This article consists of a series of short essays dedicated to a certain period of the 'popular' socioeconomic history (with a particular focus on the institutional development problems) of the former East Prussia from Antiquity to present days. The authors tackle the issues of the economic history of amber, the role of the Hansa League in the development of medieval trade, the QWERTY-effects in the rail gauge standards, and the peculiarities of the development of the Kaliningrad region in the post-Soviet period.

Key words: economic history, institutional analysis, Kaliningrad region, socioeconomic development.

In order to understand the connection between modern Russia and modern Europe one should recall the history of their relations. Those who can adequately understand the past, will understand the present and foresee the future. Thus, the key to the understanding of the problem of Europe-Russia relations, in our opinion, is the institutional economic history, i.e. history perceived as a science that deals with the processes of development of the "game rules", which determine relations between people. The book "Russia and Europe: path-dependence (an institutional analysis of the history of economic development)" [6] recently published in Kaliningrad is our attempt to analyse the global economic history as a process of institutional competition — the global competition of economic systems and institution. It is the competition which acts as a certain framework for the partially conscious, partially spontaneous selection of the most effective ways of the socioeconomic development of humanity.

The tradition of making academic publications not only scientifically grounded but also entertaining emerged abroad a long time ago. To this end, one "enlivens" the account of general patterns by giving examples of interesting case studies. The result is a better understanding of the complex dialectics of the general and the particular. Almost every chapter of our book contained insertions of "Baltic stories", describing bright and yet, little-known episodes of the socioeconomic history of the states of the Baltic region (the Kaliningrad region, Sweden, Novgorod, and North Germany). It was done not only because the book was prepared for publishing in Kaliningrad, but also due to the fact that the Baltic Sea region is the area of contacts between Russia and Europe. The authors tried to adopt such a style of describing the case studies so that the book could not only be used as an aid for a course in economic history and institutional economy but could also be
The history of the Kaliningrad region

read as a collection of popular science writings. The Kaliningrad reader will be especially interested in the excerpts dedicated to the history of the region. Therefore, we offer several essays about different aspects of the history of former East Prussia.

The myths and mysteries of the economic history of amber

In his "Metamorphoses" Ovid tells a beautiful myth about the origin of amber. Phaeton — a son of the god of the Sun, Phoebe — obtained his father's permission to drive his sun chariot. But the attempt was not a success: Phaeton was inexperienced and the horses were feral. Phaeton ran astray and approached the earth. Tremendous heat fell on earth: rivers dried up, forests caught fire, and even (!) Ethiopians turned black. Enraged Jupiter threw a lightning bolt at the inexperienced driver. Phaeton fell to his death. His sisters — the Heliades — mourning the deceased turned into trees. Even today their tears are dropping from branches of these trees into the river flowing beneath them. Falling, they harden and turn into amber.

This unpretentious semiprecious stone has been known for thousands of years. Many museums, for example, the Kaliningrad amber museum, exhibit amber jewellery and figurines dating back to the Stone Age. Amber adorned the crown of Pharaoh Tutankhamen. Since Homer, poets have eulogised the stone. Under the rule of Nero (1st century BC), a lasting vogue for amber developed in the ancient Rome — back then, a small amber statuette cost more than a healthy adult slave. Amber was also admired in the Middle Ages.

Since Antiquity, amber has been known as a panacea for all illnesses. One can hardly find any illness, that it was not believed to cure. It was sold as a product that could help on the battlefield, improve health, and increase longevity by protecting from ill fate and evil spirits. Legends say that amber is an effective remedy for quinsy and other throat problems and intestinal diseases; it improves vision and strengthens teeth. Amber stops bleeding, helps headaches and prevents cardiovascular diseases. It makes people more beautiful and thus brings mutual love, maternity, fruitage, and fertility. Amber prevents attempted murder, signals that there is poison in the glass by varicoloured sparks. It also turns away the evil eye, cures alcoholism, allergy and hysteria, hypochondria and dementia, infertility and insomnia [7, p. 337—340].

Amber is found in different parts of the world; however, the Kaliningrad region is home to more than 90% of the world's total amber deposits. Even today "amber storms" hit the Baltic coast — the sea brings tens of kilograms of amber ashore. Though, only ten per cent of the extracted amber can be used for making jewellery. Small pieces of amber are first melted and only then used for jewellery or as raw stock. In the mid-1980s, in the village of Yantarny in the Kaliningrad region, home to the unique amber-processing factory, 350—380 tons of the semiprecious stone were extracted annually [1].

1 The texts from the book were revised, two "entertaining stories" were written specially for the present publication.
Scholars calculated that 125,000 tons of amber were collected along the Baltic coast over three thousand years [8, p. 278]. And it is the first mystery of the economic history of amber.

Let us estimate the amber market. Although, the primary technique of its "extraction" in the pre-industrial age was primitive collection of amber on the sea shore, even the most modest estimates suggest that the output amounted to several dozens of tonnes of amber per year. The estimate in tonnes is substantiated by the remarkable find discovered in 1936. Three raw amber storehouses dating back to the 1st century BC accommodating 2.75 (!) tonnes of the material were found in the suburbs of Prussian Breslau (today Polish Wroclaw) [13]. Given this level of extraction, it is strange that neither the "overproduction", nor a significant fall in prices for the "tears of the Heliaades" took place in ancient and medieval Europe.

Since the cornerstone of the "amber business" is the sale of small articles weighing several dozens of grams, significant sales volumes required a successful "marketing campaign". It casts light on the economic underpinning of the "healing magic" of amber. The long list of diseases amber was believed to be a cure for proved the absence of any therapeutic properties. It produced the placebo effect: any patient, who truly believed the "commercial", was able to cure any of his illnesses with amber — such an expensive remedy cannot be a fake!

