Made and/or Invented in Hungary? The Transformation of the Hungarian Investment Promotion System from the Change of Regime to Our Days with Special Respect to the VIP Cash Subsidy system

Itthon gyártjuk és/vagy itthon fejlesztjük? A hazai befektetésösztönzési rendszer átalakulása a rendszerváltástól napjainkig, kiemelten az egyedi kormánydöntésen alapuló támogatásokra

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ABSTRACT: The study presents the transformation of the Hungarian investment promotion system from the change of regime to our days, with special respect to the non-refundable cash incentive system based on individual government decision (VIP cash subsidy) and the period after 2010. The emphasis is laid on the main territorial, sectoral, and regulative changes, as these have received relatively less research attention so far despite their significant policy relevance. Our research questions are (1) if the Hungarian investment promotion system has followed the global tendencies, (2) if it contributed efficiently to the reduction of double duality (sectoral and territorial), and (3) what kind of future processes could be outlined. Firstly, the most relevant data and literature has been analysed, then the main stages of the Hungarian investment promotion system and their characteristics are introduced and integrated into a specific conceptual system of the author, with a strong concentration on the processes in the last decade, and lastly conclusions and policy recommendations are formulated. The main contributions to the state-of-the-art are the complex, process-oriented presentation of the Hungarian investment promotion system (especially the VIP cash subsidy schemes) with the definition of its main stages, and the analysis of the recently published data on the allocation of VIP cash subsidies between 2004-2023. The main novelties of the study lay in its approach and conceptual framework.

The timeliness and relevance of the research is further strengthened by the recent global pandemia and the armed conflict in our neighbourhood together with their impacts and the countermeasures of the Hungarian government, as the Competitiveness Increase Incentive and the Factory Rescue Program. The results show that the Hungarian FDI support system has followed the global tendencies, but with a time lag, its contribution to the reduction of the double duality is only limited, especially in case of the sectoral duality, and the future holds most challenges in the field of higher value added, the Green Transition, digitalisation, the limited volume of state aids (EU and national) for potential beneficiaries and the headway of Asian companies and investment projects. We expect that this gap filling summary contributes to better understanding of the examined theme and era, the exploration of the correlations, and thus, to further research, especially in the field of inter-country comparisons in the CEE region and more effective policy interventions.

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KULCSSZAVAK: külföldi működőtőke; befektetésösztönzés; intézményrendszer; területi politika; iparpolitika

ABSZTRAKT: Jelen tanulmány a hazai befektetésösztönzési rendszer, és azon belül kiemelten az egyedi kormánydöntés (EKD) alapján megítélhető vissza nem térítendő készpénz támogatások átalakulását mutatja be hazánkban a rendszerváltástól napjainkig, kiemelt tekintettel a 2010 utáni időszakra. A hangsúlyt a fő területi, ágazati és szabályozási változásokra helyezzük, mivel ezeknek a szempontoknak az eddigi kutatások kevés figyelmet szenteltek jelentős szakpolitikai relevanciájuk ellenére. Kutatási kérdéseink, hogy (1) lekövette-e a hazai befektetésösztönzési rendszer a fő globális tendenciákat, (2) a kettős dualitás csökkentéséhez hatékonyan hozzájárult-e, és (3) milyen jövőbeli irányok fogalmazhatók meg a közelmúlt és a jelen folyamatai alapján. A cikkben a legrelevánsabb adatok és szakirodalmi források elemzését követően – egyes esetekben azokat kiegészítve – egy sajátos szempontrendszerbe rendezve mutatjuk be a hazai EKD rendszer átalakulásának szakaszait és az egyes szakaszok főbb jellemzőit. Kiemelt figyelmet fordítunk az elmúlt évtized folyamataira, majd összegző megállapításokat teszünk és következtetéseket vonunk le a jelen és a jövő kapcsán. A tanulmány fő újdonságtartalma a hazai befektetésösztönzési rendszer (azon belül is az EKD támogatások) komplex, folyamatalapú, sajátos szempontrendszerű és a területiséget kiemelő elemzésében és korszakolásában nevesíthető a nemrégiben nyilvánosságra hozott adatbázis (2004-2023 közötti EKD döntések) elemzése mellett. A közelmúlt globális szintű, előre nem látott kihívásai (kiemelten az egészségügyi világjárvány és a szomszédunkban kialakult fegyveres konfliktus) és azok mai napig tartó hatásai (mint például az ellátási láncok akadozása, újraépülése és az energiaválság), valamint az azok kapcsán tett kormányzati intézkedések (a versenyképességnövelő támogatások és a Gyármentő Program) még jobban erősítik a kutatás időszerűségét és szakpolitikai relevanciáját. Reményeink szerint ez a hiánypótló összefoglalás hozzájárul a vizsgált téma és időszak jobb megértéséhez, az összefüggések feltárásához, a jelenlegi és a következő generációk tudásanyagának bővítéséhez és ezáltal további értékes kutatásokhoz és hatékony szakpolitikai beavatkozásokhoz a szakterületen.

Introduction

Foreign Direct Investment (FDI) has played a significant role in the economic transformation of Central and Eastern Europe during and after the change of regime. The economic structure inherited from socialism, that was built on state-owned companies, should have been reconstructed from its building blocks – and for this, the participation of multinational companies was an absolute necessity. Thus, the former production structure that was not based on business logic but rather on complex social and economic engagement, could be reformed.

Two milestones could be highlighted in this process: firstly, Hungary's OECD membership in 1996 as a result of its recently achieved macroeconomic stability, and secondly, EU accession in 2004. In this period, Hungary's regulatory framework had been increasingly harmonised with the acquis communautaire, with special respect to the provisions of competition policy that was occasionally in internal conflict with the state aid policy system. This not only resulted in Hungary's weakened position in the international competition for investment projects, but state aids, and more specifically tax allowances, represented the last finalised chapter of the accession negotiations that required a lot of expert level conciliations to reach consensus. The decade was characterised by the continuous functioning of the national investment promotion system, with major reformulations in some cases, but mostly with finetuning measures.

Three global crises took place in the analysed period: the financial crisis, the pandemic, and the armed conflict in our neighbourhood. Answers to these crises should be given to minimise their negative impacts, in the form of effective interventions. Could Hungary succeed in this?

Our main research questions are threefold: (1) if the Hungarian investment promotion system could follow the main global tendencies, (2) if it effectively contributed to the reduction of double duality,[1] and (3) what kind of future processes could be identified based on the research results.

Our main objective is to present the national processes of the last decades and integrate them into a coherent system with the identification of the milestones, tendencies, patterns (if any), their underlying reasons and triggers. On the other hand, we do not aim to analyse statistical data and the theoretical, legislative, and practical framework of state aids at any geographical level, or to make international comparison with the practice of the neighbouring countries; the former has been studied extensively already by other researchers while the latter is the topic of future research. The success of investment promotion (e. g. volume versus quality, and its various impacts on the host economy) is not in the scope of this study either. We focus on the transformation of the institutional system and the most important financial incentive (VIP cash subsidy) with special emphasis on its territoriality. It is important to highlight that each investment project co-financed by VIP cash subsidies has a direct territorial impact *ab ovo,* our intention is to support our opinion that the Hungarian investment promotion system is less "spatially blind" than its sectoral associates, and followed/follows the global tendencies more efficiently.

Our study starts with the overview of the most relevant national and international literature, followed by the summary of the applied, mainly qualitative and process-based methodology, with some quantitative elements (VIP cash state aids allocated between 2004–2023). In the main chapter, we present the processes and stages of the Hungarian investment promotion system in the last decades, with a clear focus on recent sectoral and regulative changes and tendencies. Territoriality, as a decisive factor in regional studies, is analysed in a specific sub-chapter. We finish our study with conclusions and policy recommendations, as the research is very timely and highly policy-relevant.

Literature review

Our research has a clear territorial scope on Hungary and a chronological scope on our era from the change of regime. Consequently, we start the literature review with the most relevant Hungarian studies in the field, that we structured by their approach and relevance to our study, also identifying their specific research gaps (Table 1).

Regarding international literature about Central and Eastern Europe, there are some country-specific studies where national investment promotion systems and FDI inflows at the regional (NUTS2) level have been examined, like the case of Slovakia (Hintosova, Barlasova 2021), the Czech Republic (Pavlinek 2016; Pavlínek, Žižalová 2016), Poland (Weresa 2004) and Romania (Antonescu 2015). Other studies analyse the transforming of the Visegrad Four region into a knowledge-based economy (Capik, Drahokoupil 2011; Tőrös, Mészáros, Dani 2017). Central and Eastern Europe as a wider geographical scope has been also examined from several aspects: investment promotion and FDI inflows (Harding, Javorcik 2011), FDI in the post-2008 period (Galgóczi, Drahokoupil, Bernaciak 2015), its impacts on growth and restructuring (Hunya 2002), and its post-crisis crossroads (Kalotay 2017 and Szent-Iványi 2017). Studies focusing on emerging European markets constitute the next group as the direct and indirect effects of FDI (Hanousek, Kocenda, Maurel 2011), the manufacturing FDI in new EU Member States (Hunya 2004), and technology transfer through FDI in the top-10 transition countries (Damijan, Knell, Majcen-Rojec 2003).

