The special economic zone in the Kaliningrad region: development tool or institutional trap?

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Abstract

In this paper we examine the special case of the “degenerated” Special Economic Zone (SEZ) in the Russian exclave on the Baltic Sea — the Kaliningrad region. The ‘compensation Vs. development’ policy dilemma associated with the SEZ in the exclave is elaborated using modified ERP and ETR techniques. Factual results and consequences of more than 20 years of ongoing SEZ institutional instability (a transitional shift from customs tariff to profit taxation preferences) are examined. We show how transfer pricing and formation of hybrid structures reinforce the import-substitution bias of exclave economics. Some concerns about the trade-off between stimulation policies and economic efficiency in the context of the SEZ are discussed.

JEL: R58, P33, P48
Key words: Special economic zone; Kaliningrad exclave; regional economic policy; import-substitution; hybrid structures

1. Introduction

This paper aims to consider some peculiarities of the Special Economic Zone (SEZ) in the Kaliningrad region of Russia, which represents the only economically interesting Russian exclave surrounded by EU countries (namely, Lithuania and Poland). We start the introduction of the action arena with a description of the sudden emergence of the exclave region in 1991 accompanied by a dramatic decrease (to the level of 16% of the 1990 index of industrial production) and nearly complete destruction of the former economic base.

The phenomenological nature of the exclave SEZ reveals some interesting collusion between economic and political considerations concerning development of the exclave region. The region has experienced an explosive growth of its net imports and has occupied a strong import-substitution position in the post-Soviet national division of labor (up to 4.0 % of total

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Russian imports are currently transferred through Kaliningrad oblast, which has only 0.65% of the country’s population). Many observers claim that this was done at the expense of other domestic regions (Smorodinskaya and Zhukov, 2003). So, the SEZ has been seen initially as a masked subsidy policy granted to the region by the federation. But “subsidy” does not presuppose excessive rents and the “federation” has never been an internally consistent player. One can always find groups of interests disadvantaged by SEZ misuses, and these groups have always been eager to end the free customs zone in Kaliningrad oblast. This concern, reinforcing a vicious circle of instability, led policy makers to change the SEZ strategy in 2006, when a new regional-specific Federal Law on the SEZ in Kaliningrad oblast (not to be confused with “Russia-wide” SEZ legislation) was adopted. In the relevant sections we will try to formalize the legal norms of different SEZ periods in economic terms, applying such models as ERP and ETR.

The transitional period of the SEZ that allowed co-existence of both tariff and tax preferences gave rise to the formation of SEZ hybrids. We are far from the idea that the legislator was too naive not to understand such a risk. Most likely, “time pressure” within the political cycle and lobbying efforts of interest groups forced implementation of a half-decision. Thus, in a special section we will look at some intermediate results of import-substitution reinforcement. We share a fear that the Kaliningrad community, in spite of many talks, will soon find itself being unprepared for the so-called “2016 Problem” – the time when the free customs zone terminates.

2. The exclave region as an institutional phenomenon

Exclavity (and exclaves/enclaves) is in principle an institutional phenomenon. It is a path-dependent and artificially constructed economic reality that, if taken for granted, creates its own specific economic conditions, incentives and benefits (Amin, 1999). Such conditions for the Kaliningrad exclave\(^1\) can be viewed in terms of a trade-off between EU proximity and detachment from Russia (keeping in mind the advantages and disadvantages associated with both factors). Some authors in a more general framework of exclavity assert that a “compensation vs. liberalization” dichotomy exists in the choice of economic policy towards an exclave (Vinokurov, 2007a).

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\(^1\) Strictly speaking, the Kaliningrad region is a semi-exclave of Russia and, symmetrically, a semi-enclave of the EU. In this particular case the “semi-” prefix means that the area has access to the sea, and therefore better approachability to the mainland compared with a pure exclave/enclave.
Table 1 summarizes some advantages and disadvantages of the Kaliningrad exclave viewed from two different perspectives.

