

## **SURVIVAL THROUGH NETWORKS:**

### **The ‘grip’ of the administrative links in the Russian post-Soviet context**

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#### **Abstract**

Based on analysing the post-Soviet transformation experience of four defence sector organisations in a Russian region where the defence sector occupies a substantial part of the local economy, this article develops a typology of network relationships: *Grooved Inter-relationship Patterns (Gr’ip)* networks and *Fluid Inter-relationship Patterns (Fl’ip)* networks. This typology can be applied to a range of transition/emerging market and low system trust contexts. *Gr’ip* networks, in this case, represent the persisting legacy of the Soviet command-administrative system. *Fl’ip* networks are here an attempt by the defence companies to link into the civilian supply chains of a developing market economy. This article argues that *Gr’ip* networks had and still have a crucial role to play in Russian enterprises’ survival and development.

#### **Key words**

Networks, trust, state-owned enterprises, local and regional authorities, economic transformation, Russia

## INTRODUCTION

The economic and social reforms introduced in Eastern Europe and Russia in the late 1980s and early 1990s were aimed at building a market-type system on the ruins of a command-administrative one. The legacy of the socialist past continues to persist, however, with ties from the socialist period proving essential for organisations' survival and the development of coping strategies during the process of economic and social transformation (Stark and Bruszt, 1998; McCann, 2005; McDermott, 2007). This article scrutinises the administrative links that bound organisations to the local/regional and national authorities and the role of trust and power in the development of these links, and exposes the crucial role these links played in the organisations' survival and subsequent development. In doing so, it reveals ways in which the paths followed by the enterprises studied did not conform to economic rules and mechanisms assumed by western neo-liberal economists (Soulsby and Clark, 2007).

According to the neo-liberal approach restructuring would take place through the process of corporatisation and privatisation, and large, formerly state-owned enterprises would unbundle the profitable aspects of their operations from the non-profitable ones (see, for example, Blanchard *et al.*, 1994; Aghion and Blanchard, 1994; Carlin *et al.*, 1994). Many Russian defence enterprises, however, did not follow this pattern; these companies stayed intact, and managed to preserve most of their scientific and technological potential (and capital) by contracting and/or "freezing" some of the production shops rather than cutting them off and closing them down. Studying how these organisations (both state-owned and privatised) survived the huge changes which occurred during the Russian transition can help expand our understanding of how organisations respond to institutional change during a process of creating market institutions (Peng, 2003). This study thus contributes to the growing organisational and management literature on post-socialist and emerging market

economies on the one hand, and to the literature on networks highlighting the previously overlooked role of links between industrial organisations and public bodies, on the other.

The findings of the study suggest the vital role of networks in the studied organisations' survival and development in Russia's forming market-type system. The networks were based on Soviet-era administrative ties between defence companies and local and national-level authorities, developed in that era with the aim of sustaining defence production. In the transition period Russian defence companies maintained and developed these networks as a response to the institutional changes within the post-Soviet context. Studying networks, trust and power within the Russian defence industry, where the state and local/regional administrations have a substantial influence on both state-owned and privatised enterprises<sup>1</sup>, provided rich data which allowed for the development of a typology of networks, which can be applied to other post-socialist and emerging market societies as well as other contexts of low system trust.

## **NETWORKS, TRUST AND POWER**

The importance of networks in developed market economies has been stressed by Granovetter (1985), who emphasized the embeddedness of economic action in social relations. This argument applies equally well in the case of networks in Eastern Europe. In conditions of change from a command-administrative system to a market system, when the institutional framework of a market economy is developing, generalized trust in the emergent institutions remains low, especially in the case of post-Soviet Russia (Mishler and Rose, 1998; Rose, 1998; Hanson, 2002; Shalpentokh, 2006). Institutions (formal or informal) are 'the rules of the game' that the institutional framework provides. These institutions both constrain and enable the regulation of economic activities in a society (North, 1990; Schmid, 2004). Russia is characterized by an uncertain institutional environment with low reliability

of the law and of courts (Rose-Ackerman, 2001; Ledeneva, 2009), an inadequate legal framework (Levin and Satarov, 2000; Prokhorov, 2002), and underdeveloped strategic factor markets (Kuznetsov and Kuznetsova, 2003; Dynkin, 2004). It is not surprising, therefore, that trust is placed on individuals rather than institutions (Kholodkovski, 1998), and personal relationships are heavily relied upon (Ayios, 2004; Batjargal, 2007). Previous research has emphasized the necessity for managers to cultivate personal connections in conditions where there is a weak rule of law and a government which does not support a stable regulatory environment (Boisot, 1986), whereby impersonal business transactions (Zucker, 1986) are inhibited. The importance of networks of personal relationships has a long history and was not only an important part of Soviet reality, but of tsarist Russia as well (Ledeneva, 1998). Personal contacts with members of the political elites, including those of the previous Soviet regime, were highlighted as being important for both domestic companies and for foreign investors (Halinen and Törnroos, 1998; McCann, 2005).