However, such a "commercial" approach was not peculiar of amber only. It was also used for all precious and semiprecious stones known to people from antiquity:

If your eye is not sharp, or your arms are all weak,  
Precious gems in the bazaar for your ills you should seek.  
Old magicians will find in no time what you look for  
And explain there is never a need for a doctor,  
And the secret of health is in bright precious stones,  
With their glitter and shine we're by Allah bestowed [10].

And of course, the most effective of all stones is the "Northern gold", the bright and lively, cheerfully coloured amber.

The "Kaliningrad trace" in the "summoning of the Varangians"

The first states of our Slavic neighbours (the Polish, the Czech, and Serbians) were founded by local tribal leaders. However, according to the Tale of Bygone Years, Rus was founded by the Vikings/Varangians who came from the Baltic. Apparently, it should have contributed to a stronger initial Europeanisation of the Ancient Rus. But the further history of Kievan Rus does not suggest that the Varangians 'imported' into the Slavic lands any advanced European institutions. Why?

To understand why Scandinavian Vikings did not bring European institutions, we should analyse their origins. First of all, the general term "vikings", applied to all Scandinavian adventurers of the early Middle Ages, came to widespread use in the age of Swedish romanticism in the 19th century. Of course, it had been used before (the term can be found in Icelandic sagas as early as in 7th-8th century), but less often.
Nevertheless, in the 8th-9th centuries, nobody called "guests from the sea" Vikings. Back then, only the expression "to go viking" was used by Scandinavians to denote raids to Europe. Franks called the sea raiders Normans (Northmen), residents of the British Isles — the Danes (i.e. "people from Denmark), Slavs — Varangians (i.e. "sworn persons").

What forced Scandinavians to leave their homeland? In the 8th-10th centuries, the population of Scandinavia did not exceed 200,000 people. Today, we know only three Viking settlements that can be called towns only in the vaguest meaning of the term, namely: Birka in Sweden, Hedeby in Denmark, and Kaupang in Norway. In fact, they did not differ much from other settlements, they only had a greater number of wooden houses.

A Scandinavian man of the pre-Christian era could have several wives and concubines, and each family had a lot of children. The land was inherited by the eldest son. And the other children faced the dilemma, whether to uproot trees and dig granite rocks out of the ground, or to "go viking" in pursuit of happiness far from their homeland. Under the conditions of a relatively high birth rate, the main reason of Viking raids was the lack of arable land.

Coastal cities and towns of Europe became targets of the raiders from the North. Roman fortifications were not always properly maintained in the early Middle Ages, so the invaders easily occupied many of them. By the end of the 9th century, dozens of cities had surrendered to Normans, among them London, York, Cologne, Nantes, Rouen, Orléans, and Bordeaux. Initially, the area of invasion encompassed England, Germany, and France. In the 840s, Scandinavian pirates reached the West coast of Spain, in the 860s — the Mediterranean. However, in the South, the pirates were stopped by Arabs, whose fleet carefully guarded their land.

The major expeditions of Vikings required more organisation than short raids. It was necessary to bring together raiding parties, which spend the winter in their target lands. In 835 Scandinavians start spending winters in Ireland, in 843 — in Gaul, and in 851 — in England. These raider lairs gradually developed into the sites for trade with local population. A chain of fortified markets encircled the Baltic Sea.

Thus, trade was developing alongside military activities (fig. 1). It is not a coincidence that until the 19th century, small tradesmen were called Varangians in North-West Russia.

Three factors helped put an end to the raids of Vikings.

The first one was a three hundred year long Christianisation of pagans, which helped suppress their savage customs and encouraged them to settle permanently in continental Europe. One of such "migrants" was, for example, Rørik of Frisia (Jutland), a son of a Jutland (Danish) king, who lived in the 9th century. Banished from homeland, he was granted by the French king an estate in Frisia (today's Holland), although he continued making long-distance raids. During one of the raids, as many historian believe, Rørik took a prominent part in the establishment of the Old Russian state, becoming the legendary Rurik of Russian chronicles. Better known is the story of lands granted to Normans in the lower course of the Siena (later called Normandy).
The second factor was European beauties. Vikings, who moved from occasional raids to Europe to a methodical seizure of the continent, did not hurry to bring their Scandinavian wives. There were a lot of beautiful women who were also attracted by clean aliens. An English chronicle of the 12th century blamed Vikings for cunning: they (sic!) often washed themselves, regularly combed their hair and wore clean underwear and sometimes used cosmetics to enhance their beauty and stoutness [12, p. 11—25].

The third (and most important) factor was a gradual transition of Scandinavian countries from the pre-state freeman community to the state "order". When the central authority was weak, there were a lot of "sea jarls" who were mostly involved in overseas raids and had troops exceeding the king's ones by number. In the 11th century, Scandinavian kings could already suppress the "sea robbers" and were themselves losing interest in raids, opting for regular tributes.

Scandinavian raids contributed significantly to the physiological genotype of modern Europeans. For instance, England is "three times" of Scandinavian "origin". In 1066, three Scandinavians were fighting for the throne: the legitimate (half-Scandinavian) English king Harold, and the invader Harald of Norway (his expedition is considered the last raid of Vikings) and William, the Duke of Normandy (a descendent of Norman raiders). William won this "internal war of Scandinavians". The bilingual kingdom of Scotland was also founded as a result of a Viking invasion [8, p. 12—63].
But did Vikings contribute to the social genotype of Europe? Could Varangians as robbers and invaders import Western institutions to Russian lands? It is highly improbable. To begin with, Vikings-Varangians were not a "nation", rather a robber/hired militant (tradesman) "profession". One can hardly expect them to import the values of Western civilization. Just to compare, let us address the history of the crusader state on the territory of Byzantium in the 13th—14th centuries: European knights and hirelings succeeded in robbery but not in importing Western institutions. The professional desperados of Middle Ages (Cossacks in Russia, the Taborites in Bohemia) lived by the rules of property authority rather than private property. Thus, Rurik's Varangians/Vikings could hardly bring to Eastern Slavs any advanced practices.