Table 1: Peculiarities of the Kaliningrad exclave

<table>
<thead>
<tr>
<th>Effects</th>
<th>Detachment from the mainland of Russia</th>
<th>Proximity to the EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Favorable migration conditions</td>
<td>“Quality ladder” effects and technological imitation capabilities</td>
</tr>
<tr>
<td></td>
<td>Higher tolerance of others</td>
<td>Specific FDI potential</td>
</tr>
<tr>
<td></td>
<td>Better security system</td>
<td>Special development programs and neighborhood initiatives</td>
</tr>
<tr>
<td></td>
<td>Special Federal region-specific initiatives and programs</td>
<td>Better access to EU retail markets and resorts for population</td>
</tr>
<tr>
<td></td>
<td>Favorable tariffs of natural monopolies</td>
<td>Different legal environment</td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Absence of inter-regional trade with homeland regions</td>
<td>Language barriers</td>
</tr>
<tr>
<td></td>
<td>Failures of labor market due to its isolation</td>
<td>Closeness to stronger competitors</td>
</tr>
<tr>
<td></td>
<td>Structural local market failures (local monopolies and oligopolies)</td>
<td>Market entry barriers</td>
</tr>
<tr>
<td></td>
<td>Higher transport tariffs</td>
<td>Border and visa barriers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Higher political risks and concerns about energy security</td>
</tr>
</tbody>
</table>

Source: compiled by the author.

We assume that these conditions are on average unfavorable for businesses compared to those in the rest of the domestic economy. In economic terms it assumes the existence of special extra costs of exclaviy. In spite of the past two decades of exclave existence these costs have not yet been systematically documented and studied, except for some biased attempts mostly driven by ad hoc political or legislative concerns (Gareev, 2014; Gareev et. al., 2005a).

It has been asserted that the Kaliningrad exclave enjoyed long-running opportunities derived from its EU proximity, i.e. better access to capital and markets (Vinokurov, 2007b; Smorodinskaya and Zhukov, 2003). Proponents of this position have always argued for the international openness of the region and claimed that the Kaliningrad region failed to extract gains from its “natural” (first and second best) advantages stemming from its EU proximity (Lamande et. al., 2004). Taking globalization and open markets as a reference point, one may insist that closeness to more developed economies opens room for positive spill-over effects and better development prospects. Coupled with access to cheaper infrastructure and energy resources, proximity to EU markets might stimulate indigenous regional enterprises to be more competitive and ready for international cooperation. Unfortunately, institutions and practices instigated by EU-Russian borders merely impede valorization of the potential benefits of Kaliningrad’s geographical proximity to the EU market (Vinokurov, 2007a). After all, integration results in dilution of the negative effects of enclavity.

A somewhat different view (Fedorov, 2011) stresses the prevailing importance of the comparative economic disadvantages of this exclave region due to its detachment from the mainland of Russia. This train of thought seems to be more consistent with the initial assumption of “granted institutional conditions”. The underlying rationale behind this view is as follows. The political priority of “nation state” unity is going to be the dominant factor in the foreseeable future, at least for the Russian Federation. So, state border regulations will be
posing formal and informal obstacles for cross-border flows, thus *ceteris paribus* inducing *additional costs* to regional residents. These costs might be of a different nature, i.e. due to local structural imperfections, higher transit tariffs, additional customs routings, and so forth. There is also one interesting but less studied aspect worth mentioning, namely, the absence of frictionless inter-regional flows with neighboring domestic regions. Coupled with limited intraregional markets we get some additional constraints in the form of higher prices and higher wages claims by less skilled labor (on average) that also suppresses competitiveness.

In the next part we will consider the Kaliningrad exclave and study some peculiarities of the SEZ in the Kaliningrad region as an *endemic institutional arrangement* designed to overcome some consequences of exclavity.

### 3. The SEZ as a key development tool for the Kaliningrad exclave

The Kaliningrad region survived one of the largest drops in its industrial production index – down to 16 in 1998, to the level of 1990 – among the regions of post-Soviet economies (here we leave outside the scope those regions that faced hostilities or other catastrophic events). Second, it was always prone to larger fluctuations of economic indicators than most of its counterparts (even with corrections of scale statistical effects). Third, the region enjoyed the prominent manufacturing growth associated with the complete restructuring of its economic base encouraged by SEZ regulation. This growth was followed by a short-term decline due to the financial crises of 2007-2009, but has recovered recently.