Networks of personal relationships and *personal trust* rather than trust in the system, or *system trust*, are the basis for interactions between organisations in the private and state-controlled sectors (for a discussion of *personal trust* and *system trust* see Bachmann, 2001). Networks are based on personal contacts and are defined as a “set of nodes (e.g., persons, organisations) linked by a set of social relationships (e.g., friendship, transfer of funds, overlapping membership) of a specified type” (Laumann et al., 1978: 458). The emphasis within administrative networks is on preferential treatment through lobbying, whereas, the emphasis within firm-to-firm networks is on creation of products or services based on implicit and open-ended contracts (Jones *et al.*, 1997).

Interpersonal trust underpins both these types of network. Trust is “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor

or control that other party” (Mayer *et al.*, 1995: 712); Luhmann (1979) argues that complexity and uncertainty are reduced by accepting one’s vulnerability to the actions of the other. Production of trust is rooted in social relations and the obligations inherent in them (Misztal, 1996). According to Zucker (1986: 60), there are three main modes of trust production: (1) process-based (trust is tied to past or expected exchange); (2) characteristic-based (trust is tied to the person, based on family background or ethnicity characteristics); and (3) institutionally-based (trust is tied to broad societal institutions). Bachmann and Inkpen (2011) stress the importance of institutional-based trust rather than relying on interaction-based forms of trust alone, however, in the Russian context where institutions (including those that can help reduce the risk of misplaced trust, especially legal regulations) are weak, interaction-based trust retains its significance. It is thus relational trust, based on experience and interaction with a particular exchange partner (Ring and Van de Ven, 1992), that is significant in this context. Previous research has demonstrated that trust in economic relationships is built on prior experiences (Mayer *et al.*, 1995; Das and Teng, 1998), but it doesn’t just develop over a period of time, what is required is an expectation of continuance of the interaction (Poppo *et al.*, 2008).

In relation to trust building, Sako (1992) identified three levels of trust: contractual trust (an expectation to abide by written or oral contractual obligation); competence trust (a belief that the necessary activities will be carried out competently and reliably); and goodwill trust (mutual expectations of exceeding stipulated contractual obligations). The latter is developed when an expectation exists that a favour will be returned and thus norms of reciprocity are established (Ireland and Webb, 2007).

It has been argued that an inter-organisational relationship is predominantly based either on investing trust or on relying on resources of power and a threat of sanctions for undesirable behaviour (Bachmann, 2001). According to Molm (1997), actors can be mutually

dependent on each other for rewards, and this provides the basis for their power over each other. Molm (1997) distinguishes between coercive and non-coercive power. Coercive power involves gaining rewards using punishment or threatened sanctions through control of negative outcomes. Non-coercive power concerns providing or withholding rewards in order to promote desired behaviours. Mutual dependence between defence companies and local and regional authorities can give rise to the use of non-coercive power, as will be discussed in the typology section.

The analysis of trust, power and networks has received much attention in the literature on networks in public administration, although the focus has been on networks surrounding the different stages of the policy process, such as formation, governance and policy implementation (Lecy *et al.*, 2013), the latter being the remit of collaborative networks (McGuire, 2006; Head, 2008). Agranoff and McGuire (2001) emphasise the importance of trust as holding networks together. At the operational level of collaborative networks establishing trust and reciprocity is seen as important and each participant's power and resources need to be assessed (Mandell and Keast, 2008). In the context of publicly funded services provision trust develops through repeated interactions or it can be a consequence of accreditation and licensing. Service providers have the power to determine the ways and conditions under which services are delivered (Tenbensen, 2005). The dependence of organisations on each other for resources creates a power dependence that affects the way these organisations interact and the way power is distributed within collaborative networks (Rhodes, 1997). Moreover, collaborators may not have a choice about who they need to collaborate with. This leads to suspicion as a starting point, rather than trust and the focus then shifts to trust building. Understanding of how power is exerted needs to be based on the understanding of where points of power lie on the micro level of the collaboration itself (Huxam, 2003).

Trust and power considerations such as these are relevant to the collaboration (within a network based on administrative ties) between defence companies and local and national-level authorities analysed in this article. However, in this case the aim of the collaboration is to ensure these parties' survival and development in conditions of institutional change as a new, market-type system is being created.

This research aims to explain how the studied enterprises survived these conditions and to explore the significance of the identified network relationships in this. The aim is also to explore the particular characteristics of these networks in a specific context of the Russian defence industry, which has been as yet insufficiently tackled in the extant literature.