Methodology

The scope of our study is limited to Hungary, and uses a process-based analysis of the post-socialist period. We analyse recent processes and territoriality in more detail, as a major aspect in regional studies. The applied mixed methodology is mainly qualitative, descriptive, and explanatory, but also exploratory with the application of a conceptual framework to systemise the identified tendencies, changes, milestones, and interventions. Contrary to previous studies, we do not examine the topic at a given moment from a bird’s eye perspective with a focus on either macroeconomic factors or on specific themes (e. g. supplier networks and development, clusters, industrial parks, global value chains (GVCs), free zones, tax allowances, competitiveness increase schemes), but completed a coherent, bottom-up process analysis with a regulative-institutional and sectoral-territorial focus. The prioritised territorial aspect was approached from two directions: top-down from the policy level through the analysis of the regulative framework (modifications of the EU level regional aid map and national level government regulation on VIP cash incentives), and bottom-up

Table 1: The summary of relevant Hungarian literature and research gaps
A fő releváns hazai szakirodalom összefoglalása a kutatási rések azonosításával

Topic	*Aspect/approach*	*Author (Year)*	*Research gap/Relevance*
Retrospective, bird's eye studies with focus on macroeconomic processes and factors	Investment promotion in the era of the change of regime and EU accession New technologies Catching-up to the West through FDI Main stages (4) of the Hungarian FDI support system Double-duality, spatiality, and regional aspects	Antalóczy, Sass (2003a, 2014), Antalóczy, Sass, Szanyi (2011), Barta (2002), Mihályi (2010), Szanyi (1994a, 1994b, 2007), Voszka (2013) Szanyi (2007) Mihályi (2010), Sass, Szalavetz (2013 and 2014) Szanyi (2016, 2017) Antalóczy, Sass (2003b)	Our study focuses on policy-relevance and territoriality, bottom-up and process-based approaches, and we provide a micro-level analysis of the specific interventions as well as their spatial distribution. Research gap induced by the processes of the last decade, identification of a new (5th) stage.
Focused analysis of some specific, thematic aspect(s)	Supplier networks Clusters, industrial parks Global value chains (GVCs) Relocation of business activities Free zones and tax allowances Technologies and competitiveness	Sass, Szanyi (2004) Buzás (2000), Grosz (2000) Sass, Szanyi (2009) Szanyi (2008), Szalavetz (2012, 2013, 2016, 2017) Sass, Hunya (2014) Antalóczi (1997, 1999), Antalóczy, Sass (2002) Novák (2002, 2003), Sass (2003)	Low efficiency and success factor of the national sectoral policies and interventions, mainly due to lacking capacities and competencies of Hungarian SMEs. We analyse the intervention level answers to global tendencies without thematic focus.
FDI-related recent processes and aspects	The role of Hungarian SMEs in manufacturing Re-industrialisation and FDI-based development model FDI footprints in cities Embeddedness of MNCs Global production networks and the semi-periphery State aids and its impact on companies	Lux, Páger, Kovács (2020) Lux (2017), Lux, Horváth (2017), Lux (2020) Rácz (2019), Rácz, Gál (2018) Józsa (2016, 2019) Voszka (2003, 2018), Molnár (2021) Nyikos et al (2020), Medve-Bálint (2022)	We provide a chronological and policy-related framework for these more theoretical and quantitative studies. We identified several related new tendencies, as the Hungarian Multi Program, the Factory Rescue Scheme, and the positioning of Hungarian companies in VIP cash subsidy schemes.
Global tendencies	Move towards higher value-added Digitalisation Green deal (industrial plan), carbon-neutral Europe National policies	Del Prete, Rungi (2017), UNCTAD (2012) in Szalavetz (2013) EC (2023a, b, c, d) EC (2019, 2020, 2023e) Hungarian Government (2020, 2022)	The main research questions are if the upgrade from "Made in Hungary" to "Invented and Made in Hungary" could be managed with a shift towards higher value-added and how the national government could generate and support this effectively.

Source: Author's construction

from the host locations of the allocated VIP cash subsidies in the last 30 years (data recently published by the Hungarian Government).

Table 2: The summary of research methodology
A kutatási módszerek összefoglalása

Objective	Presentation of the transformation of the Hungarian foreign direct investment (FDI) promotion system in the last decades, in the form of a coherent system with milestones, tendencies, spatial patterns (if any), their underlying reasons and triggers.
Research questions	RQ1: Did the Hungarian investment promotion system follow global tendencies? RQ2: Did it contribute efficiently to the reduction of double (sectoral and territorial) duality? RQ3: What kind of future processes could be outlined?
Research methodology and scientific approach	The research methodology is mainly qualitative and process-oriented, based on real context. Quantitative analysis is based on recently published dataset of the Hungarian Government. The scientific approach is analytical induction through process logic and global tendencies.
Conceptual framework	Foreign direct investment, multinational companies, investment promotion system
Context	Geographical scope on Hungary (CEE) and sub-national (regional and local) level
Examined period	1990–2023 (quantitative dataset for 2004–2023)
Unit(s) of analysis	Single-country analysis, regional and local level
Evidence-gathering methods	Documentary review, publicly available information Use of physical, technological and social/economic evidence
Information sources	Qualitative: publications, databases, media, reports, internal reports and studies, websites Quantitative: dataset provided by the Hungarian Government on host locations of allocated VIP cash subsidies in 2004-2023
Methods of analysing the evidence	Qualitative methods: - Identification of key characteristics and milestones - Conceptual model development (theoretical explanation) - Processing the quantitative dataset, data cleaning, gathering additional information - Analysis of the results, validation of the process model, visualisation
Unit(s) of analysis	Single-country analysis, regional and local level

Source: Author's construction

Regarding qualitative research, we applied an inductive approach and mainly content analysis based on scientific literature, policies, government and EU level regulations, degrees, communications, corporate documents, and our own empirical observations and practice. In quantitative research, we relied on the database of the allocated VIP cash subsidies in Hungary between 2004 and 2023, recently published by the Hungarian Government (2023). According to our knowledge, this is the first analysis of this dataset so far.[2] The research objective, research questions and the main aspects of the applied methodology are summarised in Table 2.

Elements of the Hungarian investment promotion system

Before presenting our research results, we define what we mean by investment promotion system. We accept the three elements of the investment promotion system applied in international and national literature: fiscal, financial, and other. There is a wide variety of incentives ranging from investment treaties, international trade facilitation agreements, tax allowances, free zone regulations to non-refundable cash subsidies. Typical fiscal incentives are the tax allowances, financial incentives are the non-refundable cash subsidies (analysed in-depth in our study), and other incentives are the operation of the investment promotion agencies (IPAs) and the relevant regulatory framework.

Firstly, we present the evolution of the 'other' category in Hungary as the overall institutional and regulatory framework for the other two (fiscal and financial) elements. Regarding the institutional system, soon after the change of regime, the Hungarian Investment and Trade Development Agency (ITDH) was founded in 1993 by the Hungarian Ministry of Economy and Transport. This agency would undertake investment promotion activities until 2010 with a relevant regulatory framework elaborated in 2003 by the Ministry. Based on these procedural rules, investment projects of outstanding importance for the national economy could be subsidised by state aids based on individual government decree (VIP cash subsidy).[3] Following the 2010 elections, the new government established the Hungarian Investment and Trade Agency (HITA), that was not the legal successor of ITDH. The new agency (HITA) was operating and managing its budget autonomously with a single headquarter and several regional branches; its ownership and coordinative rights were practiced by the Minister for National Economy. In 2014, the Hungarian Investment Promotion Agency (HIPA) was established as a legal successor to HITA, and it is still functioning nowadays as a non-profit private company under the control of the Ministry of Foreign Affairs and Trade (Figure 1).