Figure 1 draws a prominent picture of the exclave economy, capturing its important features. Finally, one should not be misguided by looking only at growth indicators. On the one hand, we have witnessed the radical restructuring of an economic base when entirely new industries and economic activities emerged in Kaliningrad² (Fedorov, 2011; Vinokurov, 2007a). There appeared car assembly, consumer electronics, food processing, construction materials and the furniture industry, to name a few (Gareev et. al., 2005). On the other hand, the crisis of 2008 revealed the fragility of the SEZ import-substitution model. Indeed, the rise and fall of home appliance assemblers is a good example of the hidden vulnerability of the chosen economic model (Usanov, 2008).

² In the text we use Kaliningrad and the Kaliningrad region (oblast) interchangeably referring to the whole area.
The special economic zone in the Kaliningrad region: development tool or institutional trap?

Figure 1: Industrial and agricultural production index of the Russian Federation and the Kaliningrad region, 1991-2011; Index (1990) = 100

Source: Rosstat, 2012; author’s calculation.

We suggest that the SEZ in the Kaliningrad region can be treated as an endemic institution, not solely as a policy tool, due to the handicapped status of the region imposed by institutions and/or policies at a higher level. This means that a business, all things being equal, is “forced” to use SEZ preferences in order to stay ‘in the game’.

Undoubtedly, the SEZ in the Kaliningrad region has been shaping exclaves economic conditions for more than two decades. Figure 2 reflects the chronology of the SEZ evolution as divided into three periods.

Figure 2: The chronology of the SEZ in the Kaliningrad region

In this paper we are especially interested in the Kaliningrad exclave’s economic development since 2006 when two legal systems for the SEZ have been coexisting (for convenience we call them SEZ-96 and SEZ-06). Formally, the Law on SEZ-96 was repealed by the Law on SEZ-06, but the core positions of SEZ-96, namely, free customs zone regulations, were with some minor modifications preserved in current legislation (Russian Federal Law, 1996; 2006). In spite of some recent changes such as the Customs Union of Belarus, Kazakhstan, and Russia, the free customs zone is still valid. Now Kaliningrad’s economy is approaching the end of the transitional period, which is known as the “2016 problem”.

According to the original law on SEZ-96, “goods shall be deemed to have been produced in the Special Economic Zone provided that the proportion of value added by the processing (re-
processing) thereof accounts for at least 30 percent, (…), and the processing (re-processing) thereof entails a change in the goods code under the customs classification” (Russian Federal Law on SEZ, 1996). This norm means that a manufacturer who wants a certificate of origin for finished goods delivered from the SEZ needs to prove that at least 30% of their value was added in the Kaliningrad region, and simultaneously the goods had changed their tariff nomenclature on, at least, the fourth digit.

For the sake of positive analysis, we will focus on the former requirement (30% of added value), as the latter is always item-specific. For the conscientious producer, it does not usually constitute a challenge to obey the latter requirement. Besides, later, after adoption of the SEZ-06 regulation, application of these criteria was relaxed from “and” to “or” logic. To put it differently, “true” production transformation of inputs entails certain costs that constitute added value \( A \). For simplicity, we interpret the norm in terms of value added to final goods ratio as follows.

\[
\alpha = \frac{V - C}{V} \cdot 100\%
\]

Where \( V \) stands for output value (price of a manufacturer without V AT\(^4\)); \( C \) stands for cost of imported inputs (usually the CIF price). So, \( A = C - V \) is simply value added from the point of view of a producer under a free trade situation, i.e. before tariffs are instituted. By definition, we have \( \alpha \epsilon [0,1] \). In our special case, the SEZ point of view corresponds to a free-trade pattern (represented by \( A \)), whereas the competing patterns can be seen, in general, as value added after application of tariff policy:

\[
A' = V(1 + \tau') - C(1 + \tau')
\]

The normative threshold for value added in the SEZ is, as mentioned, 30%. It is interesting to note that SEZ-96 introduced an *ad valorem* rule that implies that added value to the import ratio \((V-C)/C\) is approx. 43%. This is important because of the composition and structure of value added. Being “true” added value, a large portion of critique addressed to the application of the SEZ-96 would be disproportionate. Indeed, many observers questioned multiple misuses of the *ad valorem rule* in the Kaliningrad region (Smorodinskaya and Zhukov, 2003; Vinokurov, 2007a).