In the story of "the summoning of the Varangians" there is another important element partially related to the history of the modern Kaliningrad region.

Although the sea raiders-Varangians of the 8th—9th century were mostly of Scandinavian origin, some of them came from the Southern coast of the Baltic Sea. There are no accurate data as to the origin of the Varangians who were summoned to Rus (Swedish? Danish? Slavic? Prussian?). One version suggests that the Rurik of chronicles arrived in Novgorod not from Scandinavia but from Prussia. For example, The Tale about the Princes of Vladimir (the beginning of the 16th century) narrates the following story. The Novgorod voivode Gostomysl summoned all Novgorod proprietors on his deathbed and told them: "Men of Novgorod! Listen to my advice! Send a wise man to the land of Prussia and summon a ruler from their noble families". They went to the land of Prussia and found there a prince named Rurik, descended from Roman Emperor Augustus, and the messengers pleaded with him for all Novgorod people to come and rule over them [3]1. In this case, Rurik of Novgorod from Prussia is not related to Rurik of Frisia.

Historians have been questioning the credibility of the legend about the summoning of the Varangians for more than two hundred years. Today, the opinion that the Rurick dynasty descends from the Obotrites who lived along the coast of the Baltic Sea to the West form the modern Kaliningrad region is gaining influence. The largest coastal settlement of the Obotrites (in the environs of modern Mecklenburg) was called Rerik (!) by the Danes, which sounds similar to the name of the legendary Rurik. An undeniable fact is the active migration of Western Slavs towards the East, to Novgorod lands (even one of the districts of medieval Novgorod was called Prussian).

Therefore, the answer to the question why the Varangians did not "import" to Kievan Rus any advanced European institution is pretty simple: they

---

1 The Tale of the Bygone Years gives the following version: in the year 862, messengers from Novgorod "went overseas to the Varangian Rus': these particular Varangians were known as Rus', just as some are called Swedes, and others Normans, English, and Gotlanders, for they were thus named" [22]. It is important to mention that the chronicler distinguishes between the "summoned" Varangians and the Swedish and Normans (i.e. the Danish and Norwegians).
were not Europeans! Indeed, the main criterion of "civilization" was the adoption of Christianity, and the Christianisation of Scandinavians and Western Slavs took place only in the 11th-12th centuries. Vladimir the Great, the prince of Kiev, a great-grandson of Rurik, adopted Christianity as the state religion of Kievan Rus at the end of the 10th century — much earlier that the alleged homeland of the Rurikids.

The myths and mysteries of the economic history of amber

For a long time, amber was available for everyone to collect. The free collection came to its end at the very beginning of the 13th century when the Teutonic Order, which had already consolidated its positions on the shores of the Eastern Baltic, exerted ownership over amber. Those accused of illegal amber collection were hanged on the first tree. There is a remarkable story among the legends of Königsberg about a crossbowman Hans Lose: in the 15th century he denounced many traders of illegal amber bringing them to the gallows and was later accused of planting amber on his victims, after which the "vigilante's" eyes were put out, his legs cut off, and he was beaten to death on the market square. Even after the decline of the Teutonic order, the monopoly on amber remained. Until 1828, there had been a special hangman who carried out the sentences for the unauthorised collection of amber.

Recently, an interesting archaeological find was discovered, which makes one ponder the strength of the Teutonic monopoly of amber collection. It is the second mystery of the economic history of amber.

At the end of 2008, an expedition of the Institute of Archaeology of the Russian Academy of Sciences working in Vladimir found in the basement of a boyar house burnt by Tatars in 1238 a 120 kg hoard of raw amber. Apparently, the house was the premises of an amber workshop or a merchant's storehouse [9]. This find makes one remember that the traces of "industrial" amber processing were found in other parts of Russia in the times when the Teutonic Order allegedly monopolised its extraction. Two amber workshops covered with hundreds of small amber pieces were discovered during the excavations of the first third of the 13th century layer in Novgorod [11].

So, where did it come from? Apparently, after the monopolisation of amber by the Teutonic Order, large shipments of amber to Novgorod and other Russian lands were impossible — almost the whole 13th century the Teutonic knights and Novgorod were at war. One can hardly believe that the knights could not establish control and amber was exported by hundreds of kilograms from under their nose. There might be two answers to this mystery.

On the one hand, it is highly probable that it took some time before the knights established proper control over amber. Shadow economy has a long history; when restrictions are imposed, there is always somebody who can...
bypass them in pursuit of profit. In this case, the treasure of Vladimir is, in today's terms, a result of large illegal supplies of scarce consumer goods.

On the other hand, though amber is called the "Northern gold", it was industrially extracted not only on the shores of the Baltic Sea. Even Herodotus, Tacitus, and Pliny the Elder wrote that amber could be brought not only from the distant North but also from closer places — from Scythia. It has been proven that, in the Middle Ages, amber was extracted literally in the environs of Kiev. (Today these deposits are almost completely exhausted.) Therefore, Vladimir and Novgorod amber workshops could use not the Baltic, but the Dnieper amber. Moreover, the amber from Tutankhamen's tomb and the amber vogue under Nero could also have been of Scythian "origin".

