboration between public and industrial research, mainly aiming at major companies in the field of aerospace and defence (FILIPOWICZ 2000).

Referring to defence issues, a specific programme (FRED-Funds) was born out of national initiatives providing financial support for SMEs struck by the restructuring processes. Altogether 35mio FF were assigned for regional FRED-projects, of that 24mio FF from the Ministry of Defence (MoD) and 11mio FF from regional sources (SALANAVE-PEHE 2000). The economic influence of this initiative remains small and local, even if project related co-operation processes are prerequisites for any financial help. All these different strategies and initiatives from the national level together form a main force in the regional economy of Midi-Pyrénées.

Bottom up activities with a notable impact on aerospace and defence companies remain restricted. The Département Haute-Garonne (*Conseil Général*) is not legally permitted to award direct financial support to companies and focuses especially on rural areas. At the regional level (*Conseil Régional*) financial resources for industrial obligations are limited. The disposable budget for industrial activities currently amounts to 6% (150 to 200mio. FF) of its overall budget (RASIWALA 2000). Therefore the "*Contrat de Plan Etat-Région (CEPR)*" has been voted on as a co-operative effort to guide regional development during the next years (until 2006), binding national as well as regional resources for well defined projects. Financial and implementation responsibilities are already elaborated in detail (CONSEIL REGIONAL/PREFECTURE 2000). The participation of the state with 50% of totalling project costs concedes regional actors an amplification of their scope while limiting their independent and flexible development strategies. The CEPR constitutes the only formal co-operation of the multitude of public actors with economic orientations in the region. In most cases co-operative approaches are solely chosen as the cases arise and are likely to remain on an informal basis (RASIWALA 2000). Between bottom-up actors and the regional aerospace and defence companies informal albeit close relations and contacts, especially personal ones, prevail. Concludingly, Midi-Pyrénées shows an innovative development although the strong dependencies on the aerospace sector and on state initiatives increase the region's sensibility for changes.

4.2 The South West of England

The region South West of England comprises six Counties and nine Unitary Authorities and covers more than 24.000km². This size ranks the South West first in England. By contrast, referring to the number of inhabitants (4,9mio. in 1999) South West ranks only eighth (SWRDA 1999:13). The region shows for the most part rural features with a few urban centres (Bristol, Plymouth, Bath, Poole).

Industrial activities are traditionally concentrated in the Northeast along the dynamic M4 corridor to London and to the South East. Likewise, defence production is based in this area, especially in the agglomeration of Bristol. Comparable to the French region the defence industry of the South West constitutes an integral part of the aerospace production and dates back to the foundation of the former Bristol Aeroplane Company (today BAe Systems) in 1909 and its strengthening during both World Wars (LOVERING 1988). Even though military activities constitute an economically important sector for the region, some other sectors dispose over substantial economic weight as well and guarantee for a diversified regional economy. Therefore, the regional production environment doesn't show the same single orientation towards the aerospace sector as in Midi-Pyrénées.

Today, the regional defence and aerospace industry consists of ten prime contractors and approximately 500 subcontractors. Altogether, about 40.000 jobs or 1,7% of the regional employment depend on this sector (see Table 2) (BRADDON et al.2001:18). Its annual turnover in South West totals £3bio.(more than 5% of the regional GDP). The regional aerospace activities comprise prime contractors of differing fields such as aircraft engines, airframes, avionics, helicopters or equipment and can therefore be classified as diverse (WEAF 2001). In contrast to Midi-Pyrénées, there is no supporting network of research, transfer or training institutions in the region specialised in aerospace issues in the South West. This is true, even if some universities offer courses focused on the specific needs of aerospace and defence companies. Thus, in the South West aerospace is not as dominating in the region's daily life as it is in Midi-Pyrénées.

Table 2
Important aerospace and defence companies of the South West

Companies	**Locations**	**Employment (2001)**
BAe Systems Plc	Dorset, Plymouth	7.300
Rolls Royce Plc	Bristol	5.300
Airbus UK	Bristol	4.500
GKN Westland Helicopters Ltd.	Yeovil, Weston-super-Mare	3.935
Cobham Group (Fr Aviation, Fr Hitemp)	Dorset	2.236
Smiths Industries Aerospace	Gloucester	1.900

Source: HAWES/HEARN 4.3.2002.