Regarding the regulative framework, it was developed in parallel to the institutional system after the change of regime. The first step was the restructuring

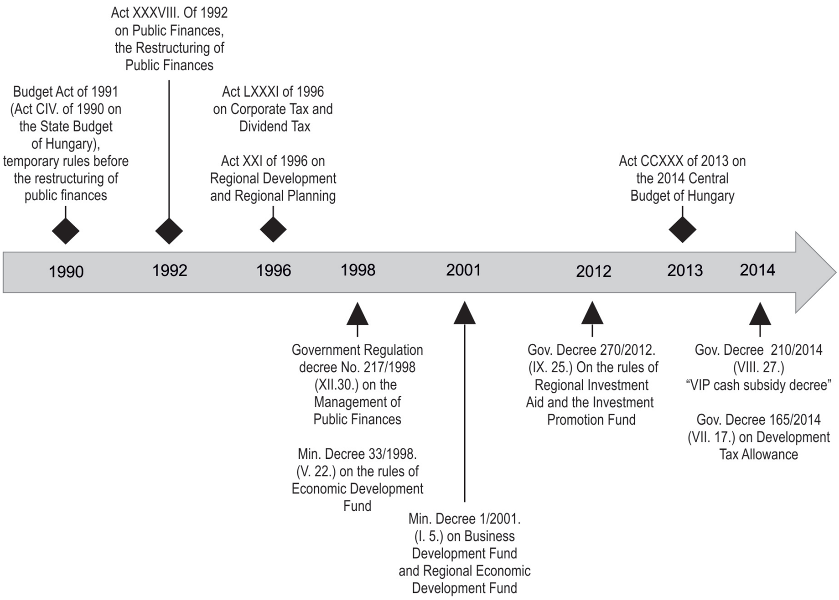
Figure 1: Transformation of the institutional system of investment promotion in Hungary (1993–2023)
A hazai befektetésösztönzési rendszer operatív intézményi hátterének változása (1993–2023)

ITDH	**HITA**	**HIPA**	**HIPA Nonprofit Ltd.**
Investment and Trade Development Agency	Hungarian Investment and Trade Agency	Hungarian Investment Promotion Agency	
1993 - 2010	01/01/2011 - 07/25/2014	07/26/2014 - 08/31/2019	01/09/2019 -
Establishment 1993 Background institution of the Ministry of Economy and the Ministry for Foreign Affairs	**Establishment 2011** Gov. Decree 265/2010. (XI.19.)	**Legal succession**	**Legal status modification** Gov. Decree 201/2019. (VIII. 15.)

Source: Author's construction in 2023 based on Krauss (2015)

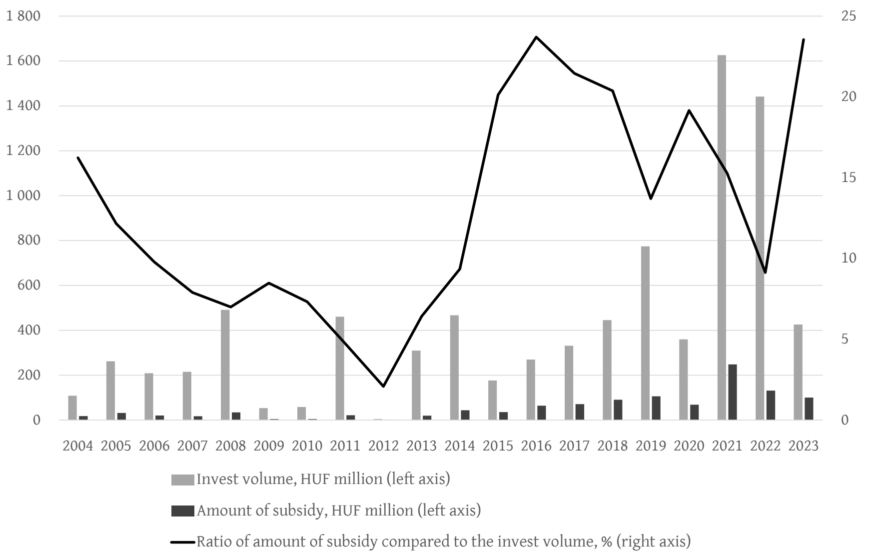
of the state budget from the state socialist system to the market economy. The legal conditions of the most important fiscal incentive, the Development Tax Allowance (DTA) was subsequently established in 1996. It has been modified several times since then: EU accession should be emphasised here, as the competition policy chapter constituted the most complex challenge during the

Figure 2: The main elements of regulatory background of investment promotion in Hungary (1990–2023)
A hazai befektetésösztönzési rendszer szabályozási hátterének fő elemei (1990–2023)



Source: Author's construction based on publicly available information accession negotiations, due to the heavy tax allowances allocated to large investors.[4] On the other hand, the most important financial incentive (VIP cash subsidy based on individual government decree) is regulated by Gov. Decree 210/2014. As we will analyse territoriality as a prioritised aspect in our study, Act XXI of 1996 on Regional Development and Regional Planning should also be indicated. As it is visualised on Figure 2, we can declare that the institutional and regulative framework of the Hungarian investment promotion is relatively stable. Secondly, we present the fiscal and financial elements. Regarding fiscal incentives, we have already mentioned the tax allowances that are measures typically applied by 'poor countries' in the 1990s, as in this case the state disclaims its future, not-yet-produced incomes to attract an investment project. These incentives were widely applied by Hungary in the late 1990s and early 2000s, where investors could receive 10 years of tax exemption in case of completing 10 billion HUF investment in developed, and 3 billion HUF investment in less-developed regions. Thus, we can state that territorial differentiation has occurred in the DTA system from the very beginning. As the conditions of financial incentives were established from 2004, the volume and ratio of these measures have been increasing from the late 2000s. The most important financial incentive was (and still is) the VIP cash subsidy, and the tendencies of the last decades in total investment cost and the connected state aid intensity (the volume of the subsidy versus the volume of the investment project) are

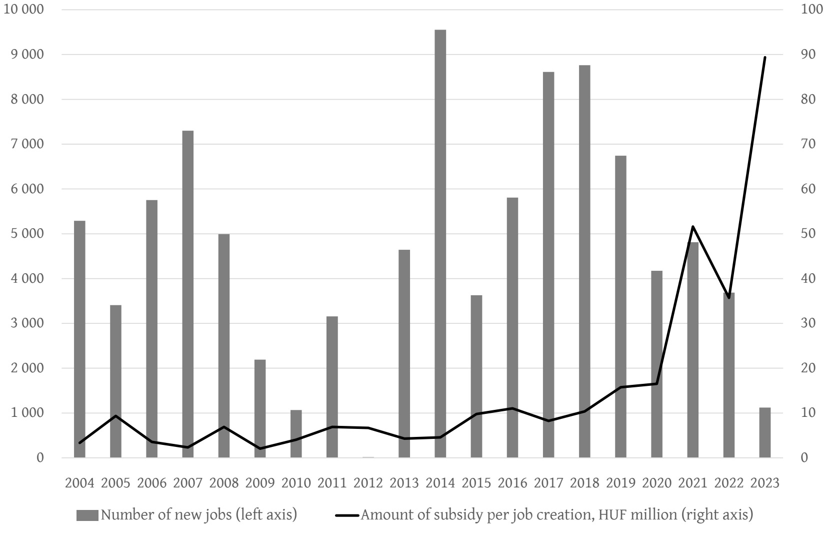
Figure 3: The ratio and volume of VIP cash state aids in investment volume (2004–2023)
A megítélt EKD támogatások összege és aránya a beruházási volumenhez képest (2004–2023)



Source: Author's construction based on data published by the Hungarian Government visualised on Figure 3. The impacts of the economic crisis and the pandemic are clearly shown in the trendline, and an interesting but very logical correlation could also be identified: in lean years, the state aid intensity is higher to stimulate investments, while in prosperous years, a lower state aid intensity is sufficient, as there is no urgent need to further incentivise the investment projects.

We also examined the new employment generating effect of VIP cash subsidies in their number and the state aid volume per new employment (Figure 4). As it can be seen, starting from 2019/2020, there is a drop in the number of new employment, that could be reasoned by the trend change in the Hungarian employment market (high employment rate, shortage in skilled labour) and the subsequent change in the state aid regulatory framework: from the end of 2019 new employment generation is no longer an entry criterion (eligibility condition) of asset-based VIP cash subsidies. It can be stated that the formerly very important indicator of subsidy allocated to job creation is not an appropriate indicator from 2020.

Figure 4: The relationship of new workplaces and allocated VIP cash subsidies (2004–2023)
A megítélt EKD támogatások összege és a munkahelyteremtő hatás kapcsolata (2004–2023)



Source: Author's construction based on data published by the Hungarian Government

Stages in the transformation of the Hungarian investment promotion system

After presenting the three elements of the Hungarian investment promotion system, we analyse the system's transformation in the last decades and present its identified stages and tendencies. Previous studies (Szanyi 2016) identified four major stages in the transformation of the Hungarian investment promotion system, as follows: the attraction of flagships (1990–1996), greenfield investments and developments (1997–2003), the disappearance of the capital attraction advantage (2004–2010), and the differentiation of FDI (2010-...). We basically accept these stages, while claim for the necessity of a fifth, recent stage starting from 2020 that aims to achieve a higher value-added (local content) and to simultaneously answer the global challenges. First, we briefly summarize the main characteristics of the first four stages, and second, we present the identified fifth stage in more detail.

