Ukraine: Higher education reforms and dynamics of the institutional landscape

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1. Introduction

The developmental trajectory of the HE system in Ukraine has mirrored the large-scale transformations that have been taking place in the country since the collapse of the Soviet Union. Rapid change in the socio-economic and political environments, and dramatic demographic changes as well as vicissitudes in foreign relations have all formed the wider context in which the HE system has been evolving.

This chapter views the changes in the HE landscape through the lens of horizontal and vertical diversification and organisational interrelationships (Teichler, 1988). Ukraine's HE followed a trajectory that is both similar and different to developments in other post-Soviet states (Huisman, Meek, Wood, 2007: 565), facing a shared communist past, bringing back to life pre-Soviet institutions and achievements, and looking for the ways forward.

We will review how horizontal institutional differentiation has been jumpstarted with the introduction of private universities and other structural changes in the system. We will also discuss changes in the vertical differentiation amongst institutions of HE based on their status and ranking system. The interrelationships among old and new universities have inevitably shifted towards being more competitive, which presents not only a new practice for the system but also an additional challenge in the face of negative demographic trends.

2. Brief historical overview of the pre-Soviet HE system in Ukraine [1]

The first HEIs in Ukraine appeared in the west of the country and in Kyiv, the capital of Kyivan Rus. Towards the end of the 16th century, Western Ukraine was experiencing religious and national identity struggles whilst seeking to position itself between the influence of Orthodox Christian Russia and Roman Catholic Poland and Austria. The Oztrozska Academy, established in 1576, was the first HEI established in the territory that is now Ukraine. The Academy was closed in 1636. In 1632 Petro Mohyla, Metropolitan of Kyiv founded a later well-known Kyiv Mohyla Academy whose main purpose at the time was to 'benefit the Orthodox Rus' religious and ethnic communities' (Yershova and Gordiichuk, 2013: 474). The Academy became an influential centre of innovation and research and served as a model for universities in Eastern territories established in the 19th century (Bunina, 2013). In 1817, however, the Academy closed down soon after Russian Empress Catherine II withdrew her financial support.

In the mediaeval city of Lviv, the Roman Catholic Jesuits order actively pursued the approval of the Polish King John II Casimir who eventually granted permission to establish the University of Lviv in 1661. The University facilitated the development of this region (Bunina, 2013) and produced several graduates of national impact. Over a hundred years later, another university in the Western part of the country was opened in 1875 in the city of Chernivtsi. Although the University teaching was originally delivered in German, it gradually became a multicultural and multilingual institution.

In the modern Eastern Ukrainian territories, the first HEIs appeared at the beginning of the 19th century. These HEIs were established in territories that at that time were under the jurisdiction of the Russian Empire. Hence, they reflected

[1] This chapter refers to contemporary Ukraine's territory as recognised by the United Nations unless explicitly stated otherwise.

different principles and traditions. Osipian (2008) describes the Russian tradition in HE as one of 'weak university self-governance', compensated by 'strong state control'. The first university in these territories was opened in the city of Kharkiv in 1805. Other national universities were open in Kyiv (1834) and Odessa (1865).

Institutions established under Western European influence differed in many ways from their Eastern counterparts in the underlying autonomy models that underpinned institutional relationships with the corresponding governments. In the West, the impact of religion on HEIs was given considerable importance by the state (whether Polish or Austrian) and often resulted in clashes with the religious beliefs of the Ukrainian population. In the East, issues concerning institutional autonomy were the key source of tension in university-government relations.

A parallel trend of systematic development of teacher training institutions started in the 1860-70s. This development introduced the first elements of differentiation into the HE system as these institutions combined elements of vocational training with advanced studies and attracted a specific student population interested in the teaching career. Initially, not all of them were HEIs. The first teacher training HEI opened in Gluhiv in 1874 (Bunina, 2013) putting a start to what is now a robust net of pedagogical universities.

By the beginning of the 20th century, student numbers in higher education had doubled by comparison to the late 1800s, although access for poorer working class and peasant youth was still severely restricted (Bunina, 2013). Immediately prior to 1917, the Ukrainian HE system amounted to 27 institutions that educated more than 35, 000 students (Kurbatov, 2014). During the brief period of Ukrainians independence and the Civil War of 1917-1920, additional HEIs were opened in the capital, including the Academy of Pedagogy, as well as in Kamyanets-Podilsky in the West and an early form of Tavrida University in the

Crimea. By the time most of the current Ukraine's territory became part of the USSR in 1939, Ukraine had 129 HEIs. In 1941, Ukraine had 162 HEIs and around 130,000 students. Table 1 presents a simple typology of the HEIs by extent and type of specialisation. At this point, Ukraine had 6 comprehensive universities. Technical and industrial institutions were leading the way along with their pedagogical counterparts, reflective of the needs of the economy and the high emphasis placed on access to secondary education.