## **METHODOLOGY**

The data from the four defence enterprises considered here provides an illustration of how companies reacted to the transition process in post-Soviet Russia, presenting a longitudinal view of this process. The empirical data collection started with semi-structured interviews (lasting between 30 and 50 minutes) focusing on the defence enterprises' economic and financial situation and on how they were coping with the changing economic conditions. These were conducted with directors and heads of either Chief Economist's or Commercial departments at four defence enterprises in one Russian *oblast'* (region)<sup>2</sup>, where the defence sector occupies a substantial part of the local economy. The choice of defence enterprises was determined by their significance for the regional economy in the pre-transition period. The names of the enterprises have been changed for confidentiality reasons. Two of the four companies were privatised in the beginning of the economic reforms in 1992 (*Avia-Co* and *Mechanics-Co*), and two were state-owned (*Avia-Ent* and *Mechanics-Ent*). The enterprises were visited between June and July 1995, and between September and October 1996 (see below for the discussion of the importance of this period); one follow-up interview was

carried out in December 2000 (see Table 1). Interviews were carried out in Russian with detailed notes made (recording was not permitted) and written up after the interviews. The written up notes were translated into English. Sources of information beyond the interviews included: in-house company publications; newspapers (local and national); company websites. Additional information was obtained from the local Chamber of Commerce and Industry. Information updated beyond December 2000 is based on reports in Russian newspapers (local and national) and on the data provided by company websites. Secondary data were also translated from Russian into English. The increased emphasis on security in late 1990s and especially beyond 2000 affected access to the companies, preventing further interviews being undertaken.

**Table 1: Interviews per organisation**

|                        | <i>Avia-Co</i>      | <i>Avia-Ent</i> | <i>Mechanics-Co</i> | <i>Mechanics-Ent</i> | <i>Total</i> |
|------------------------|---------------------|-----------------|---------------------|----------------------|--------------|
| June-July 1995         | Director            | Director        | Director            | Director             | 8            |
|                        | Chief Economist     | Chief Economist | Commercial Director | Chief Economist      |              |
| September-October 1996 | Chief Economist     |                 | Commercial Director | Director             | 3            |
| December 2000          | Commercial Director |                 |                     |                      | 1            |

The reliability of these data was evaluated partly by making comparisons (direct or indirect) of these available sources, partly by evaluating the bias or non-bias or attitude of each source. This was done by comparing what the sources said about the organisations studied with what they said about other companies where it was easier to ascertain their degree of accuracy. Contacts in other fields of business, for example, offered useful feedback on certain newspapers and websites, describing how their businesses were represented. Discussions with industry experts helped to compare and contrast the findings with the

situation in other organisations of this sector. This provided a clearer picture of the angle taken by certain of the sources. Triangulation was achieved through comparing multiple sources of information (Yin, 1994).

Interview data and secondary data were coded using the following six categories: organisation's economic situation, indebtedness, working patterns, levels of employment, lobbying, networks of connections. The first four categories are derived from the established socio-economic analysis of company adjustment during the beginning stages of transition (see, for example, EBRD, 1994; Commander and Coricelli, 1995). The last two categories emerged from the data and were supported by the literature (Stark, 1996; Stark and Bruszt, 1998). Analysis of these data demonstrated a consistently happening phenomenon (Miles and Huberman, 1984; Mason, 1996): financial stability of studied organisations depends on lobbying and networks of connections to local and national administrations.

## **FINDINGS**

### **Background and general economic context**

The research covers the period from 1994 to the present time, however, what was happening to companies studied during 1994 – 1996 when most of the interviews took place is of special interest since this was the most difficult period of the Russian transition for industrial enterprises and the economy as a whole. After the start of the reforms in 1992 and continuing until 1998 there was a steady and extreme decline of the Russian economy (Potts, 1999). By 1998 GDP (using constant prices) was 56% and industrial output was 46% of their pre-reform level (UNECE, 1999), and agricultural production and food processing had both decreased by 40% (Goskomstat, 2000). According to Clarke (2007), the collapse of investment triggered a substantial decline in orders for the engineering and construction industries. Within the engineering sector, the military-industrial complex enterprises were facing the inability of the

government to pay for the orders that still remained. In the same period light industry's output declined by 83% (Goskomstat, 2000), as consumer goods industries were under the pressure of increasing import competition; inflation with a stable (managed, with an 'adjustable peg') exchange rate undermined the competitive advantage of domestic producers and, more importantly, consumers were keen to try the novel imported goods (Clarke, 2007). Within the Russian economy only the exporters of raw and processed materials experienced growth, indeed, these industries were booming as the decline in domestic demand for fuels, metals and chemicals meant these were available in larger volumes to be exported (Clarke, 2007).