One could give a definitive answer to this question if the Baltic and Dnieper amber had different chemical composition. However, the analysis of the infrared spectra proved them to be identical, since both deposits come from the same amber formation region [11, p. 77]. So, the answer to this question is still unclear.

The splendours and miseries of the Hansa League

"Alternative history" is a popular genre of contemporary science fiction. As a rule, the plot revolves around our contemporary who mysteriously goes back to the past and starts "putting everything to rights" (repulses Batu Kahn's invasion, reconciles Peter the Great with Tsarevich Alexei, helps Denikin put an end to the "red upheaval"...). However, the real history is rich in episodes that look as if a "guest from the future" made an attempt at exporting institutions in time. Such episodes can be found in German history as well.

The following story could make an amusing novel: a contemporary European finds himself in the Middle Ages and starts establishing there something like the modern USA. He relies on advanced merchants who suffer from the wilfulness of feudal lords. Our contemporary manages to form a 'Europarlament' from the representatives of a several dozens of emporia, which announces the foundation of the Union of Trade Protection. This Union protects the Baltic Sea from pirates, organises industrial cargo ship-building and boosts lively trade of consumer goods. When the reactionary feudal lords try to impose restrictions on merchants, the military troops of the Union "explain" to them how dangerous it is to mess with the business affairs of modest traders. Under the slogan "German trade above all!" new cities, free from feudal authority, rise on the Baltic coast.

That is how it actually was. Almost how it was...

In medieval Europe, in the conditions of weak central authority, merchants had to protect their goods from raiders and lords who were always eager to make good at somebody else's expense. The Hansa (German for 'union', 'group'), which was founded in the 12th century, developed into such
an informal union bringing together the merchant guilds of northern German cities. A landmark in the consolidation of the Hansa was the year 1285 when Lübeck, Wismar, and Rostock built up a trade alliance. The first Hansa 'conference' took place in Lübeck in 1356, where the alliance of German trading cities was fully formed. Such 'conferences' of alliance city representatives became regular, their decision were binding for all members of the Hansa.

The zenith of the Hansa was in the 14th-mid-15th centuries, when the alliance brought together approximately 160 cities situated on the shores of the North and Baltic Seas. The "grim genius of the German nation" was first to understand the advantages of trading convenience goods. If Italians dealt mostly with luxury goods brought form the East, the members of the Hanseatic League focused on trading grain and salt, fish and oil, iron and wool. To transport such voluminous and relatively cheap goods, the Hanseatic cities needed practical and spacious vessels. The answer was a cog — a 25 meter long and high side ship, having a 100 tonne capacity. Such ships were built as fast and as cheaply as possible. Having got the sense of their power, the Hanseatic merchants moved from property protection to active politics and were granted special trade preferences. The crucial point was the control over the traffic of goods and fluctuation of prices. When in 1362, Valdemar IV of Denmark tried to challenge the Hansa, the war ended with the seizure of Copenhagen in 1368 by the united Hanseatic fleet and the peace treaty of 1370, according to which the king of Denmark could not be elected without the preliminary consent of the League. In 1468, the English king Edward IV also tried to revoke the privileges of the Hansa. After the League plundered the coast of Britain, the king was forced to restore the privileges and pay a contribution. In 1524, the members of the Hansa, true 'kingmakers', helped a Swedish nobleman Gustav Vasa liberate Sweden from the Danes and become the king.

Lübeck, the leader of the Hanseatic League, also became an exporter of institutions. The governance and the law of the city (the Lübeck law) was a peculiar 'export product' for the new cities rising in Sweden, Poland and on the eastern coast of the Baltic Sea. The colonisation of the Baltic Sea accelerated due to the Hansa League. The formed migrant settlements evolved into cities — over 300 years, more than 300 new cities emerged in the Baltic, including Riga, Danzig (Gdansk), and Revel (Tallinn). It was the Hanseatic age when the colonisation resulted in the rise of three German towns — Altstadt (128), Löbenicht (1300), and Kneiphof (1327) — which united later to become the city of Königsberg.

Nevertheless, the Hanseatic League was neither the 'dawn of capitalism', nor the core of the unification of Germany. On the contrary, it hampered both. Every city settled its affairs independently. The League did not have either a central authority, or a common fleet. The target of the Hansa was not to encourage competition or free trade but to create and solidify the monopolistic privileges of its members.
The Hansa, as any monopolist, maintained lucrative prices. Every attempt of non-member cities to carry on external trade independently was instantly thwarted. They faced, in the best case, commercial blockades or, in the worst case, wars, which were usually won by the Hansa. This state of affairs continued until the second half of the 16th century, when after the rise of Dutch trade and the strengthening of Denmark, the influence of the Hansa started decreasing. The demise of the Hanseatic League took place in 1669; but the Hansa almost ceased to exist during the Thirty Years' War (1618—1648).

There were at least two factors weakening the Hanseatic League, which gradually led to its decline. Our drawbacks are often the extension of our virtues. The Hansa was no exception. The alliance of northern German cities rested on the feudal (rather than capitalist!) monopoly, its major function was that of a mediator. Moreover, after the unification, the merchant guilds strengthened monopoly spreading it beyond medieval cities, as a result, the new object of regulation was not the local market but the market of the whole (in this case, Baltic) region. And the quantity transformed into a new quality. This monopolistic (and feudal by nature) regulation extended to new areas, where capitalism, fettered by feudalism, started to develop. It is well-known that first manufactories emerged in rural areas, free of feudal regulations. Those manufactories were focused more on the external than internal market. But the Hansa captured external markets throughout the Baltic Sea, thus hindering the development of manufactories in the region.