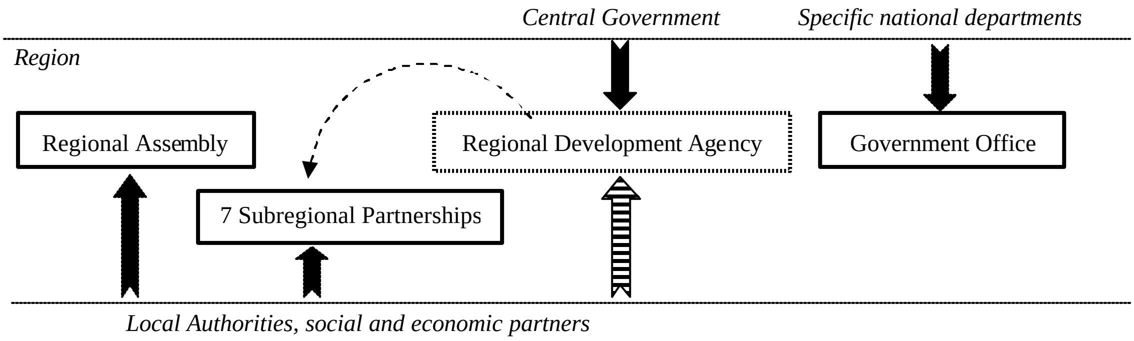
The regional economy of South West is a growing economy, and this was also valid for the regional defence and aerospace sector. After the end of the Cold War, defence orders for regional companies continued and the commercial side was even booming. The South West benefited from military programmes with significant involvement of regional defence companies (COX 2002)[6]. It was only in the last years, that problems arose. Older programmes expired, new programmes are still in the research and development phase with production only being launched in the near future (Eurofigther, Joint Strike Fighter, A400M). This, the consequences of 11th September 2001, and previously postponed measures of restructuring, induced a massive job cut in regional aerospace companies (e.g. 1.000 of GKN Westland Helicopters, 900 of Rolls Royce). These job-losses occurred mainly at the defence side of the regional aerospace activities and are judged as a short-term problem. Efforts are concentrated on keeping production capacities for the coming increase of orders. Even strategies of public actors in the region are

[6] Contrary to the national trend defence expenditures going to the South West doubled between 1990 and 1998, likewise also defence dependent employment increased in these years (DASA 2001).

focusing on lobbying government to bring forward military orders (CHIDGEY 6.3.2002).

The strong commitment of the new Labour government to regionalisation led to the foundation of Regional Development Agencies (RDAs), which build up the central regional institution for economic development (see Illustration 3)[7]. Fifteen different actors out of the region are delegated by government (esp. *Department for Trade and Industry*) for a 2 year working period. In its *Regional Strategy* the RDA of South West declared its commitment to actively promote aerospace as one out of seven key economic sectors (SWRDA 1999). This will certainly enforce public orientation towards and relations with the regional aerospace and defence industry. In co-operation with the regional association of aerospace companies (WEAF) the RDA is currently working on a cluster-analysis of aerospace activities to get more information about the structure and the regional interdependencies of the sector.

Illustration 3
Public bodies in the Region of South West



Source: author's own illustration 2002.

Financial resources for RDA measures are channelled through the Government Office (GO) as the regional representation of eight different departments of central government. The GO of South West is not elaborating proper economic strategies. Its scope of action is limited. Central objective is the communication between the national and the regional level (HAWES/HEARN 2002). The Regional Assembly (RA) of South West

[7] The process of strengthening the regional level began with the manifesto of the new Labour government in 1997. In the same year the white-paper "*Building Partnerships for Prosperity*" with first organisational statements was published. In 1998 the "*Regional Development Agencies Act*" and herewith the foundation of the new regional institutions was formally decided. Some more white-papers clarified the regions' role in the policy process and gave more concessions to regional actors.

with 117 members delegated by local authorities as well as by social and economic partners in the region, scrutinises and monitors the economic activities of the RDA without significant competencies of its own (ELTON 2002)[8]. The interplay of the different institutions is still vague, in development and at the moment mainly based on individuals.

Aerospace and defence companies of the South West are oriented towards the RDA and their financial resources and show only few relations with other regional bodies. Most of their contacts go to the national level, directly to the government (HAWES/HEARN 2002). Up to now, national programmes and funds are dominating the palette of public activities for the regional aerospace industry. For defence companies with restructuring problems no specific supports are available. A regional delegation of the Defence Diversification Agency (DDA) of the MoD is running some bilateral projects with companies of the South West, but these activities are neither integrated in nor of significant impact for the regional production environment (BRADDON 2002).