The questions that were of interest from the start of the research were how the companies adjusted to new economic conditions during a critical period of transition in Russia (when defence enterprises experienced unprecedented economic upheaval) and what helped them to stay afloat. Through investigating their financial situation and generally their economic development it became clear that purely economic reasoning could not explain how they survived. It also became clear that networks of connections, especially to local/regional and national administrations played a significant part in the enterprises' survival and development either as defence-oriented organisations or as organisations diversified into civilian production (in addition to their defence orientation).

Table 2 shows the companies' sub-sector (aviation, machine-building, metal-working or munitions), whether the company was privatised or not and the current ownership status. Privatisation resulted in the formation of open joint-stock companies (allowing outside shareholders). *Avia-Ent's* state joint-stock company ownership status means that the state still has a controlling stake in the company.

**Table 2: Companies studied: industry affiliation and ownership status**

|                  | <i>Avia-Co</i>  | <i>Avia-Ent</i>  | <i>Mechanics-Co</i>                                      | <i>Mechanics-Ent</i>  |
|------------------|---|--|--|---|
| Sub-sector       | Aviation  | Aviation   | Machine-building and metal-working                       | Machine-building and munitions  |
| Ownership status | Open joint-stock company from 1992, state 'Golden share'* | State-owned enterprise until 2002, when it was transformed into a state joint-stock company and became part of a state <i>kontserni</i> ** | Open joint-stock company from 1993, state 'Golden share' | State-owned enterprise; bankruptcy procedure started in 2003, went bankrupt, transformed into an open joint-stock company in 2007 |

\* A 'Golden Share' is retained by the state, giving the state a right to veto any decision of the company, which could be damaging to national security.

\*\* *Kontsern* is Russian for a group of companies and is derived from the German term *Konzern* with the same meaning.

## Networking

*Avia-Co*, *Avia-Ent* and *Mechanics-Co* actively used their network links to local/regional and national administrations. These three enterprises benefited from *oblast'* governor's connections in Moscow and the role played by representatives of the state defence export agency Rosvooruzhenie (replaced by Rosoboroneksport in 2000), which helped secure export contracts for the defence companies of the *oblast'*, according to a regional newspaper. This was especially the case for *Mechanics-Co*, which used administrative networks to sustain it mainly through export contracts, such as producing spare parts for another company that had an export contract. This 'link' was facilitated by the *oblast'* administration.

The director and top managers of *Avia-Co* and *Mechanics-Co* devoted a lot of time going on trips to secure different subsidies and grants from the federal government as well as from the local government budgets. In the case of *Avia-Co* this resulted in financial assistance from the federal budget in 1995, achieved through lobbying on the part of the director of

*Avia-Co* and the regional authorities during the Prime Minister's visit to the *oblast'*. As the Director of *Avia-Co* commented:

Our financial difficulties were very much alleviated when Prime Minister Viktor Chernomyrdin signed a special document securing financial help to our company; it was quick coming too - after two-and-a-half months the funds were transferred from the federal budget.<sup>3</sup>

Another later example of the use of administrative networks was a loan of Rb 106 million to *Avia-Co* from the *oblast'* budget, which was extended in 2003 at an interest rate of 1% (the standard interest rate in the local banks was 21-23%), in 2003. According to a regional newspaper, these very favourable conditions were secured through close ties between the company's director and the leaders of the *oblast'* administration. Moreover, the *oblast'* administration made the money for *Avia-Co*'s loan available from the *oblast'* road fund, thus putting on hold the maintenance of the region's road network. Here the administrative ties secured financial assistance (as a loan on very favourable conditions can be considered) to *Avia-Co* from the regional authorities.

As far as *Avia-Ent* is concerned, it survived the difficult economic conditions mainly through using its network links with the city and *oblast'* administration, and with the missile and artillery state agencies. The enterprise used these networks to lobby for financial assistance and to increase its military production (both the state military procurement order and export of defence production). As the Director of *Avia-Ent* admitted:

Thanks to good relations with the Central missile and artillery board and the Navy, a prepayment was received for a state military order in mid-1993. Later, connections helped matters to improve in 1994 when assistance from the Board of anti-missile defence and "Rosvooruzhenie" state military export company facilitated the signing of an export contract.

The reliance on these networks is not surprising since the enterprise was prohibited from privatising. The enterprise's strategic importance was recognized by the government when *Avia-Ent* was included in a state defence *kontsern* (group of companies) in 2002. Substantial

increase in military production drove the enterprise's recovery and growth. The background of the director at *Avia-Ent* is significant as well. According to a regional paper, up until 1998 he had worked at the enterprise in various departments. At this point, he went to work as the representative of "Rosvooruzhenie" in the *oblast'*. In 1999 he was encouraged, not only by his former colleagues but also by the *oblast'* governor, to take up the post of *Avia-Ent's* director. This set of relationships contributed largely to the following recovery and success of the enterprise.