Both features (the capture of markets and retention of trade privileges) turned out to be incompatible with evolving manufactory capitalism. It encouraged competition, which could be beaten off only by the producer with lower expenditures. Free trade became crucial for the use of relative advantages. The longstanding existence of the Hansa did not accelerate but slowed down the development of capitalism in the Baltic region. The countries participating in the Hanseatic trade started to fall behind the Netherlands, England, and France.

...Maybe the "guest form the future" did visit medieval Germany, but he was a herald of regress rather than progress? If the Hansa had not formed, the dawn of capitalism could have broken over Germany and Sweden rather than Holland and Great Britain.

The Kant code (a story a la Dan Brown)

The great German philosopher Immanuel Kant had an exceptionally boring life. He hardly ever left his hometown Königsberg and did not do anything except teaching philosophy and writing philosophical treatises. Nevertheless, he became a character of an adventure story à la Dan Brown — the one with mysterious murders, Masonic conspirators, cunning royal agents, brilliant detectives and historical sensations [17]. This novel stands out from
the ocean of bestsellers à la *The Da Vinci Code*, because it offers a new perspective on the role of the 'Kaliningrad' philosopher in the modern cataclysms.

Since we aim to write not a commercial but a popular science review, we will give the gist of the book without risking to spoil the plot of the story. Germany, 1870. The ruler of a principedom commits suicide in mysterious circumstances. The investigation is conducted by an Austrian agent and a local physician, an enthusiast searching modern research methods. It turns out, that the prince gave his proxies a large sum of money to hire robbers to attack post chaises. Finally, the detective-physician finds out the real purpose of those strange actions: a new manuscript of Immanuel Kant, *The Critique of Pure Reason*, which contains startling revelations, was to be transported from Königsberg to Leipzig. The conspirators decided to destroy the manuscript and disguise it as a chaise robbery. The main character saves Kant's book and delivers it safely to the publisher. But what was the startling revelation? Many years later, after the French revolution and Napoleon's wars, the physician rereads *The Critique of Pure Reason* and suddenly understands why the ideas of the philosopher shocked the conspirators so much. Immanuel Kant scientifically supports the right of a human being to change the world according to their ideal concepts; and the world is being torn apart. The book ends with the main character despairingly thinking whether he made an awful mistake saving that brilliant and frightful book, in which the world got lost.

The book of the German novelist must leave a strong impression on the reader, because, nowadays, the talks about the role of philosophy in dramatic changes are not very popular. Of course, one can remember Hegel's philosophy as one of the sources and elements of notorious (for many) Marxism. But if the founder of the 'malicious' dialectics, Friedrich Hegel, is usually linked to Karl Marx, Kant has never been blamed for revolutionary cataclysms. However, when reading the 'frightful' words of Kant, one gets an impression that they have already seen it in a revolutionary context. Here one might remember the final short and sharp phrase from the *Thesis on Feuerbach* (1845): "Philosophers have only interpreted the world in various ways — the point however is to change it".

Of course, one can hardly accuse Immanuel Kant of opening Pandora's Box and encouraging the legions of those willing to change the world according to their design.

**The three gauges of Kaliningrad**

In 1985, the American economist Paul David published an article [20] dedicated to the seemingly insignificant problem of the development of the keyboard layout standard. This small article evolved into a theory, which is considered a major achievement of the institutional economics.

When the typewriter was invented in the USA in 1868, it had two rows of keys standing for the letters A-Z in the alphabetical order. However, the
first typewriter models manufactured by the Remington Company since 1874 had a flaw: two adjacent keys would clash and jam if pressed at the same time, or in a rapid succession. Then another keyboard layout was invented, where the most frequent two-letter combinations were placed on the opposite sides of the typewriter. In the mid-1870s, the QWERTY layout, which has been the universal standard since then, was developed. So, the QWERTY keyboard was a product of temporary and incidental technical circumstances. Two decades later, the typewriter was upgraded so that the clashing and jamming of keys became impossible, but QWERTY layout remained the standard.

This research on the optimal layout principles allowed A. Dvorak, an adherent of Taylorism, to patent a principally new keyboard layout. Although experiments showed that the Dvorak layout is 20—40% more effective than the QWERTY layout, it did not become a standard. The Dvorak keyboard is not perfect — new, more effective variants were developed later. However, despite the innovations, new keyboards are used nowadays by a handful of "fans", while the overwhelming majority uses the QWERTY keyboard.

P. David gave the following explanation of the QWERTY phenomenon [21, p. 30—49]. To understand what happened in the last decades of the 19th century, an economist must pay attention to the fact that typewriters were becoming an element of a large and rather complex production system, which included typists and typewriting equipment. Thus, among the agents making a decision were not only the manufacturers and purchasers of typewriters, but also typists offering entrepreneurs their skills, as well as different private and public organisations teaching typewriting. This complex system was not the result of a project, it emerged spontaneously.

The domination of QWERTY is explained by the spontaneous evolutionary processes of the technical interrelatedness, economies of scale and quasiirreversibility of investment. They constitute the basic ingredients of what might be called 'QWERTY-nomics'.

The factors mentioned by P. David create a situation when one of many competing standards prevails and the return to the standard diversity becomes almost impossible. W. Brian Arthur called this phenomenon 'lock-in tendency' [19]: irreversible changes take place in only one direction. It means that the 'war of standards' will be inevitably won by one of them, but no objective law can predict which one. Here, of importance is the 'historical coincidence' factor, which, at the beginning of the process, can determine further events.

The victory of QWERTY layout over more effective standards may seem insignificant in the context of global economic history. However, the research on the economic history of technical standards launched after the pioneer works of P. David and B. Arthur showed the wide occurrence of QWERTY effects in almost all fields.