5 Regional Governance and Regional Defence Industry

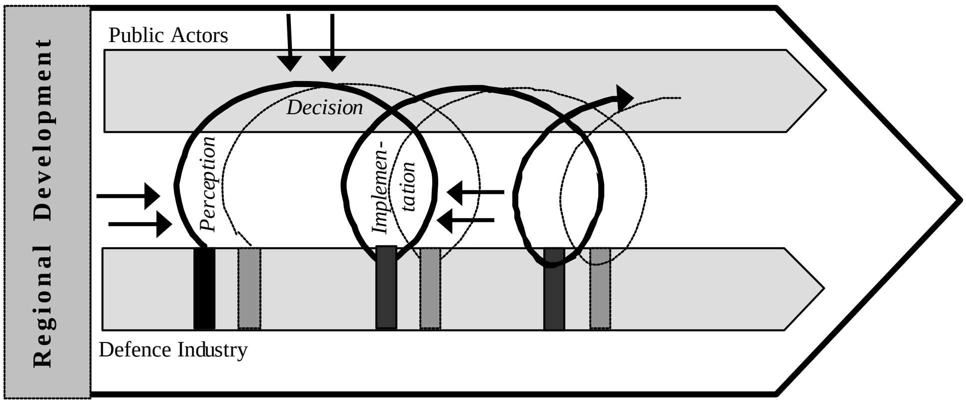
Considering the situation of Midi-Pyrénées and the South West, regional defence production obviously implies challenges for the economic development. Especially the strong dependency on the cyclical aerospace and defence sector, on a few major companies, and on national initiatives has to be mentioned. In addition, the insignificant integration of the defence companies into their regional production environment curtails innovation stimuli and transfer effects for the local economy. Yet, to ensure a long-lasting innovative development in this context, theoretical findings would put an emphasis on strengthening endogenous activities, on SMEs, on diversification, and on intensified networking and co-ordination approaches. Therefore the question arises, whether governance processes in regions with defence production correspond with these theoretical claims.

The close connection between the commercial and the military aerospace production makes analyses of defence specific governance difficult. Nevertheless some characteristics occur, which are especially influencing the following three issues of governance

[8] In May 2002 the white-paper "*Your Region, Your Choice: Revitalising the English Regions*" was published, giving regions the opportunity to directly elect their assemblies and strengthen their roles.

processes: the perception of the governance need, the decision of strategies and the implementation phase with its feedback-loops. Illustration 4 depicts these issues and their position in the governance processes in a simplified way.

Illustration 4
Perception, decision and implementation in governance processes



Source: author's own illustration 2002.

Perception of problems and definition of governance needs

The lack of an objective reality makes governance difficult. Governance always depends on individual constructions of reality, on subjective perceptions influenced by rational arguments as well as by communicative, interactive processes (NULLMEIER 1993:175). The appraisal of regional defence production and its impact on the regional economy is marked by a scarcity of information. Defence companies are not used and partially not allowed to inform their regional production environment about their activities. In Midi-Pyrénées as well as in South West little is known about the conditions, the structure, and specific problems of the regional defence production nor about its interdependencies and entanglements with their regional economies. Therefore, the assessment of the current situation by public actors is rendered difficult.

For deriving specific necessities of action, the perceived situations are judged with regard to the aspired development and to the individual interests of each actor. During this process, well established, palpable and quantitative short-term interests at the defence companies' side collide with more qualitatively orientated, long-term objectives for the regional development at the public side. Public interests are often not clearly definable and identified. It is therefore hard to advocate them to the regional public as well as to the defence industry. In contrary, requests from the industrial side, especially the much used argument of employment, are causing concerns in the region and easily find public attention and support. In addition with powerful allies at the national and even supranational level, regional defence actors are therefore in the position to exert pressure or even extort regional authorities in order to reach a definition of governance in their own favour. This comprises direct help for regional companies, the engagement for a specific qualified labour skill, infrastructural efforts, a production environment fostering innovation by a high research density and a regional marketing promoting the defence and aerospace activities.

If the interests of defence companies and other regional actors show a striking coherence like in Midi-Pyrénées, an institutionalised consensus might be established and result in conservative efforts (MAYNTZ 1993). This kind of defence industrial milieu contains the risk of neglecting the needs for change and adaptation and, as a result, a lack of provident diversification efforts.