A contrasting picture is presented by the developments at *Mechanics-Ent*, which unlike the other enterprises was not actively assisted by the *oblast'* and city administrations. The Director of *Mechanics-Ent* described their management strategy to tackle the difficult financial situation in 1994 as follows:

We transformed production units into separate legal entities with their own accounts. The enterprise as a whole contributed assets to these, however, the sale of products was made the responsibility of these new legal entities.

The problem was that this structure caused suspicion on the part of the tax authorities, who claimed it was asset stripping. The Prosecutor General's office also took an interest in the organisational developments at the state-owned enterprise. Having carried out an audit, *Mechanics-Ent's* top management decided to abandon this structure in 1995. Nonetheless, this affected *Mechanics-Ent's* reputation. Moreover, it is hard to say whether related to this or not, the Ministry of Defence had complete disregard for this enterprise (as demonstrated by not paying for a placed order and not procuring more state military orders). Therefore, the regional and local authorities were not willing to fight an apparently lost cause of bringing defence production back to the enterprise.

In 1995 the director personally pleaded with the then Prime Minister Viktor Chernomyrdin to cancel mutual debts between the enterprise and the federal budget, but no action was taken. The Director of *Mechanics-Ent* commented:

To be noticed by the state is the most important aspect in aiding the recovery of the enterprise.

*Mechanics-Ent's* appeals for help from the state budget were not achieving any results, because unlike other studied defence sector organisations, which actively used the *oblast'* and city administrations as channels for lobbying the federal government bodies, *Mechanics-Ent* could no longer rely on these networks.

*Avia-Co* was the more dynamic of the two privatised defence-related companies in terms of developing civilian output and new, commercial networks. In 1995 *Avia-Co*, in its capacity as a manufacturer of components focused on developing links with other companies and enterprises. For example, as a supplier of pump motors the company was a member of a business network producing washing machines, according to *Avia-Co's* newspaper. Managers at *Avia-Co* also realised the advantages of participating in relevant trade fairs and product exhibitions both in Russia and abroad. As *Avia-Co's* Chief Economist pointed out:

The main aims at trade fairs and product exhibitions were: to compare the company's product range and quality with similar output of other manufacturers, to make contact with potential customers, and to network with potential collaborators.

New developing relations with civilian producers were built on process-based trust. Trust in this case had to be developed gradually, as recognized by the Director of *Avia-Co* in 1995:

Trust is very important in business relationships. When starting to work with a business partner, one has to start from a small contract and gradually to build up the business as mutual confidence in the partners increases.

Also, in 1995, one of the largest Russian car manufacturers mounted an extensive search for an appropriate partner to produce machine parts. Crucially, the Russian Chamber of Commerce and Industry, having had previous relations with *Avia-Co*, provided the information about the tender that helped *Avia-Co* to secure it. (*Avia-Co* beat four other companies to gain this contract.) A joint venture with a foreign company was established to produce electrical and technical parts for the car industry. This indicates that, in the case of some of its civilian products, this

company managed to be included in existing supply chains through joining established business networks. An important aspect of this is the possibility of dual use (military and civilian) of technology and equipment. *Avia-Co* had the opportunity to use the mechanics technology and equipment (normally used in its defence production) for the car industry. The other enterprises studied either were not successful in developing these commercial networks (such as *Mechanics-Co* and *Mechanics-Ent*) or, as in the case of *Avia-Ent*, focused mainly on the defence output and kept the civilian production on a minimal level, thus not being interested in developing such networks.

According to the information provided by *Mechanics-Co*, this company had most problems in developing a strong range of civilian products and did not develop opportunities to join commercial networks related to civilian products. Many civilian goods developed by *Mechanics-Co* entered the market too late and had to compete with already established domestically produced goods and imported brands. Instead, much of the company's production space was rented out to other businesses.

*Mechanics-Ent* tried to survive by becoming a mostly civilian-oriented machine-building plant. This was difficult to achieve because it was not able to sell their output (equipment and consumer goods) on an appropriate level (in terms of volume) to sustain itself, even though this enterprise attempted to develop certain commercial networks. A positive example was the development of relations with agricultural producers. The continuation of relationships based on economic ties from the Soviet period formed another strand in *Mechanics-Ent*'s strategy. For example, in Soviet times the enterprise had supplied spare parts to agricultural-machinery producers. Relations with heads of farms, etc, continued to be developed. To meet the subsequent demand for agricultural machinery (and meet the need for its maintenance) a joint-stock company, which included relevant production shops, was created in 1995. By 1996 agricultural producers/farms were placing

orders for spare parts and the enterprise was accepting monetary and barter payments, and was offering an opportunity to lease machinery. However, agricultural producers were not able to provide consistent demand for agricultural machinery.

An important civilian line developed at the enterprise was medical equipment. However, production of medical equipment was problematic, according to the Director of *Mechanics-Ent*:

The enterprise experienced pressure and active undermining of its products by certain groups that were more interested in importing this type of equipment than in its development within Russia.