A classic example of the QWERTY effect is the story of the rail gauge standard. This story brings together facts and anecdotes, America and Mon-
As we know, the steam locomotive was invented in 1814 by the English self-taught inventor George Stephenson. In 1818, the first 61 km long railroad was constructed under his supervision. Since the first railroads were initially meant for coal transportation, the gauge standard was the width of the then coal carts. The width of the carts was, in its turn, determined by that of a standard wagon used for transporting cargoes since the Roman times. In antiquity, tracks for wagon wheels were hollowed in the road; wagons were usually pulled by horses harnessed side by side. The width of two horses — 4 feet 8½ inches (1,435 mm) — became the Stephenson standard gauge.

When the railroad started to handle other cargoes and even passengers, the gauge standard, ‘developed by Roman slaves’, came in question. Engineers rightfully believed that the broadening of the gauge will contribute to its durability, increase the speed of trains and make the trip more comfortable. However, when it became necessary to lay rails over uneven terrain and mountainous areas or over bridges and in tunnels, the narrower gauge was more economical.

In the 19th century, during intensive railroad construction, the war of standards was in full swing. For example, in the 1870s in the US, there were six different gauge standards. The antique standard had the advantages of Stephenson’s authority and the lock-in effect. Nevertheless, when the construction of the first passenger railroad between Manchester and Liverpool was being planned in 1830, Stephenson’s competitors offered a broader — 1676 mm wide — gauge. If Stephenson had lost, the world railroad history could have been totally different. However, Stephenson won, which finally led to the victory of the Stephenson gauge. As a result, when Americans were designing spaceship engines in the 1960s, they had to fit them in a width of 5 feet; otherwise they could not have been transported to Cape Kennedy through railroad tunnels constructed for the Stephenson gauge.

In Russia, the construction of railroads began almost at the same time as in Great Britain: the first 27 km long railroad between Saint Petersburg and Tsarskoye Selo was opened as early as 1837. There is an anecdote explaining why its creator Gerstner, an Austrian, chose a broader gauge standard. The construction project is said to be approved by the emperor Nikolai I. And when asked whether the gauge should be broadened, the august customer used a rude implicit negation referring to the size of a particular male organ. Since the negation was implicit, the foreign engineer mistook it for an instruction and followed the ‘advice’, honestly thinking that the mentioned male body part length suggested the desired length for the extension of the railway gauge and made the gauge 1520 mm wide.

Of course, it was not the case. At least, since the first Russian railroad’s gauge was 1830 mm wide. The Russian gauge standard was established much later, when at the beginning of the 1840s, the preparation for the mass railroad construction started in Russia (including the Moscow to Saint Pe-
The history of the Kaliningrad region

tersburg Railway, featured in the poem "Railway" by N.A. Nekrasov). Experts commissioned from America (who supported the broader gauge) persuaded the Technical committee of the Department of Communications to adopt the six feet (1520 mm) gauge standard. As a result, Russia set a standard that was used only by several American railway lines — most of railroads in the USA had the 1435 mm Stephenson gauge.

The Kaliningrad of today is a unique evidence of the bygone 'war of standards' — there are three gauge types in the region. First of all, as throughout the territory of the former USSR (and Mongolia, which was a Soviet satellite), most Kaliningrad railways are of the 1520 mm width Russian standard. Secondly, during the development of the direct communication between Kaliningrad and Europe, the railways of the Kaliningrad-Berlin type were equipped with the 1435 mm Stephenson gauge. Some sectors have two — the Russian and the Stephenson — gauges. Thirdly, the idiosyncrasy of Kaliningrad (apparently, such rarity can be seen only in Pyatigorsk) is the 1000 mm Prussian tramway gauge. It is the heritage of the pre-war times. There are still a lot of 1 meter wide tramway systems in modern German cities.

One can say that the three gauges of Kaliningrad are the symbols of the three eras of the development of former Königsberg — the Prussian, the Soviet and the prospective European ones.

Of course, over time, this diversity will cease to be. One can refer to the experience of Spain, India, and Australia, which recently allocated significant funds to standardise their railroads to the international (Stephenson) gauge. The enthusiasts for economic history have to hurry to enjoy the Kaliningrad railways as a monument to the QWERTY-effects.

How Königsberg became Kaliningrad

Usually, toponyms reflect the history of the territory and emerge as a result of century-long processes [14]. The toponyms of the Kaliningrad region, former East Prussia, are a striking exception: most of the modern names of settlements appeared in 1946 and were a product of the efforts of military topographers who allegedly completed that task in a week [see 16]. The toponyms of the Kaliningrad region, unlike those of Central Russia rooted in the distant past, do not pose problems to the local residents. Not every resident of Moscow or the Moscow region can explain the names of the rivers Moskva, Yauza, Nara, Pakhra, Istra, Oka, etc. But most of the toponyms of the Kaliningrad region are easily explicable for a contemporary. They reflect either natural, or socioeconomic characteristics.

Most of the towns and villages of the Kaliningrad regions were named after purely Russian names or surnames, to say nothing about the region itself bearing the name of the 'all-Union headman' Mikhail Kalinin. More than 200 towns and villages were named after Russian and Soviet public figures (Griboyedovo, Lermontovo, Turgenevo) and the heroes of the Great Patriotic War (Gusev, Guryevsk, Chernyahovsk, Nestrov, etc.).
There is another peculiarity, typical of the countries of the New World, where migrants (the English, the French, and the Spanish) brought the old names of settlements or natural features (mountains or rivers) familiar from childhood. Such is the story of the Canadian London and Waterloo, the American Richmond and New Orleans. And the same process took place on the Soviet territory of East Prussia after the deportation of the indigenous German population in 1947—1948 (from the pre-war population, only few people of the Baltic origin stayed in Soviet Kaliningrad).