Decision of strategies and their instruments

The identification of governance necessities includes an analysis, which factors of the problem can be changed. In the past, regions saw only the results and negative impacts of regional defence production as a field for their governance strategies. Government and industry being responsible for potential problems, were seen by the regions as acting outside their influence. But restrictions of governance capacities are two-sided, combining objective and subjective components. Facing their powerful counterparts, many public actors in regions with defence production tend to perceive their scope of action even more restricted than it is. Relying on others' initiatives is even seen as comfortable as long as no problems arise, because preventive strategies and the pursuing of proper objectives for the regional economy are hampered. Clearly identifying the limits of one's actions enables actors to fully and actively take advantage of their capacities, to renounce hopeless attempts, and instead to utilize capacities of others. Related to defence production, abilities for problem-identification and problem-solving are often horizontally and vertically disperse. Therefore and due to coherence reasons, the consideration of the governance strategies of all other actors involved in regional development is of great importance. It is essential to combine all information about national policies, local activities, approaches of other regional actors as well as of intents of the defence industry itself in a compatible and complementary way, but without losing sight of one's own objectives.

Finding the adequate vehicle to transport one's intents is strongly related to the normative situation of the regional level in the different countries. In England as well as in France competences of bottom-up regional institutions are restricted, requiring the orientation towards softer modes of governing (paradigmatic procedures, persuasion, co-operation, etc.). A good combination with the more hierarchical approaches of top-down actors in the region is essential. In both regions money is still seen as the most effective governance instrument to give defence and aerospace companies incentives to take forward specific activities for the regional development. The small financial resources are therefore equated with no governance capacities. Ideas, know-how, and creativity are demanded to overcome this traditional appraisal.

Implementation of strategies and feed-back loops

As mentioned before, single strategies are always embedded into a system of different policies. Defence production in the regions is situated in the tight field between national, industrial and regional influences. Therefore, co-ordination, coalition building and co-operation between the different governance subjects are essential, not only concerning the definition of governance contents but also considering their effects. Induced effects can be different from the aspired ones, and secondary effects must be considered as well. Duplications, reciprocal disturbances or even neutralisation of strategies must be avoided. While the preclusion of prejudices (*"negative co-ordination"*) is a first step, the final goal is an active utilisation of synergies (*"positive co-ordination"*) (SCHARPF 1993).

Governance strategies in regions with defence production often failed due to a lack of acceptance by the addressees. Regional actors and their intentions lack attention of the defence companies, and feel disregarded as long as they don't support them financially. Personal contacts, a clear profile of the governing institutions, transparency and distinct, proofed arguments can foster the trust in the competence of the governance subjects (FÜRST 2001). Trust as well as contacts are not abundant between defence companies and public institutions at the regional level.

This lack is also hampering an effective feedback process and governance learning. Effects of governance strategies are to be continually fed back to the governance subjects, as they are changing the perception of current situations and of governance necessities. Feed-back induces a learning process and can therefore change further contents or ways of governing (SABATIER 1993). A regional culture of continual, mutual information, communication and trust between subjects and objects of strategies, reinforced by personal contacts, seems to be essential.

6 Conclusions

Structural changes in the defence sector implied a decrease of its specific status. Military production approached commercial conditions and appears especially in the field of aerospace as integral component of the sector. The combination with civil production lines impedes the generation of a regional milieu exclusively distinguished by defence industrial features. Therefore, conditions of governing an innovative development in these regions are comparable to other regional economies with a high concentration of one particular industrial sector.

Nevertheless four specific characteristics must be mentioned, which make regional governance in the face of regional defence production special: an insufficient exchange of information and knowledge, a strong involvement of the national level, unapproachable major companies with an almost exclusively orientation towards national institutions, and a traditionally more passive way of regional governance relying on external initiatives and underestimating own capacities. Regional governance capacities are put together by objective factors like normative or financial competences, by subjective appraisals and by individual conditions. Identifying the limits for regional activities and defining clear objectives for the regional development, facilitates an active exploitation of the regional scope of action, reducing the dependency on external determinants. Unilateral manipulation or even extortion will be reduced in favour of a deliberate utilisation of national engagement and of defence industrial initiatives for completing endogenously based strategies.

The involvement of a multitude of powerful interests stresses the need for complementarity and compatibility. Co-ordination, coalitions and co-operations are gaining importance. Therefore an intensified information exchange, a better communication, and more contacts between the different actors at the regional level, as well as vertically with the national level, will enable regions to react rapidly to changes and challenges. This may not lead to stronger governance capacities for public regional actors themselves, but certainly to an increased regional capacity for ensuring long-term innovative development.

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