Figure 3 shows the theoretical curve that reflects the monetary units of import needed for producing one unit of domestic added value for different ad valorem levels. For instance, if one provides 30% of added value as presupposed by the SEZ-96 regulation, one needs at least 2.33 times as many imports. When real value added goes down, due to whatever reasons, import rises at an advanced pace. Unfortunately, the legislators were not explicit on this point that revealed some mechanisms of relaxation of the norm. We will not distinguish between “true” and “accounting” added value, but the careful reader should keep in mind the possible drawbacks of such a division, i.e. manipulation of costs structure and/or profit share. This assertion will become clearer when we examine SEZ hybrid structures in more detail below.

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\(^{1}\) Many misuses of SEZ-96 regulations deserve special study. In the current paper we do not touch upon those aspects of SEZ-96’s evolution. For more details, the curious reader may refer to Smorodinsky and Zhukov (2003), among others.

\(^{2}\) Value added tax in Russia is 18% for most goods and services (VAT is applicable for those firms that use the “general” as opposed to the “simplified” taxation scheme; this is not the case for VAT collected through customs clearance).
The main purpose of applying the modified effective rate of [tariff] protection (ERP) and effective [average] tax rate (ETR) approaches is to demonstrate the essence of the economic reality of exclave conditions. The formula needs to be modified in order to grasp the typical exclave import-substitution model as compared to pure import and ordinary domestic import-substitution (here we ignore the pure domestic production model; the rationale for this is twofold – on the one hand, in most business models deserving attention, imported inputs are important; on the other hand, this comparison can only be fruitful in normative analysis while comparing real business data for a specific business model).

**Figure 3: Import to added value theoretical ratio in the framework of the ad valorem rule**

![Graph](image)

So, the effective rate of protection can be found as:

\[
ERP = \tau^v + C \cdot \frac{\tau^v - \tau^c}{V - C}
\]

In this formula \(\tau^v\) refers to the customs tariff for outputs (final good produced).

For analysis of SEZ protection, using our notation introduced above, it can be simplified to the formula of effective protection of a domestic industry producing from imported inputs compared to direct import of outputs:

\[
ERP_{di} = \frac{A^v - A^c}{A^v} = \frac{V \tau^v - C \tau^c}{V - C}
\]

For clarity, we consider the weighted average tariff for inputs \(\tau^c\), (excluding VAT collected during customs clearance).
For SEZ-96, import-substitution producer effective tariff protection (zone-to-import) against pure import to the mainland\(^7\) can be found as (Gareev, 2009):

\[
ERP_{z} = \frac{V^* \tau^*}{V - C} = \frac{\tau^*}{\alpha} \cdot 100\%
\]  \hspace{1cm} (5)

In its turn, effective tariff protection of import-substitution SEZ-96 producer to domestic producer (zone-to-domestic), other things being equal, may be calculated as follows:

\[
ERP_{zd} = \tau^* \cdot \frac{1 - \alpha}{\alpha} \cdot 100\%
\]  \hspace{1cm} (6)

Of course, it is almost trivial to assume that ceteris paribus ordinary domestic import-substitution is relatively protected by tariffs compared with pure import, and SEZ import-substitution is protected compared to both. The issue, as always, is to what extent such protection is really “protective”. Moreover, it is less clear to what extent effective protection of SEZ import-substitution compensates the exclave’s burden of excessive border-specific transaction and transportation costs.

We have done a simple calculation for hypothetical, though realistic, conditions of \(\tau^v = 10\%\) and \(\tau^c = 5\%\). It is easy to see that in the hypothetical case a typical firm obeying the ad valorem rule is effectively protected against import on 33\%, but might face stronger competition from domestic companies with only 12\% of advantage. More importantly, Figure 4 advocates in favor of strong incentives to evade the law on the SEZ-96, diminishing the factual added value as far as it promises to promote effective tariff protection. Another option is to carefully examine the Tariff Schedule to find technological chains with large differentials between duties on inputs and outputs.

**Figure 4:** Effective rate of protection (%) depending on added value (%), for different modes of import-substitution; for \((\tau^v, \tau^c) = (0.10, 0.05)\).