Russian migrants replacing the deported Germans brought their culture and familiar names giving little regard to the historical succession of toponyms. Thus, it is no surprise that the map of the Kaliningrad region has its own Moscow (in fact, four of them), Borodino, Mazyr, and New Babruysk. However, usually the names are slightly modified. Villages are regularly called Moskovskoye, Kievskoye, Minskoye, Rizhskoye, Kaluzhskoye, Tambovskoye, Yaroslavskoye, etc. If we compare the predominant areas of emigration to the Kaliningrad region, we will see the interdependence of the phenomena (fig. 2).

![Fig. 2. The native regions of the residents of the Kaliningrad region that migrated in the Soviet times](image.png)

Source: [16].
Mass migrations as a form of repressing 'misbehaving' ethnical groups is a typical feature of the Asian production method. The most famous example is the mass migration of Jews in the Neo-Babylonian Empire in the 7th century BC. Unfortunately, this practice was revived in the conditions of the Soviet command economy. The tragedy befell Crimean Tatars, the Balkars of Kabardino-Balkaria, and Chechens. It is less widely known that the objects of deportation in the post-war times were not only the indigenous peoples of the Soviet Union, but also the Germans from East Prussia. Similar mass deportations of Germans (and even in a more violent manner) took place in Poland, the Polish also carried out 'ethnic cleansing' on their part of East Prussia.

It is remarkable how modern and archaic 'rules of the game' combined in the process of inhabiting Kaliningrad. On the one hand, if the deportation of Germans was a forced one, the immigration was more or less voluntary. The immigration was organised by special state recruiters who promised the immigrants good living conditions (all but any flat in any house) and financial support. However, these benefits were granted in the Soviet manner.

In effect, over the first years, the living conditions in the city destroyed by bombing were far below even the Soviet standard — there was no water supply and heating, most of the buildings were ruined. For all societies of "oriental tyranny", it is typical that the promises of officials, to put it mildly, are not fulfilled completely. Nevertheless, the promised financial support was granted. The decree of the Council of Ministers of the USSR of July 9, 1945 ordered to sell to every family of migrant collective farm workers 1 coat, 10 litres of kerosene, 10 kilograms of salt, and to every family member — 1 pair of shoes, 1 hat, 2 pairs of socks at prices set by the government [5, p. 26]. It is the true Soviet style: giving two pairs of socks (as selling goods in short supply at a price hardly related to the market one) was decided at the level of the Council of Ministers.

What did such mass migration lead to? Did the economic continuity take place? Yes and no.

Yes, because East Prussia was more of a geopolitical than economic interest for Germany, and the Kaliningrad region played the same role in the USSR. It was situated on the border of two systems, two military blocs — NATO and the Warsaw Treaty Organisation. It was also a base of the Baltic fleet, which played an important role in that opposition.

No, because the market economy was replaced by the command one with all its advantages and disadvantages, the protestant ethics was substituted by the orthodox ethics, and German culture — by Russian culture. It could not but affect the economic and administrative governance, the ideology and other forms of social consciousness, the everyday life and behaviour of the population who brought their traditions from Russian backwoods.

It is another circumstance that is quite astonishing: the long-forgotten traditions were gaining popularity, thus distinguishing the region from other constituent entities of the Russian Federation. But it is another story, the story of 'Russian Alaska in the middle of Europe' which is still unfolding.
Russian Alaska in the middle of Europe  
(advantages and disadvantages of the exclave region)

The collapse of the USSR resulted in a dramatic change in the geopolitical position of many constituent entities of the Russian Federation. Almost a half of them border other countries or seas, 25 of them border on ex-Soviet republics. The Kaliningrad region became an enclave for the neighbouring countries and an exclave for other constituent entities of the Russia Federation, since it is connected with them only by sea. The same situation is typical, for example, of American Alaska. But it was also peculiar to East Prussia — both as the kingdom of Prussia (1701—1772) and as a part of Germany after World War I (1918—1939).

The Kaliningrad region is the smallest in Russia (0.1% of the territory of the Russian Federation). Amongst the constituent entities of the Russian Federation, only the republics of the North Caucasus (Adygea, Alania, Kabardin-Balkaria, and Ingushetia) have a smaller territory. However, having the population of 0.66% of the population of Russia, the region is not ranked last. In the population density (62 people per square kilometre) the Kaliningrad region exceeds the national average (by 7.5 times) and approximates European standards.

We can argue, where is the centre of Europe — in the Ukrainian Transcarpathia, or to the north of it, — but the fact is that the Kaliningrad region is closer to Europe than any other constituent entity of the Russian Federation, not only geographically, but also in terms of a number of socio-economic indicators.

What are the features of the development of this Russian Alaska situated at a distance of 1000 km from the capital and having no land borders with mainland Russia? [4]

Of course, state borders, separating the region from mainland Russia, impede free cargo and passenger traffic and create additional costs in goods exchange. 20 border crossing points were set up in the Kaliningrad region to maintain its external connections.

However, the advantages of the coastal location are indisputable. Kaliningrad and Baltiysk are situated in the southern ice-free part of the Baltic Sea. In the modern conditions, when fishery has become an all-year activity in different seas, it is an important advantage, which creates the basis for the development of a large fishery complex.