Stage 1: The attraction of flagships (1990–1996)

Hungarian scholars have consensus in the fact that the first waves of FDI are connected to privatisation: in the early 1990s the sale of large, internationally renowned companies such as Tungsram and Chinoin, and after 1995, banks and public utilities. In Central and Eastern European comparison, it can be stated that Hungary had started and managed privatisation relatively early, with sale as its main form. During the late 1990s, the structure of processing industry had transformed, as capacities in electronics and machinery strengthened instead of former light industry employing semi- and unskilled workers. Productivity improved rapidly, the volume and share of export increased, and more and more greenfield and reinvestment decisions were made based on successfully operating factories equipped with modern technology at an international scale. This stage was characterised by large volume, reference-type investment projects that later became magnet investments, such as Magyar Suzuki Zrt. and Audi. The main elements of investment promotion were fiscal incentives, as the corporate tax allowance and free zone regulation, with some complementary individual benefits and aids (Antalóczy, Sass 2003). Although all three elements (fiscal, financial, and other) have been available in the national investment promotion system, it was not yet systemised, well-regulated, and transparent. Starting from the tax reform in 1988, international investors could receive significant tax reliefs. Over the years, the range and volume of these benefits have was continuously reduced and from 1994, Hungarian companies could also be subsidised with tax allowances.[5] With regards to financial incentives, the National Investment Promotion Fund started its operation in 1992, and actively supported production- and technology-oriented investment projects (and connected infrastructure and utility network development) until 2003. By the mid-1990s, Hungary had become the most attractive investment location in the region and could locate subsidiaries of global companies in mainly electronics and machinery. On the other hand, double duality had already emerged in both geographical and sectoral terms: while Western regions were preferred by foreign investors, Eastern ones were neglected, and international subsidiaries were firmly isolated from Hungarian companies.

Stage 2: Greenfield investments and developments (1997–2003)

Following the two main waves of privatisation, the capital investment advantages of Hungary became the major driving forces of FDI inflow instead of the former privatisation supply. A uniform, mainly normative incentive system was introduced, which also considered the EU's criteria set. Territorial differentiation was applied too, as full tax exemption could be achieved for 10 years by the realisation of projects generating new employment in regions designated for regional development. In more developed regions, higher employment commitments should have been undertaken. Economic development programs and the regulation about the VIP cash subsidy based on individual government decree were introduced. New funds were set up by the Hungarian Government for regional development, employment generation, business development and research and development. The absorption of the pre-accession funds (PHARE, SAPARD, ISPA) had been continuous, and EU funds based on the first National Development Plan were also launched with prioritised sectors such as machinery, tourism, and environment protection. National-level direct objectives involved the establishment of industrial parks and the development of the Hungarian supplier network of international companies. In the meantime, double-duality was intensifying, relations between the sectors were sparse, and the dilution of geographic duality was only partial and temporary.

Stage 3: The disappearance of the capital attraction advantage (2004–2010)

Fiscal incentives (tax, free zone, and other benefits) allocated actively and successfully from the 1990s did not fit into the competition policy and connected regulatory practice of the European Union. For this reason, this chapter required outstanding attention and capacities from the professionals, especially the harmonisation of the already allocated benefits with the EU's principles on maximum state aid intensities. This constituted a technically complex calculation challenge, and finally the negotiations were closed with a compromise from both sides. EU accession and the connected legal harmonisation with the acquis communautaire led to intensified competition among CEE countries that created a negative bargaining spiral, where Hungary was increasingly lagging behind its competitors (Kalotay, Sass 2012). Wage increases and the termination of tax benefits (major location factors in that period; Antalóczy, Sass 2003), significantly worsened the economic efficiency of production, resulting in factory closures in the 2000s. As the unfavourable effects could not be counter-balanced with the previously applied incentives, both international and public investments showed a decreasing tendency. The shift towards higher value-added and connected local content was still some way off, but what arrived was the global economic crisis in 2008.

Stage 4: The differentiation of FDI (2010–2019)

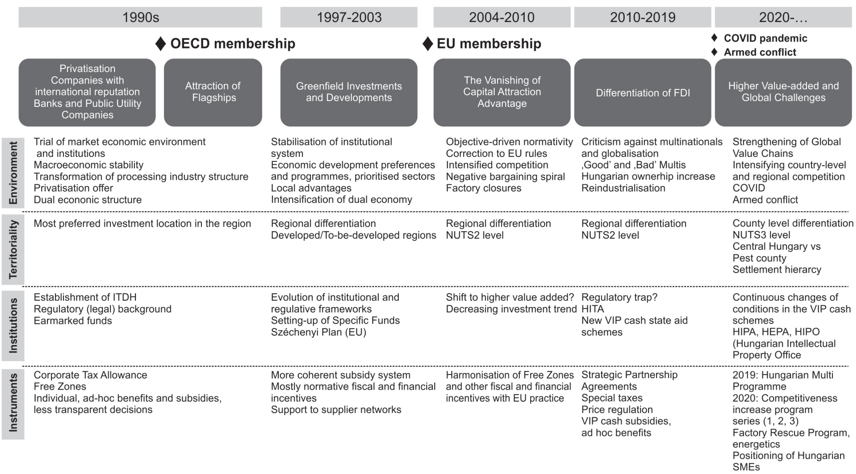
General criticism against multinationals and globalisation had strengthened in the years of recovery from the recession, in addition to decreasing investment tendencies. The Hungarian Government 'answered' these critics with two measures: (1) the differentiation of FDI into 'good, productive' and 'bad, speculative' categories and (2) the preference of Hungarian ownership. Good, productive, so 'to-be-supported' companies had been operating in manufacturing; and with these companies, bilateral strategic agreements were signed in line with the reindustrialisation objective of Hungary. Bad, speculative, and thus 'to-be-sanctioned' companies had been operating in media, business services, retail commerce, telecommunication, and public services, whereas special taxes, price regulations and official price (prices fixed by the authorities) should be introduced (Szanyi 2016a in Szanyi 2017). The volume of special taxes reached 2.5% of GDP in 2015 (Mihályi 2016; Muraközy 2012). In parallel, the government introduced measures aiming to increase the ratio of Hungarian ownership in strategic industries and companies, though this raised several concerns and debates (Voszka 2013). The turn in economic policy affected both the objectives and the applied measures; thus, the ad hoc, selective, and individual character was strengthened instead of transparency and normativism. The embedding of Hungarian SMEs into global value chains (GVCs) through multinational companies as platforms received more emphais. Two main objectives, reindustrialisation and reduced global exposure and dependence of the national economy, were in contradiction that could only be resolved with a targeted and sustainable state aid system. According to Szanyi (2008), the pace of development was slower than expected in the supplier networks for multinational companies for two reasons: the unpreparedness of the potential suppliers, and the frequent changes in the state aid system. The major task would have been the elimination of the systemic errors, and not the overwriting of the model with the objective to support as many Hungarian companies as possible to attain at least regional (if not global) scope and competitiveness.

Following the analysis of previous studies, we essentially agree with their conclusions but claim the necessity of a systemised approach that could be followed and updated for our days. At first, we had to decide if the recent course of events are integral parts of the previously identified fourth stage, or if the definition of a fifth stage is necessary; and if yes, what starting point could be defined for this new stage, and what characteristics could be identified to differentiate it from the former stage(s). For this purpose, we structured the previously defined four stages into our own conceptual system based on the following aspects:

- economic-social environment
- territoriality
- institutions and regulations (institutional and regulatory system, commitments)
- measures (eligibility and subsidy framework, specific state aid schemes).

In Figure 5, we summarised the main stages of the Hungarian investment promotion system, and their characteristics in our own conceptual model from the 1990s to the present. Based on our analysis, we claim that the definition of a new, fifth stage is necessary, its starting point defined by the global pandemic, the armed conflict in our neighbourhood, and the energy crisis as its direct impact. At this point, we must emphasise the recent transformation of the employment market and the shortage of workforce as an endogenous factor. These global and national tendencies were all reflected in the relevant sectoral policies through specific measures that we present in detail in the following description of the new, fifth stage.