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\(^7\) Here we ignore the influence of internal Kaliningrad regional markets where consumer products can be imported without customs duties under the SEZ-96 regulation.
To trace the outcomes of such incentives on an aggregated level, one may suggest considering the international trade of the Kaliningrad region as compared to the Russian Federation (see also Lamande et. al. (2004) for earlier discussion on the issue). Note that with the purpose of scale compatibility we use 1% of total amounts of exports and imports of Russia to draw the graph. So, Figure 5 presents disproportional faster growth of import to Russia through the Kaliningrad area.

**Figure 5:** Import and Export of Kaliningrad oblast and Russia, mln USD, 1991-2012

Due to growing concern about net import growth, reform of SEZ-96 was initiated in 2002 and finished at the very beginning of 2006 with adoption of the federal law on SEZ-06 that came into force on the 1st of April, 2006. The extensive literature on the topic at that time reflects a lack of modeling and rigorous understanding of the real consequences of the law on SEZ-96’s cancellation (Gareev et. al., 2005b; Vinokurov, 2007a). Political pressures and uncertainty regarding the real vulnerability of the exclave economy forced legislators to introduce the transitional period that had preserved the core of SEZ-96 regime in parallel with SEZ-06 until 2016.

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8 Recently, in August 2012, the Russian Federation joined the WTO, which in the long-run will diminish effective tariff protection for exclave (and, in general, domestic) import-substitution anyway. The transition from customs preferences to tax privileges was generally justified by both the economic interests of the Russian Federation and by WTO requirements.
4. The SEZ in the transitional period: intermediate outcomes

Kaliningrad’s strong reliance on SEZ-96 regulation led to a strong import-substitution bias. The SEZ-06 regime, among other things, introduced income (profit) tax preferences for new investors, urging them to reverse the import-substitution profile of the region. In so doing, legislators introduced the ten-year “transition period” for former SEZ-96 preferences, but formally prohibited Kaliningrad legal entities to apply both customs duties and income (profit) tax exemptions simultaneously.

It stated, even more strictly, that only newly-established legal entities that invested more than 150 mln Rubles (approx. $5 mln) in new capital assets could get full profit and property tax exemption for the first six years of operations and half relief for the succeeding six years. So, legal entities that declared projects in the Kaliningrad region with capital investments above the mentioned threshold got the status of resident of the SEZ-06. Residents of the SEZ-06 are not eligible for customs duties exemption while trading their produced goods to the mainland of Russia. Those companies (only juridical persons) established before 2006 are eligible for customs duties exemption but, in their turn, are subject to the ordinary taxation scheme. To sum up, residents of the SEZ-06 have tax preferences, but other firms may enjoy tariff preferences. No single legal person is allowed to use the preferences of both regimes.

**Figure 6:** Distribution of 90 residents in 2012 by size of declared investments, mln RUR, log scale

![Graph](image)

*Source: Author’s compilation. The Administration of the SEZ in the Kaliningrad region.*

As is evident from Figure 6, SEZ-06 legislation immediately increased new direct investments, including FDI, in the Kaliningrad region. Formally, among 90 residents of Kaliningrad SEZ-06, as of the end of 2012, are Russian legal entities that declared 75 bln RUR of capital investments. Among them approx. 32 bln RUR are pure domestic investments expected from 36 residents (with approx. 55 bln RUR attributed to 66 residents including domestic and quasi-domestic investors from offshore jurisdictions). This is in line with gen-
eral practice, as over two-thirds of all enterprises located in FEZs of developing countries are presently either fully owned indigenous firms or joint ventures between domestic companies and foreign partners (Friedrich and Nam, 2009, p. 505).

**Figure 7:** Number of SEZ-06 residents, 2006-2013 (left axis – annual number; right axis – cumulative total)

![Graph showing the number of SEZ-06 residents from 2005 to 2013.](source: The Administration of the SEZ in the Kaliningrad region.)

**Source:** The Administration of the SEZ in the Kaliningrad region.

**Figure 8:** Distribution of SEZ-06 residents in the Kaliningrad region

![Map showing the distribution of SEZ-06 residents in the Kaliningrad region.](source: Author’s compilation.)