The situation was more positive with school furniture production, e.g., a school in the *oblast'* was equipped with furniture produced at *Mechanics-Ent* and the payment was counted towards repayment of a tax debt to the federal budget. Managers at *Mechanics-Ent*, like their counterparts in the other companies, actively participated in international fairs, networking, and business trips. In 1996 these resulted in the signing of several agreements with foreign companies to produce assembly parts: a car manufacturing company in Poland; a machinery producer in Italy; and a lock producer in the Ukraine. Nonetheless, these positive attempts provided contracts on too small a scale for the enterprise to sustain itself and not to go bankrupt.

### **Developments in enterprises after 1998**

All of the enterprises benefited from the improvement of the economic situation in the Russian economy triggered by the effects of the devaluation of the rouble after the 1998 financial crisis (Sutela, 1999; Arkhipov *et al.*, 2003). Especially noteworthy here are the import-substitution in civilian production and improved conditions for export (mostly defence output) as a result of devaluation.

Two of the studied companies became members of larger corporate structures, which was beneficial for their development. *Mechanics-Co* became a member of a financial-industrial group in 1998. In 2002 *Avia-Ent* was transformed into a state closed joint-stock company through a process of corporatisation and was included in a state defence *kontsern*. Being part of this structure ensured consistent state military procurement order at the enterprise.

Emerging into the present, the most dynamic out of the enterprises studied were *Avia-Co* with both its growing military and civilian production and *Avia-Ent* with a substantial emphasis on military production. At *Avia-Co* during 2010 there was significant investment in new equipment and modernisation as well recruitment of young specialists into middle management positions. Also, in the last two years *Avia-Co*'s director had been heading the region's affiliate organisations of Russia's Union of Machine-builders and the All-Russian Council of Local Self-Government<sup>4</sup> representing the region at the national level. The other most successful enterprise, *Avia-Ent*, remaining in state ownership, has experienced substantial growth in the state military order and in defence-related exports since 2000 and, according to *Avia-Ent*'s Director's statement posted on its website, planned to maintain this position in 2013.

In contrast, *Mechanics-Co* kept shrinking in terms of the number of employees (e.g., in mid-2007 it was less than half of the 1996 level, totalling 2,320) and having an increasing share of overall income from renting out space (14% by mid-2007 from 0.9% in 1995). However, the share of production was still 75% of overall income. Since 2009 the number of employees has stabilised at around 3,300. In 2009 the production of defence output grew by 50%, though civilian output decreased by 25%. Currently half of all production is covered by the state military order and 47% is defence-related exports.

As for *Mechanics-Ent*, this enterprise experienced severe financial difficulties. Having accumulated debts for tax payments, payments to energy suppliers and its employees, *Mechanics-Ent* had its assets frozen in 2002, resulting in a start of a bankruptcy procedure in 2003. After a protracted and problematic period of bankruptcy *Mechanics-Ent* was transformed in mid-2007 into an open joint-stock company (OJSCo), established according to the 2002 Law on Bankruptcy and the decision of the creditors of *Mechanics-Ent*. In 2008 a new top management team signed a contract to assemble and later produce dairy industry equipment. In 2009 the newly-operating OJSCo was given a state military contract. It is difficult to ascertain what production capacity these developments are utilising since by the end of 2013 OJSCo was advertising spare industrial capacity, storage and office space, and a canteen for rent.

## **DISCUSSION: *Gr'ip* AND *Fl'ip* NETWORKS TYPOLOGY**

This study reveals two different types of network of defence sector organisations. A new typology of *Gr'ip* (*Grooved Inter-relationship Patterns*) and *Fl'ip* (*Fluid Inter-relationship Patterns*) networks is developed signifying these different types of relationships.

### **What are *Gr'ip* networks?**

*Grooved Inter-relationship Patterns* (*Gr'ip*) networks are based on administrative links developed during the existence of the Soviet Union, whereby organisations are still locked into a 'grooved' relationship with different levels of administration and state authorities. *Gr'ip* networks thus constitute the relations carried over from the Soviet period, when the defence enterprises in the Soviet Union had close administrative ties to the relevant ministries and to the local administration. These links were reinforced by close relations with the local Communist Party committee, though after the collapse of the Soviet Union, the latter no longer operated. However, even though the apparatus of central planning with its agencies

and ministries was dismantled (Clarke, 2007), the Ministry of Defence retained its significance, and, after the start of economic transformation, some administrative ties continued to function. For example, networks were exploited to lobby for the defence enterprise's interests, both in terms of maintaining state military orders/procurement and supporting the enterprise's social amenities, at the level of the government and that of the Ministry of Defence – traditionally seen as the most direct way to further a defence enterprise's aims. These *Gr'ip* networks had always been important for securing military defence contracts, and their importance in securing defence export contracts continued after the start of transition. Export orders provided an increasingly significant (even crucial) part of a company's output as the defence companies studied could not export defence output independently, but only through the state defence export agency Rosvooruzhenie, or Rosoboroneksport, its successor from 2000.