Figure 5: Development stages of the Hungarian investment promotion system (1990–2023)
A hazai befektetésösztönzési rendszer szakaszai (1990–2023)



Source: Author's construction based on publicly available information

Stage 5: Higher value-added and global challenges (2020-)

As mentioned earlier, based on our research results, we claim that a new, fifth stage should be defined to cover the last few years. This new stage is characterised by several significant changes in the conditions of the VIP cash subsidy system: there is a focus shift from the former, production-oriented schemes towards higher value-added, service industry, research and development, digitalisation and technology-intensive processes, and energy efficiency (Table 3). This is fully in line with the most important global tendencies that will be presented in detail later. There have been some preparatory steps starting from 2017, but the milestone is the turn of 2019/2020. Stage 5 is marked by continuous 'fine-tuning' of the VIP cash subsidy system, mostly the easing of entry criteria and compulsory commitments, for example the minimum size of investment, the minimum number of new workplaces created, the eligible costs, and territoriality (analysed further in a separate sub-chapter). The Hungarian Investment Promotion Agency (HIPA) is a competent and reputed actor at international scale also, especially in the CEE region, and its efficient operation is awarded by high rankings at prestigious international competitions. On the other hand, it has to be pointed out that HIPA's capacities are heavily burdened by the continuously increasing and high-level investment volume (mainly due to the active investment activity of Asian countries in the last few years), the management tasks to ensure compliance to EU regulations, and the 'ad hoc' new schemes as answers to global challenges, such as the Competitiveness Increase (pandemic) and the Factory Rescue (energy crisis) programmes.

Based on our research, the identification of a new, fifth stage in the transformation of the Hungarian investment promotion system from 2020 as milestone is justified by the following:

- new employment generation as a separated scheme was terminated (it was integrated in to the other schemes), as was the technology-intensive scheme;[6]
- in line with the high level of employment in Hungary, new employment generation as an entry criterion to all VIP cash subsidy schemes was cancelled (the same applied to the Development Tax Allowance soon afterwards). It is still a must in some schemes, but its minimum amount was also significantly decreased;
- the opportunity to subsidise newly established companies through VIP cash schemes was created and the 'Hungarian Multi Programme' was launched;
- the Training and the Workshop Establishment and Development subsidies were reopened, also underlining the shift towards higher value-added;
- the opportunity of complementary renewable energy production was created (although its cost was maximised in 25% of the total investment project cost);
- as answers to the pandemic, specific measures were introduced (Competitiveness Increase Programmes 1, 2, and 3).

Additionally to, but in line with the above, new changes were made in the system from 2022, such as the Factory Rescue Programme to compensate th impacts of the energy crisis, the newest scheme introduced in mid-2023 about the Green Transition and Zero Net Emission, as well as the continuous easing of the new employment creation minimum values, investment volumes, compulsory guarantees, the sustaining of the base employment numbers and finally, the modification of the territorial scope (to be analysed separately in the followings). Summing up, it can be concluded that the separation of a new stage (Stage 5) starting from 2020 is motivated by the significant changes introduced in the

Table 3: Main changes in the Hungarian VIP cash subsidy schemes (2017–2023)
Fő változások a hazai EKD rendszer konstrukcióiban (2017–2023)

	2017	*2018*	*2019 I.*	*2019 II.*	*2020*	*2021*	*2022*
Asset-based investment	•	•	•	•	•	•	•
Employment-generating investment	•	•	•				
Technology-intensive investment	•	•	•				
Establishment/extension of Regional Service Centres	•	•	•	•	•	•	•
R&D projects	•	•	•	•	•	•	•
Individual training subsidy			•	•	•	•	•
Workshop establishment and development subsidy			•	•			
Complementary energetics investment			•	•	•	•	•
Employment generation, as eligibility condition for asset-based subsidy	•	•	•				
Min. 30% salary/net income surplus as eligibility condition				•	•	•	•
Competition increase schemes in connection to COVID					•	•	•
Factory Rescue Programme							•
Green Transition, new subsidy category ‚Zero net emission'							•
Easing in minimum investment size, guarantees and base employment							•
Modification of territorial scale (county (NUTS3), settlement, EGT vs non-EGT)							•

Source: Author's construction based on publicly available information

second half of 2019, and further complemented by the pandemic, the energy crisis, and the change of the European Union's budgetary period (from 2014–2020 to 2021–2027).

Regarding our first research question, whether the Hungarian investment promotion system has followed the main global tendencies, we elaborated a matrix (Table 4) about the main global tendencies and the connected changes in the system. We identified the following main global tendencies: (1) shift towards higher value-added, (2) digitalisation, and (3) global warming. Based on the matrix we can conclude that the Hungarian investment promotion system has followed the main global tendencies through its most efficient instrument (the VIP cash subsidy schemes) by the fine-tuning of the relevant government regulation. Both the conditions and the types of the schemes have been continuously modified, adapted to the global tendencies, and tailor-made to the needs of the investors.

Two additional phenomena could be identified in Stage 5, as follows:

- From the national policy side, the intention to support national/Hungarian companies has strengthened (these companies certainly have not been previously excluded from subsidy schemes either). Thus, from the second half of 2019, newly established companies could also apply for VIP cash subsidy, the minimum investment criterion has been continuously decreased, medium-sized companies could also be beneficiaries; and finally, in case of the Factory Rescue Programme, it is a declared objective to support national companies in their energy efficiency and energy production investments.[7] The most recent initiative is the new automotive industry supplier development program that aims to increase the ratio of national suppliers, launched at the end of 2023.
- From the investors' side, our empirical experience is that subsidies stepped forward from the former 'nice-to-have' status to 'must-have' status. This is rather an observation yet, so we do not have information about their appearance as decisive factor in specific investment decisions. It appears that it was formerly a plus if state aid co-financing was allocated to an investment, but now it is already an expectation from the strategic, corporate level also, Moreover, CEE countries are outperforming each other to provide the highest (maximum) level state aids made possible under the EU rules (RAG, Regional Aid Guidance). Reasons are the intensifying CEE and global competition, increasing production costs due to the energy crisis, the slowly restructuring supplier and value chains that collapsed during the pandemic and the armed conflict, and finally the increasingly powerful presence of Asian companies. This latter also resulted in the elevation of the incentive effect in the VIP cash subsidy schemes to the global level.[8]

As a conclusion, we can state that the Hungarian investment promotion system has launched several initiatives to reduce sectoral duality, and thus, to dissolve the firm isolation of Hungarian and multinational companies, but the results so far are very limited. In the following, final part of the presentation of our research results, as the most important factor in regional studies, we analyse in detail the other aspect of double duality, namely territoriality.

Table 4: Main global tendencies and connected changes in the conditions of Hungarian VIP cash state aid schemes (2017–2023)
Fő változások a hazai EKD rendszer feltételrendszerében az elmúlt öt évben a globális tendenciákkal összhangban

Global Tendency	*VIP Cash Subsidy Schemes – Conditions and Types*
Shift towards higher value-added, competitiveness, research and development	• Favourable changes were introduced in the R&D VIP cash subsidy scheme, as the eligibility of R&D services, the decrease of the minimum project cost (from 3 to 1 million EUR), the minimum criterion of new workplaces created was also decreased from 25 to 10. With the widening of the potential beneficiaries, medium-sized companies (at lower levels in the supplier pyramid) became also eligible for this type of state aid, and a sectoral extension was also completed towards agricultural research and development activities. • Support for Regional Service Centres was an obvious shift to higher value-added in line with global tendencies (deindustrialisation), as more than half of FDI projects had already belonged to service industry before the economic crisis. This stable state aid scheme has been only finetuned in the last years with positive modifications for the beneficiaries.
Digitalisation, the European Digital Decade	• The technology-intensive scheme was an answer to Industry 4.0 and digitalisation trends. During its short-term, pilot operation it was modified several times, e.g. the minimum investment volume was decreased, the project implementation period was extended, the compulsory commitments were lightened. The scheme was also innovative in two important respects: (1) it was not necessary to create any new workplace as eligibility condition, (2) instead, the 'debut' of the wage and/or net income surplus took place here.
Global warming, Carbon-neutral Europe for 2050	• In order to achieve the climate targets, a new state aid category was introduced from August 2023 for investments targeting the transition to zero net emission (Temporary Crisis and Transition Framework – TCTF subsidy). Investments targeting the own utilisation of the produced renewable energy could also be subsidised in Budapest (complementary investment in energetics) if they were connected to an at least same size main investment, with the condition that the total investment cost exceeds 10 million EUR. As from August 2023, small and medium-size companies (SMEs) are also eligible for this scheme.

Source: Author's construction based on publicly available information

Territoriality in the investment promotion system

In the previous parts, we completed process-oriented research based on content analysis and our own empirical observations and experience. In the followings, while examining territoriality, we analyse mainly quantitative data and conduct our research from two approaches: (1) top-down, based on the relevant rules and regulations, and (2) bottom-up, based on the host locations of the subsidised investment projects. Our basic hypothesis was that the investment promotion policy and system – in comparison with other sectoral policies – is not spatially blind, so it has continuously considered the territorial aspects during its transformation in the last decades and intended to balance the regional inequalities. Regarding Stage 1 (1990–1996), as Antalóczy and Sass (2003) point out, the regional aspect was totally missing from the Hungarian investment promotion system due to the general sectoral approach and the ad hoc character of the decisions. In Stage 2, on the other hand, they acknowledge the shift towards regionality, normativity and transparency. This is the line of thought that we follow when analysing Stage 3, 4 and 5.