**Source:** Author’s compilation.
Figure 7 demonstrates the intermediate but direct formal impact of SEZ-06 incentives, and Figure 8 reflects their spatial distribution in the Kaliningrad region.

Note that the intensity of new residents’ registration corresponds to six-year cycles of tax preferences. Recently we have observed a new phenomenon of formal liquidation of residents after exactly six years of operation. This fact explains the difference between “active investors” and “active residents” in Figure 7.

The SEZ-06 was designed to encourage a reverse from an import-substitution to an export-oriented economic model of the exclave. The main idea behind the transitional period was to prepare companies for operating without the “crutches” of customs preferences. But the reality seems to have demonstrated another vivid example of institutional relaxation of the norms.

Instead of inhibiting stimulus to import, the transitional period regulation gaps reinforced the import-substitution model at new levels (we have observed this effect in Figure 5 above).

In 2005, just before adoption of the new SEZ-06 law, Gareev et al. (2005) showed that even full exemption from income and property taxes would not be enough to compensate SEZ-06 preferences. The reality has proven the validity of those evaluations (being adjusted to path dependent effects of the transitional period of the SEZ). It is still an open question whether those SEZ-06 preferences are adequate, at least, to compensate the transaction costs caused by exclavity. Armed with intermediate empirical results we may try to reveal the real mechanisms at work behind the scene (Gareev, 2009).

5. SEZ hybridization and import-substitution reinforcement

With the SEZ’s isolated system of taxation and preferences in mind, one may think of discrete investment alternatives as defined by Devereux and Griffith (1999). There are two ‘pure’ modes and one hybrid mode. There is one ‘normal’ regime with full taxation for controlling purposes. Strikingly, the hybrid discrete investment alternative is capable of achieving a very low, in our case even negative, effective taxation rate. The economic rationale for these results can be demonstrated by the simplest exposition of the effective tax rate model. We ignore depreciation, inflation, cost of capital and many more concerns. As a starting point, we may assume that profit tax and duties are the only taxes in the whole system, and the effective tax rate for normal mode equals t - statutory profit tax rate (see Figure 9).
In Figure 9 we compare different discrete investment alternatives corresponding to pure SEZ-96, SEZ-06, and hybrid operational modes as of 2006. To enable a direct comparison between discrete alternatives, we propose to treat duties in terms of profit tax in such a way that tariff exemption is equivalent to profit tax subsidies at rate $\tau = (C/\pi) \tau^C$, where $\pi^0 = \pi(1-t)^9$. Unfortunately, the connection between $C$ and $\pi$ used for taxation purposes is obscure for our discrete alternatives in numerical terms. So we use a plausible assumption for the SEZ that $\tau \approx 0.20$.

The horizontal axis reflects the number of years of a project’s realization. The important thing to note is that profit tax exemption alone can hardly substitute customs duties preferences for most business models that require material imports.

Hybrid structures cannot be easily identified in practice. We refer to a group of firms as a hybrid if it consists of two or more legal entities that operate as one economic unit (under unified economic control) with the purpose of economizing on transactions and/or taxes stemming from the co-existence of the two SEZ regimes. This might be slightly confusing terminology, as usually in economic theory hybrids are claimed to be somewhat distinct discrete structures alongside vertical integration or spot market deals (Joskow, 2008). We use the term rather in the juridical and practical sense, stressing the “hybridization” of different SEZ systems. To put it another way, our legal SEZ hybrids might look like “unified hierarchal organizations” through the economic lens.

To avoid confusion, we use just $T$ to designate profit before taxes, and upper and lower indexes with respect to $T$ are used to notate net profit. For SEZ-06 residents these parameters obviously coincide.

"Theoretical and empirical research in the New Institutional Economics tradition examines not only the determinants of the boundaries between firms and markets but also the origins of various “hybrid forms” of governance structure that lie between simple anonymous spot market transactions and unified hierarchical organizations with varying expanses of vertical and horizontal control. These hybrid forms include various types of long term contract, joint ventures, dual sourcing (partial vertical integration), holding companies, and public enterprises" (Joskow, 2008, p. 320).
Nonetheless, they are not more vertically integrated in terms of the famous corrected ‘added value to sales ratio’ compared with pure SEZ-96 or SEZ-06 organizations.