In the *Gr'ip* type of network trust is based on cultivating personal-trust relationships with governmental and administrative officials of different levels (see also Xin and Pearce, 1996; Peng, 2000), and it is the links with the administrative authorities of different levels that bind the parties in co-operation for mutual gain. All parties (the companies and the administrative authorities) are bound by this chain, without which either would find it difficult to operate. Defence enterprises provide employment, which secures social and economic stability in a region and contribute to housing, health and recreation costs for their employees, providing services which in most other countries are provided by local authorities (Kosals and Izyumov, 2011). This network is built on relations established in the command-administrative system and still has a flavour of the Soviet-type relationships between the authorities of different levels and the economic agents, underpinned in the Soviet period by both coercive and non-coercive power exercised by the authorities of different levels over the economic agents. From the start of the transition process, the local authorities were lobbying

the federal authorities for substantial financial support in the form of subsidies for the large enterprises, arguing that it was necessary for maintaining local social stability (Slinko *et al.*, 2003; Aslund, 2007).

Mutual dependence characterises the relationship within the *Gr'ip* networks. The potential for withdrawing support (lobbying for state subsidies, etc., on the part of the local and regional authorities; and political support, including votes, on the part of the defence enterprises) forms the basis for non-coercive power that both these actors possess over each other. On the other hand, this underlying power is combined with trust built on a personal level and strengthened through the long-term nature of the relationship. The *Gr'ip* networks between the defence enterprises and administrative authorities of different levels are based on a combination of power and trust.

### **What are *Fl'ip* networks?**

*Fluid Inter-relationship Patterns (Fl'ip)* networks are based on company links formed in the post-Soviet period; these 'fluid' relationships are based on mutually advantageous economic exchange in developing market conditions. *Fl'ip* networks relate to the defence companies' civilian output rather than to defence output, and operate in developing market conditions. Defence production, both in Russia and in the West, has a specific, non-market culture involving close government supervision, secrecy, detailed technical specifications and standards that need to be met, costs determined by technical requirements, quality over cost considerations, etc. The difference in company practice and culture between defence and commercial business in relation to the US is outlined in Office of Technology Assessment, 1992; Cooper (1991) examines similar issues in relation to the Soviet Union and Kennaway (1994) - in relation to Russia. Thus, *Fl'ip* networks are not linked to defence production.

It is noteworthy that defence enterprises also produced civilian goods in the Soviet period (Cooper, 1991), which was done under conditions of a planned economy, where there were no incentives such as efficiency and profitability. In post-Soviet conditions, however, collaborating with civilian companies in order to produce civilian goods takes place in a developing market economy. Defence companies' civilian output, thus, needs to compete with the civilian economy's output from both domestic and foreign producers. *Fl'ip* networks are inter-firm networks between defence companies and civilian producers in a developing market economy of Russia.

There are two main ways for the defence companies to develop economic relations with civilian producers. They can act independently to initiate contacts and exchange information by attending trade and industry fairs and exhibitions and by participating in tenders. Or they can develop *Fl'ip* networks through third parties, who will mediate and provide guarantees of reputation, such as the Russian Chamber of Commerce and Industry, other companies that have been long-term business partners, or city and *oblast'* administrations.

Trust that develops in *Fl'ip* networks is process-based. *Fl'ip* networks, unlike *Gr'ip* networks, are not developed in the administrative or control sphere (where the main activity is lobbying for state support and for continuation of defence contracts) but in the economic or productive sphere. Here the defence companies seek out economic agents of the developing private sector so as to develop supply chains of civilian products. The nature of trust developed in this instance enhances mutually advantageous relations based on being partners in an economic exchange. As noted, an uncertain institutional environment makes it difficult to enforce contracts and to protect property rights. Contracts under these circumstances are more or less based on trust and on mechanisms of responsibility. If one reneges on an

agreement, it is not legal liability that is feared but the loss of business partners' trust, cornering out of the market, and eventually bankruptcy (Gutnik, 1996).

Establishing and maintaining trust in *Fl'ip* networks is supported by third-party mediations and referrals, which provide guarantees of reputation, and this is based on individual-level trust. The progression from contractual and competence levels of trust to goodwill trust will depend on the continuity of repeated exchanges and establishment of a long-term relationship.