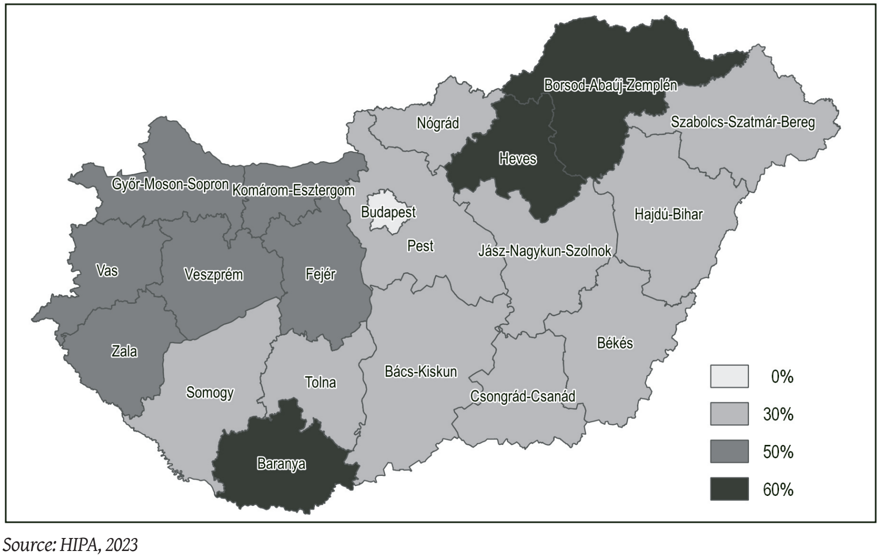
Regarding the top-down approach and the policy level, it must be emphasised at the very beginning, that location decisions are made by the investors based on a multicriteria decision matrix – the opportunities of the competing potential host locations are relatively limited, especially in case of EU Member States, whose hands are tied by the relevant EU level regulations, most importantly by the General Block Exemption Regulation (GBER) and the Regional Aid Guidance (RAG). Here, national policies can only 'fine-tune' the framework conditions, as Hungary also managed recently. The latitude is relatively narrow and there are only a few issues through which territoriality as an aspect could be endorsed. Nevertheless, we examine the followings in this part:

- If the Hungarian government preferred/prioritised the lagging behind areas when allocating state aids to investors or the VIP cash subsidies strengthened further the regional im-balances?
- How did the modifications of the relevant regulation affect the specific regions/counties?
- Could we identify territorial patterns and/or correlations within or between the specific stages?

When it comes to territoriality, the first close-ended question to be decided has two alternatives: if it is possible for a company to receive regional aid type subsidy in a specific area: yes or no. If yes, what entry (eligibility) conditions should be fulfilled: are the company and the investment project eligible for the subsidy? If yes again, what could be the maximum possible state aid intensity and volume to be allocated to a beneficiary? And finally, what is the price: what kind of compulsory commitments should the beneficiary undertake for the subsidy?

The first three questions are basically regulated by the Regional Aid Guidance, so at the EU level. In our days, meaning the current EU programming period of 2021–2027, the following regional state aid maximum values should be applied from 1 January 2022 (Figure 6).[9] The regional aid map is a legal regulation that determines the maximum state aid intensity (ratio) that could be allocated to large companies completing investment projects in a given Member State and its regions and sub-regional units. In case of the least developed regions of Hungary, the maximum intensities in the whole EU could be achieved as investment subsidy. The regional aid map determines the maximum intensities at NUTS2 (regional) level, while the VIP cash subsidy system has been using the NUTS3 (county) level as the basis for territorial differentiation, and most recently (from August 2023) the settlement (LAU, Local Administrative Unit) level is used, based on the position in the settlement hierarchy (see later).[10] Additionally to the regional aid type subsidy maximum values, a new scheme was introduced at EU level in the current EU programming period, that is the socalled Just Transition Fund that indicates a further 10% bonus state aid intensity based on NUTS3 level differentiation. Another important modification compared to the 2014–2020 regional aid map is the separation of Budapest capital from Pest County (region) at NUTS2 level, that resulted in the maximum available 50% state aid intensity for companies in Pest County as a significant positive impact from 1 January 2022.

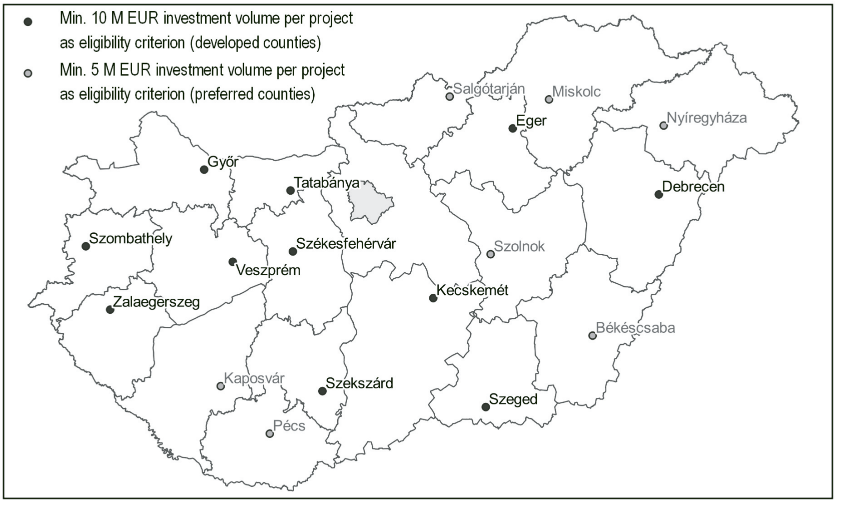
Figure 6: Regional aid map of Hungary (2021(2022)–2027)
Magyarország regionális támogatási intenzitási térképe (2021(2022)–2027)



Source: HIPA, 2023

A recent policy level modification is maybe the most significant change from the aspect of territoriality, as from August 2023, the scale of the territorial differentiation was changed from the former county (NUTS3) level to settlement (LAU) level in case of asset-based investments. This means that when determining the minimum investment volume for asset-based investments, the project implementation site should be considered at the settlement level, and the scale is ranging from 3 to 10 million EUR, the lowest amount should be applied for the smallest settlements and the highest to the most developed regional/county capitals (Figure 7).[11] As previous studies (Józsa 2019) and empirical experience also pointed out, tier-2 level (medium-sized) cities and county capitals are preferred by investors for locations decisions, so the current modification of the VIP cash policy aims at positioning the smaller cities and villages in the countryside for industrial projects. The minimum investment volume of 3 million EUR is the lowest ever value experienced so far in Hungary in the VIP cash subsidy system. This could also indicate a stronger position of national state aids versus EU subsidies. In the framework of the mentioned modification, not only the requested minimum investment volume further decreased, but the guarantees connected to the subsidy volume also and investments aiming the production of renewable energy could be subsidised in Budapest as well.

Figure 7: Territorial differentiation of minimum investment volumes for asset-based VIP cash state aid schemes in Hungary (2023, million Euro)
Egyedi kormánydöntés (EKD) alapján adható támogatás területi alapú minimum beruházási összege (2023, millió Euró)

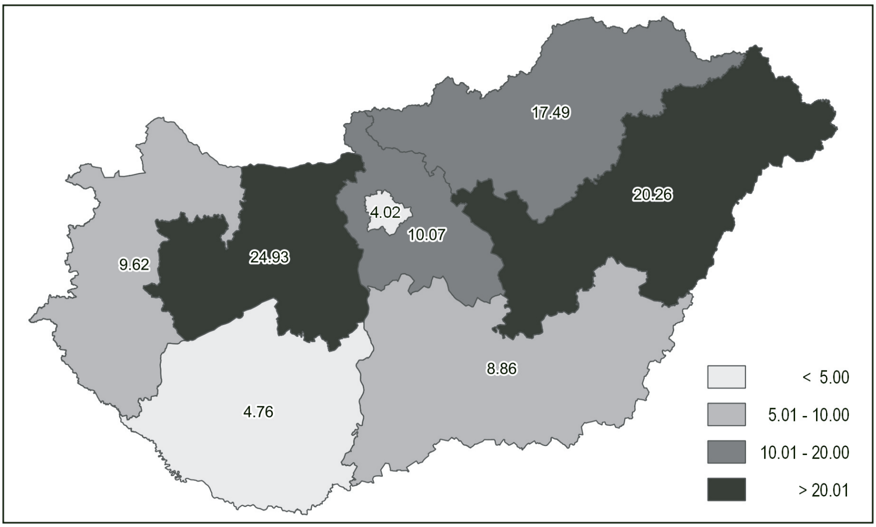


Note: The seats of developed counties are marked in regular type, while the seats of preferred counties are marked in boldface
Source: HIPA, 2023

Regarding the bottom-up approach and the host locations of the investment projects subsidised by VIP cash state aids, we examined the territoriality of the state aid allocation decisions between 2004–2023. We looked for characteristics, patterns, and correlations; for example, whether preference/prioritisation of specific regions by the national government could be observed in the identified stages, and if yes, did it occur between or within the stages. In other words, could the identified stages be followed in the territoriality of the location decisions, meaning preferred and neglected areas in some stages, if there is a correlation between space and time.