Kaliningrad lies in a closer vicinity to European trade partners than Saint-Petersburg, Murmansk, or Arkhangelsk. Even today it processes more than 15 million tonnes of cargoes. A large industrial port complex is developing in Kaliningrad, gradually extending over the whole western part of the region. It includes the Kaliningrad sea cargo part, fishing sea and river ports, the towns of Svetly and Baltiysk. Oil extraction is carried out along the shelf of the Baltic Sea.
The Kaliningrad region is becoming a rapidly developing recreation centre, which attracts more than 0.5 million tourists. While Russians need visas for a trip to the Baltic countries, they can fly to Kaliningrad without any visas. However, for a cheaper trip by train, one needs a Lithuanian transit visa, which significantly reduced the number of tourists. Therefore, it is not surprising that, in 2008, when the Russian Federation managed to only restore the industrial potential of 1990 — the last pre-crisis year of the Soviet era — the Kaliningrad region exceeded the figure almost twofold. It happened due to the fact that, over the last 10 years, the investment dynamic was almost twice as high as the national average rate (fig. 3).

![Fig. 3. The investment dynamics in the Russian Federation and the Kaliningrad region, % from 1998](image)

Calculated according to: [15].

**A 'double periphery' or a 'development corridor'?**

*(Kaliningrad as a potential Russian Hong Kong)*

The Kaliningrad region is located at the intersection of two main traffic arteries of the Baltic (fig. 4). Will it develop as a mere transit centre or a development corridor is a problem drawing an increasing attention. The question is “Will Kaliningrad remain a double periphery (both for Russia and Europe) or become a link and a cooperation region enjoying the advantages of both Europe and Russia”.

A development corridor is usually defined as a territory situated between two or more poles of economic growth [16]. Such corridors regularly attract investment from both centres. A good example is Hong Kong — the link between the rapidly growing Chinese economy and developed countries.
A strategy and a programme for the socioeconomic development of the region have been developed to date; they are based on the 2005 Law on special economic zones. The first law "On the Special Economic Zone in the Kaliningrad region" was adopted as early as 1996. It rests on three pillars:

— duty free import of goods from other Russian regions and abroad;
— duty free export of goods produced in the SEZ into other Russian regions and abroad;
— for the goods to qualify for the duty relief, the VAT generated in regional enterprises should be not less than 30% (or 15% for electronics and technologically advanced home appliances).

In view of this law, the region was developing import substitution. However, it was specific import substitution, since even local goods were mostly produced from imported raw and semi-finished materials.

Despite the limited effectiveness of the import substitution strategy, Kaliningrad achieved notable success, first of all, in the mechanical engineering, food and furniture assembling industries. Only a small part of the mechanical engineering and papermaking industry produce was imported abroad alongside goods manufactured from local raw materials (fish, oil, peat, amber).

These advantages might be significantly downplayed after the perspective accession of Russia to the WTO, which will result in the general reduction of customs duties.
At the beginning of the 21st century, as the regional economy was growing and the income of the residents increasing, Kaliningrad goods found their Russian customer. Approaching the European standards in their quality, Kaliningrad goods stand out due to relatively low prices. The increase in the income of Kaliningraders resulted in the growing demand for housing and durables. And it is the latter (motor cars and TV sets, refrigerators and vacuum cleaners, furniture and carpets) that have been traditionally produced in the region.

The long-term programme for the socioeconomic development of the Kaliningrad region for 2007—2016 sets two principal targets of the regional development:

— the growing competitiveness of the region both in Russia and abroad;
— the rising standards of living comparable to the European ones.

These targets require the development of cooperation in the region, the region’s entering the common European labour and capital market, developing a connection to the united European energy system, and integrating into the European motorway system.

Today the Kaliningrad region and its municipalities participate in five Euroregions: Baltica, Neman, Šešupė, Saule, and Łyna—Lava. Figure 5 shows that it is only a tiny part of numerous interregional groups that has formed in the Baltic region. So, the Kaliningrad region has a great potential [4].

![Cross-border cooperation with the participation of the Kaliningrad region and its municipalities.](image)

**Fig. 5.** Cross-border cooperation with the participation of the Kaliningrad region and its municipalities.

Digits indicate euroregions:
1 — Baltica; 2 — Neman; 3 — Šešupė; 4 — Saule; 5 — Łyna-Lava

Source: [16, p. 173].
Of course, the transformation of the ex-German Königsberg into a Russian Hong Kong is a long way off. But even the longest way starts with the first step.

In conclusion, we would like to mention that the main resource of modern socioeconomic development is social capital, including the level of civil society development. A major drawback of contemporary Russian society is its civil sluggishness, which creates favourable conditions for the restoration of the institution of authority in the form of property. The socioeconomic modernisation is feasible only if citizens do not solely rely on the wise tsar and have enough resources to actively participate in the search for development possibilities.

The recent events in the Kaliningrad region show that, in terms of civil protest engagement, the "peripheral" Russians are much more active than the residents of Central Russia. The ex-Soviet Kaliningrad paradoxically reveals certain features of the European culture of Prussian Königsberg. Thus, the Kaliningrad of the 21st century has a chance to develop into a Russian analogue of Hong Kong.

Bibliography

2. Гареев Т. Р., Жданов В. П. и др. Становление новой экономики Калининградской области. Калининград, 2005.
5. Митрофанов А. Городские прогулки. Калининград. М., 2008.
10. Ошанин Л. На бухарском базаре // Талисман Авиценны. Ташкент, 1980.
13. Сребролюбский Б. И. Янтарь. М., 1984. URL: http://iznudr. ru/books/ item/f00/s00/2000003/st023.shtml
14. Успенский Л. В. Загадки топонимики. М., 1969
15. Федеральная служба государственной статистики. URL: http://www. gks. ru/ (дата обращения: 01.03.2010).
17. Флейшгаузр В. Книга, в которой исчез мир. М., 2008.
18. *Arthur W. B.* Increasing Returns and Path Dependence in the Economy. Fo-

19. *Arthur W. B.* Competing Technologies, Increasing Returns, and Lock-In by His-


22. The Rus’ Primary Chronicle. URL: http://www.utoronto.ca/elul/English/218/PVL-selections.pdf