## **CONCLUSION**

This study sought to understand how organisations respond to institutional change during a process of creating market institutions. The study reveals that using links from the previous Soviet period and developing new links in the developing market economy is the key explanation. Two different types of network of defence sector organisations are identified and the Russian defence companies develop these two types of network as a response to the institutional changes within the Russian post-Soviet context. A new typology of *Gr'ip* (*Grooved Inter-relationship Patterns*) and *Fl'ip* (*Fluid Inter-relationship Patterns*) networks is developed. *Gr'ip* networks are relations with administrative bodies of local/regional/federal level, which are rooted in the Soviet past; and linked with defence production. The legacy of power relationships between the defence enterprises and administrative authorities of different levels is strong here, forming the basis for co-ordinating expectations and interaction between the defence industry organisations and the administrative authorities. *Fl'ip* networks are relations based on mutually advantageous economic exchange with civilian goods producers underpinned by process-based trust initiated by third-party mediations and referrals, providing guarantees of reputation.

The study shows that the success of these companies ultimately depended on their ability to manage and develop existing *Gr'ip* networks established in the Soviet period. Developing new relationships in the commercial worlds in and beyond Russia was a source of additional strength for *Avia-Co*. Development of these networks, however, is taken as an addition to objective factors, such as the type of output, ageing plant and equipment (which some of the organisations studied managed to modernize), location and transport links with access to suppliers and markets (which was good for the *oblast'*), well-laid out premises (since these are defence companies, they had priority in Soviet times in terms of superior facilities), well-developed and maintained urban infrastructure (partly developed and maintained by the organisations studied) to attract the work force (Clarke, 2007).

It needs to be stressed that defence exports drove and continue to drive the growth of the defence companies studied, as well as the Russian defence sector in general. The role of *Gr'ip* networks here is of paramount significance. This is especially the case for defence enterprises in the provinces that cannot export defence-related output independently of Rosoboronekport, as is the case for the enterprises studied. Many of the defence export contracts were established during the Soviet times and the 'exportability' of the output to particular parts of the world was already determined. It can be deduced that the *Gr'ip* networks help develop these contracts and help to find new ones, though it is then up to the defence company itself to supply goods of the requisite quality. The importance of *Gr'ip* networks is best demonstrated by *Mechanics-Ent*. The local authorities were not on its side, were less supportive than they were of other defence organisations, such that *Mechanics-Ent* was unable to cope with the difficult economic conditions and to avoid bankruptcy.

Previous research on strategy in transition economies has demonstrated that as the transition progresses and the institutional environment changes, the role of networks and relationships decreases and the role of market-oriented strategies increases (Peng, 2003;

Danis *et al.*, 2010). Due to the weakness of market institutions in Russia this response to institutional changes has not been mirrored within the context studied. Through the exploration of how these companies adapted to the systemic shift from a planned administrative system to a market-type system (and this exploration was taking a longitudinal, rather than a snapshot, view) it became clear that the *Gr'ip* and *Fl'ip* types of network made it possible for these companies to find a way to survive and develop. Moreover, the analysis brings to the fore the importance of the relationship between a state-owned company (or a previously state-owned company) and regional/local authorities, and through them, national-level authorities as well. It is the continued reliance on these relationships conceptualised as the *Gr'ip* network that is the significant finding of this study.

The context for this study was very specific, so caution must be exercised in considering to what extent this research can be generalised. Nonetheless, there is an implication that this type of research might offer similar findings in other post-socialist and emerging economies contexts with a similar level of institutional development offering potential for further research. *Gr'ip* and *Fl'ip* types of network are relevant to organisations that were owned and regulated by the state during the state-socialist period and that still have a state involvement when a market-oriented economy is being developed. Future research can analyse other such sectors as well as the defence sector in different emerging market contexts and what implications the existence of *Gr'ip* and *Fl'ip* networks in these sectors has for engaging in international collaborations and the potential interplay between trust and power in these inter-organisational relations. Another stream of further research needs to analyse whether and how *Gr'ip* and *Fl'ip* network ties influence each other. This study also offers a theoretical underpinning for analysing the use of interpersonal trust in wider contexts characterised by low system trust, opening further avenues for research.

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## NOTES

1 For an analysis of the Russian privatisation process see Filatotchev et al. (1996). For a comparison of valuation methods of state-owned companies put up for sale in developed market, transition and developing economies and whether these matched privatisation objectives stated by the governments see Gonzalo *et al.* (2003). For an overview of privatisation within the context of the Russian defence industry see Sanchez-Andres (1998).

2 *Oblast'* is Russian for region and denotes an administrative territorial division within the Russian Federation. The transliteration uses the Library of Congress Romanization Table for Russian, where the soft sign is depicted by an apostrophe. Since the region is anonymised, it is referred to as just *oblast'*.

3 Interview quotations were translated from Russian into English by the author.

4 The All-Russian Council of Local Self-Government is a voluntary, member-based, self-governing association established on 31 May 2006 in order to promote an effective system of local government and to develop citizen participation in the work of local government, including charitable and volunteer work. Membership covers all regions of the Russian Federation.

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