In the case of the Kaliningrad SEZ the typical hybrid usually comprises the resident(s) of the SEZ-06 and affiliated firms operating according to the rules of SEZ-96. Thus, hybrids use the preferences of both regimes. As we know, ‘juridical’ integration is not allowed according to the law on the SEZ. Nonetheless, hybrid agreements are capable of mimicking integration schemes. Of course, transfer pricing should be allowed for such a model which, in general, is a quite realistic assumption. Using transfer pricing is not problematic for indigenous firms (transfer pricing is more complicated for transnational value chains due to special control).

Table 2: Aggregated groups of residents in 2012, by economic sectors / industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Residents</th>
<th>Impact</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Group members</td>
<td>Independent entrants</td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automobile assembly*</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Chemicals</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Construction materials*</td>
<td>10</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Electronic appliances*</td>
<td>9</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Food processing*</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Machinery and equipment*</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Other production</td>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of business estate</td>
<td>16</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Transport and logistics*</td>
<td>16</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td><strong>90</strong></td>
<td><strong>30</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

*) Industries that emerged before SEZ-06.

Source: Author’s compilation.

We may try to indirectly reconstruct some of those hybrids by aggregating information about the affiliation of residents of the SEZ-06 (Table 2). It is harder to collect information about non-residents of the SEZ-06 operating within the same business groups. We must assume that most residents have strong incentives to utilize a transfer pricing scheme, forming wider networks of cooperating hybrids. Indeed, indirect but solid evidence for the “hybridization” scheme is the growing import flows that otherwise would hardly aggregate at such a pace.

Table 2 reflects only resident firms as far as only they are accountable to the SEZ administration. The overall conclusion is that, thanks to an incomplete legal base and the economizing behavior of firms, changes in the SEZ “rules” aimed at reversing the nature of import-based economic growth led to a reinforcement of the existing economic model.

The scheme is not a guideline for tax evasion but rather an optimization problem subject to existing institutional, and thus fuzzy, constraints. Ironically, solving the problem might give industries better short-term results that are achievable in normal non-exclave conditions at the expense of long-run sustainability of the whole region. This is because of an over-compensation effect stemming from the co-existence of two overlapping systems of preferences, each
designed to mitigate the region’s initial handicap. We believe that over-compensation in the short-run jeopardizes the long-term sustainability of Kaliningrad’s economy.

6. Conclusion

Neither economic theory nor practice have as yet produced a comprehensive answer to the question whether an exclave region is capable of unaided development and is in principle economically self-sustainable. It was always more narrative (descriptive) discussion about trade-offs between advantages and disadvantages of exclave economics and “restrictive vs. stimulating” influence of federal-regional bargaining (not mentioning international aspects actively studied in political science).

The SEZ, on the one hand, was aimed at compensating some economic disadvantages of the region and, on the other hand – at stimulating faster development backed by locational advantages.

We adapted and applied some universally known techniques (such as ERP and ETR) to show that a radical decrease in the overall tax burden can be achieved by hybrid structures. We then considered the list of SEZ-06 residents with the purpose of understanding those hybrids. This rather simplified analysis reveals the emergence of hybrid structures utilizing the transfer pricing mechanism that allows us to question the real consequences of the SEZ’s modification of the economy.

In accordance with theoretical prediction, “pure” models were relaxed by the hybrid structures deriving excessive rents in initially handicapped conditions. The existence of such hybrids jeopardizes incentives to invest in real value added and favors those business groups that were already in place. As a result, the SEZ’s evolution has made the exclave economy intrinsically fragile despite complacent nominal economic growth indicators. We also claim that some intra-regional value-chains were excessively stimulated at the expense of long-term sustainability of the region, but their respective property structure does not allow the conclusion that the regional economic system was the main beneficiary of those indirect subsidies.

Besides, relatively soon the exclave economy will be faced by the “2016 puzzle” that is awaiting resolution (the time when the transitional period ends). Only a few hybrids will reinvest profits in order to prepare themselves for the end of the transitional period in 2016.

References


amendments to some legislative acts of the Russian Federation”, 16-FZ, 10 January, (in force).