At the end, did VIP cash state aids *de facto* increase or decrease regional imbalances?[12] Regarding the prioritisation of some regions (NUTS2) by the government, as a total volume, 1 131 billion HUF VIP cash subsidy was allocated by the Hungarian government in the examined period (2004–2023). The total investment volume was 7 600 billion HUF for altogether 488 projects. The average state aid intensity was 14.89%. Almost one-fourth of the total state aids arrived to Central Transdanubia, traditionally a heavily industrialised region (Figure 8). This region was followed by North Great Plain and Northern Hungary (20.26%–17.49%), and with significant lag the South Great Plain, Western-Transdanubia and Pest County (10-10-10%).

Figure 8: The share of allocated VIP cash subsidies per region in Hungary (2004–2023, %)
A megítélt EKD támogatások összege régiónként (2004–2023, %)



Source: Author's construction based on data published by the Hungarian Government, 2024

The lowest ratio (5%) of the lagging behind Southern Transdanubia region speaks for itself. An even lower subsidy volume was allocated to Budapest, but for a totally different reason: its high development level in both absolute and relative terms. The contribution to territorial imbalances has been only partial, focusing on Northern Great Plain and Northern Hungary.

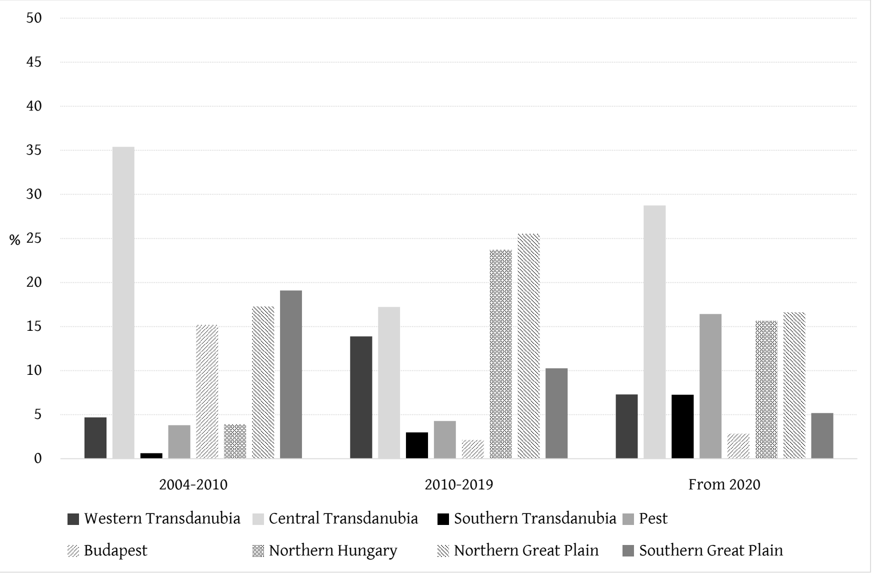
Regarding the identified stages, we can observe some correlations: it is clear that between 2004–2010 Central Transdanubia was the winner of VIP cash subsidies with a highly outstanding state aid volume that was followed by the two regions of the Great Plain with half amounts, and Budapest received a similar amount of subsidy. From 2010, the emphasis was shifted to the Eastern parts of Hungary: North Great Plain and Northern Hungary took over the leading position, and Central Transdanubia slipped down to the third place. The data of Budapest dropped very significantly to almost one-tenth of its former value. The outlier data of Western Transdanubia (compared to the other stages) is powered mostly by the high-volume reinvestment decisions of Audi. In the recent stage starting from 2020, Central Transdanubia regained its leading position and Norther Hungary and North Great Plain is accompanied by Pest County with more than four times higher value than those in the former stages (due to the separation of the former Central Hungary region into Budapest and Pest County).

It must be pointed out that the length of the examined three stages is different (Stage 3: six years between 2004–2010, Stage 4: nine years between 2010–2019, and Stage 5: from 2020 onwards), and the volume of the allocated state aids per period deviates also. In Stage 3, about 12% of the total subsidy volume was allocated; in Stage 4 about 40%, and in Stage 5 almost 48%, an outstanding amount considering that this period is the shortest.

As a summary, it can be stated that the great winner of VIP cash subsidies is Central Transdanubia, followed by the eastern parts of Hungary in the North Great Plain and Norther Hungary regions with continuously increasing volumes, achieving the runner-up positions in both absolute and relative terms. Pest county receives significantly higher state aid volumes as a consequence of its separation from Budapest, as expected. Southern Transdanubia is the persistent laggard, but although its relative position is stable, the allocated state aid volume shows an increasing tendency, so in absolute terms, its tendency is positive. On the other hand, Southern Great Plain shows a continuous fallback from its strong start.[13] Two correlations could be observed between the periods and the stages: starting from 2010 towards the Eastern regions of Hungary and from 2020 towards Pest county (Figure 9).

Figure 9: The volume of allocated VIP cash state aids per region and per stage in Hungary (2004–2023)

A megítélt EKD támogatások összege régiónként és időszakonként (2004–2023)



Source: Author's construction based on data published by the Hungarian Government

Conclusions

In our study, we presented the transformation of the Hungarian investment promotion system from the change of regime to our days, with special respect to the VIP cash subsidies and the period after 2010. We searched the answer to three research questions out of which the first was whether the Hungarian investment promotion system has followed the main global tendencies. We identified three main global tendencies: the shift towards higher value-added, digitalisation, and green transition. Our answer to the first research question is yes – with some delay though, but the most efficient instrument of investment promotion (the VIP cash subsidy system) was flexibly adapted to the global tendencies by the responsible sectoral ministry. Specific examples for this adaptation are the shift towards higher value-added through the support to Regional Service Centres, research and development, corporate training and workshop establishment and development. Connected to digitalisation we can mention the support to (re)industrialisation and automatisation (Industry 4.0 and the connected technology-intensive subsidy scheme). Responses to the tendencies at the employment market are the elimination of new employment creation as an entry (eligibility) criterion and instead, in parallel, the introduction of surplus salary cost and net income volume. In order to reduce the impacts of the global pandemic, the government launched the Competitiveness increase series of schemes (1, 2, and 3), while the energy crisis and climate targets were addressed by the complementary energetics development, the Factory Rescue Programme, and the new state aid category available for investments aiming the transition to zero net emission (Temporary Crisis and Transition Framework).

Starting from the change of regime, we could identify five stages in the transition of the Hungarian investment promotion system. Our first contribution to the state of the art is the systemised description of these stages, and specifically, the definition and characterisation of the current, fifth stage starting from 2020. We presented in detail the objective factors, features, episodes, milestones, and justification of this stage that underlined the necessity of its separation as a new era. When analysing the process, we examined the three elements of the investment promotion system identified in international literature, as the fiscal, financial, and other incentives. Regarding the other incentives, we can state that apart from some significant modifications, the continuous operation and relatively frequent fine-tuning of the system was characteristic that concerned the relevant regulatory background but not the main legal provisions. The institutional system itself is relatively stable: only minimal changes were adapted based on legal succession from the change of government in 2010, and previously, it has also been continuously functioning from its establishment in 1993 under the coordination of the responsible ministry. Our empirical experience also shows that the challenging task of transplantation strategic objectives into sectoral policy and specific measures and interventions was considerably effective in case of the Hungarian investment promotion system. The shift from the practice of poor countries (fiscal incentives, e.g. tax allowances) to non-refundable in cash state aids (financial initiatives) was also successfully completed also. Recent years were characterised by continuous fine-tuning (mostly easing) of the VIP cash subsidy system, but the persistence of this trend is uncertain in the future. The most important tasks are still the compensation of the deficient trust and the relatively low familiarity of the investors with the potential host location, and in parallel, intensifying support for national companies. Some phenomena could also be observed that could potentially signal the shift of the emphasis from EU funds to national budgetary resources.

At this point we move on to our second research question; the effective contribution of the Hungarian investment promotion system to the mitigation of double duality (duality in sectoral and geographical terms). Double duality has occurred right after the change of regime, in parallel with the inflow of FDI, as a natural side effect. It is obvious if we consider that industrial investments happens in a given location, namely settlement, and time is required for the evolution of all cooperation: this is true for both supplier networks and intercompany relations. Unfortunately, double duality has been continuously intensifying in the subsequent stages, despite the efforts to its dilution. It can thus be stated that the investment promotion system achieved only limited results in the dilution of double duality, and mostly in geographical terms. Regarding sectoral duality (the isolation of multinationals from Hungarian companies), the different supplier- and cluster development programmes achieved only very limited results, mainly due to the unpreparedness of potential suppliers and the inadequacy and frequent changes of the support schemes. Starting from 2020, major modifications were implemented in this field. Firstly, regarding sectoral duality, the preference of national SMEs appeared in the state aid schemes: VIP cash subsidies were opened up to newly established companies and SMEs, the base employment sustaining commitment was eased to 75%, compulsory commitments for asset-based investment projects were changed from new employment generation to net income surplus and salary increase, the amount of guarantee and minimum investment size were decreased, and the preference of national companies was clearly declared (Factory Rescue Programme). As territoriality as an aspect was analysed in a separate sub-chapter in our study, given its outstanding importance in regional science, we examined geographical duality from two perspectives: top-down from the policy level and bottom-up from the host locations of the state aid allocation decisions in the last 20 years. From the policy level, it can be stated that the preference of less developed regions has been implemented from 2004 consistently, firstly horizontally at the regional (NUTS2) and county (NUTS3) levels, and most recently vertically at the settlement (LAU) level, based on the rank of the specific settlement in the hierarchy (e. g. county capitals versus small cities and villages). Regarding the host locations of investment projects and the connected state aids, additionally to the absolute and relative lead of Central Transdanubia, the Eastern part of Hungary is catching up from 2010, and Pest county from 2020 due to its separation from Budapest. In absolute terms, the volume of state aids received by Southern Transdanubia is also increasing. We also emphasised that the opportunities of the national governments to influence location decisions are limited, as these are made based on a complex, multi-criteria set by the headquarters/corporate centres of investor companies.

Finally, regarding our third research question about future tendencies, we expect the continuation of the prioritisation of Hungarian SMEs in all (EU and non-EU) subsidy schemes, their appearance as direct competitors for multinational companies in the VIP cash state aid schemes, and the support of consortium-type projects with the partnership of multinational companies, SMEs, and/or research/education institutions. The shift towards higher value-added and local content will be further intensified with the support of regional service centres, research and development, corporate trainings and workshops, investment projects aiming digitalisation and the transition to zero net emission. Regarding financial incentives, the strengthening of refundable subsidies could be foreseen versus non-refundable subsidies at the policy level that could result in the decrease of the state aid intensities per project, due to less budget available. The repositioning of fiscal incentives could also occur together with the further easing of the conditions of the guarantees to be provided by the beneficiaries.

In technological terms, investment projects connected to energy production and storage are booming, and more rapid technological obsolescence, digitalisation, automatisation and the increased role of artificial intelligence could be expected. In geographical terms, the continuation of Asian capital inflow can be expected in parallel with reshoring to Europe, and hopefully the willingness of Hungarian companies towards investment activities will also be further increased. In the short term, the recent modification of the regulation towards differentiation based on the rank in settlement hierarchy will not have immediate results, but in the medium term, it might generate interest towards district capitals and smaller towns.

As policy recommendations, we can formulate the necessity to strengthen the 'soft' elements in the VIP cash system, e. g. the number of participants in dual education, the cooperation with higher education/research institutions, their prioritisation as specific indicators and/or factors increasing the state aid intensity. It would be efficient to ensure significant financial resources to investment projects of large companies in the field of energetics, and to consider accelerating technological change/obsolescence the extension of the lead times from suppliers. Institutionalised and regular communication with strategic companies is unavoidable for timely recognition of their needs. Supplier development should be generated from the SMEs side through support to their potential and competences and incentivising large companies with higher state aid intensity for the cooperation. Increased coordination between competent sectoral ministries is required to harmonise state aid schemes and fully exploit their synergies and to reduce red tape, and improve digitalisation. Future research strands are the indepth analysis of the recently published database (also analysed by us in this study) with emphasis on territoriality, international benchmark studies in the field of the identified five stages of the Hungarian investment promotion system. This would contribute to efficient and policy-relevant results at both Member State and EU level.

Notes

1. Double duality refers to geographical and sectoral differences between regions (locations) preferred or neglected by investors, as well as the isolation of national and multinational companies from one another (Szanyi 2017).
2. The dataset included the company name, relation, activity, number of new employees, investment volume, state aid volume, date of Grant Agreement signing, but not the implementation site. Thus, we had to identify through mainly internet-based research the host locations of 488 decisions. In case of 4.88% of the total state aid volume (55 213 578 thousand HUF out of 1 131 494 290 thousand HUF) we could not precisely define the host region due to either the lack of information, or to the lack of information about the division

of state aid between several locations. Further data clearing and processing is necessary to further increase the reliability and coherency of the dataset.

3. At the time, manufacturing investment projects of at least 50 million EUR investment volume, and regional service centre projects of at least 25 million EUR could be subsidised through this financial incentive. The National Investment Promotion Fund, as an earmarked financial source, was established in 2003, with the integration of the former Regional Economic Development and Economic Development Funds.
4. This regulation has been modified several times since then. The main issue to be solved during the EU accession negotiations was that the EU's system takes into account the investment project cost when determining the maximum achievable state aid intensity based on the regional aid map (theoretical maximum intensities), while the Hungarian system was built on tax savings based on business operation, that could sometimes be higher than the theoretical maximum in the EU. The most important obstacle was the validation of the already achieved tax benefits, where as the compromise was that tax benefits claimed before 1 January 2003 were not considered by the European Commission (Antalóczy, Sass 2003, 13.)
5. Erdős (2012) describes in detail the different incentives available to national and international companies, and highlights that the act on corporate tax incentivised foreign companies in a normative way with tax allowances until 1993. From 1994, the Hungarian government could allocate tax allowance based on individual decision. This was already a privilege for national and international companies, so the positive discrimination of foreign companies with regards to tax benefits was terminated.
6. The declared objective of the technology-intensive scheme was the reaction to Industry 4.0 and automation tendencies, but it was only available for two years (2017–2019). Its significance lays in its 'pilot' character, as for example, this was the first scheme where the later on generally applied salary and net income surplus was introduced as compulsory commitment.
7. The Factory Rescue Programme addressed the reduction of the impacts of the energy crisis resulting from the armed conflict in Hungary's neighbourhood. The minimum investment size was 500,000 EUR. The 150 billion HUF allocated for the Programme by the Hungarian Government was absorbed in 17 minutes on the online platform, and applications were submitted for several times more budget than the funding allocation. The significance and magnitude of the programme is shown by the allocated budget that is three times more than the annual budget available for investment promotion in Hungary. Altogether, 378 companies registered for the programme, and Hungarian companies are declared to be prioritised.
8. The competition has also shifted from the EU to the global level, as its was previously sufficient to prove the so-called 'incentive effect' of a subsidy with the identification of competitors within the EU, but in case of the new subsidy category (Temporary Crisis and Transition Framework – TCTF subsidy), a counteroffer from outside the European Economic Area is necessary.
9. The validity of the former regional aid map was extended from 31 December 2020 to 31 December 2021, mainly due to other priorities of the European Commission (the pandemic and its impacts; EC decision, SA.58164 (2020/N) case C(2020) No 6769, 7 October 2020). Compared to 2014–2020, the most important changes are: the maximum regional aid intensity for Central- and Western Transdanubia was decreased with 5%, for most parts of Pest county it was increased with 5%, and no regional aid can be allocated to large companies in Budapest.
10. In case of Development Tax Allowance, the scale of territorial differentiation is still the regional (NUTS2) level, but the new employment generation eligibility condition was cancelled here also, from 2020. The minimum investment volume is unchanged from 2017; and the area of Hungary is divided to beneficiary and not beneficiary regions, whereas the beneficiary regions are prioritised by lower minimum investment volume, similar to the Free Enterprise Zones.

11. Territorial differentiation based on the rank in the settlement hierarchy was introduced in August 2023 (modification of Gov. Decree 210/2014. (VIII. 27.) with Gov. Decree 366/2023. (VIII. 3.).
12. More details about the analysed dataset can be found in the Methodology. Regarding the examined period, 3 identified stages were included, as VIP cash subsidies were not allocated before 2004, so the first two stages are not concerned. In 2010, we identified the date of the national elections (April 2010) as a milestone in the defined stages (Stage 3 and 4). In case of 2019 and 2020, we used the calendar year. Budapest was consistently handled separately from Pest county. It also has to be pointed out that the length of the period of the stages is different.
13. The data of the recently published BYD investment is not yet included in the database.

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