Table 1. Typology of HEIs by specialisation in 1941.

Type of HEI	**Number of HEIs**
Comprehensive Universities	6
Industrial/Technical Institutes	40
Agricultural Institutes	19
Economics Institutes	6
Pedagogical Institutes	69
Medical Institutes	15
Art, Music and Theatrical Institutes	7
Total	**162**

Source: Buhalo (1945).

3. Ukrainian Higher Education System between 1940 and 1990

Not unlike other post-Soviet states, the Soviet Ukrainian HE system was designed and developed to supply the manpower needs of the economy. In a highly centralised social system, HE was controlled and coordinated in relation to the industry and economic needs of the USSR. The military needs during the

war, and then the post-war arms race mirrored themselves in the growing numbers of engineering and other technical specialisations. Centralised control and manpower planning enabled institutional inter-relationships that were primarily based on the principles of complementarity rather than competition. Ukrainian HEIs during the Soviet period were producing graduates for the needs of other Soviet republics as well as Ukraine itself. Two institutions, in particular, were noteworthy for their all-USSR student body: the Ivano-Frankivsk National Technical University of Oil and Gas and the Mykolayiv Shipbuilding Institute.

Disciplinary orientation and geographical location in part determined HEIs' role in the overall system and national economy. In addition, student mobility was not very high but policy measures were implemented over time to boost HE participation rate for low-income applicants, especially from the countryside. Higher education was free of charge and all students were admitted on a competitive basis. Students also received a modest stipend to cover living expenses. This gradually boosted student mobility.

After World War II and Stalin's death in 1953, Khrushchev's government undertook a reform of the HE system. In the 1950s-1960s, the HE system was slightly downsized, with some institutions closed or merged, leaving 135 HEIs instead of 160. The student numbers, however, doubled in comparison with the pre-war period. Diversity in the form of delivery grew, including the delivery by correspondence (*zaochyi fakultet*), further opening opportunities for older individuals already in the labour force.

Vertical institutional differentiation had become particularly clear by this time. Comprehensive universities enjoyed higher status, a wider range of disciplines and more privileges, including opportunities to engage in research, whilst specialised institutes focused primarily on teaching within their chosen fields.

Polytechnics, however, received additional support and funding from the government at this time, fuelled by the need to rebuild the country (USSR) after the war, whilst maintaining its technologically competitive status in the international political arena. Many of these polytechnics grew into well-recognised and prestigious institutions of the time. Table 2 presents the state of the system in 1988, shortly before the collapse of the Soviet Union. Horizontal diversity is evident in the different types of specialisation within universities. Technical HEIs attracted the largest number of students at the time, followed by pedagogical HEIs, suggesting a possible element of vertical differentiation based on their importance in the overall social system.

Table 2. Typology of HEIs by type of specialisation in 1988

Type HEI	**Number of HEIs**	**Number of students**
Comprehensive Universities	10	98,734
Pedagogy and Education	42	257,014
Technical (industry and construction)	40	318,181
Transport and Communication	10	56,284
Agriculture	17	90,372
Economics and Law	10	68,964
Medicine and Sport	18	56,591
Art and Cinema	9	6,572
Total	**156**	**952,712**

Source: Goskomstat (1989)

3. Changes in the HE System since Ukraine's independence. Policy, practice and agency.

With the onset of independence, Ukraine's HE system had 156 HEIs at the beginning of the 1991/92 academic year. The system was then about to enter a long and turbulent period of reforms with varying levels of success in implementation.

Initially, the only active agency in the reform process belonged almost exclusively to the President, the Parliament and the Cabinet of Ministers. Fimyar (2010), in her analysis of policy rationales in HE, argues that the primary policy documents reveal that the sources of all policy documents were Presidential Decrees, whilst Educational Laws, directives of the Cabinet of Ministers and Ministry of Education laws and directives were derivatives of the latter. It is in part understandable why the president of a highly centralised country so inexperienced in self-governance would be reluctant to delegate important decisions, but such high levels of centralisation in policy sources excluded important stakeholders from having a voice for at least two decades, having an inevitable impact both on the institutional diversity, institutional interrelationships and the quality and relevance of higher education to the country's economy and social development. The reform processes have been underpinned by three key rationales: *nation and state building, comparison and critique, and finally catch-up Europeanisation* (Fimyar, 2010). The following three sub-sections explain the nature of each rationale in more detail.

3.1 Nation and state building

The *Nation and state building* rationale is grounded in the concerns of separation from the Soviet past, establishing a differentiated system, reviving pre-Soviet traditions and history as well as pursuing active ukrainianisation of the

educational process to ensure that the historically vulnerable Ukrainian language (Janmaat, 2008) continue to develop and shape the national identity of the Ukrainian people. The proportion of university students instructed in Ukrainian in the 1995/96 academic year was 51%. In 2002/03 this figure grew to 78%, with Western (99%) and Central Ukraine (approximately 96%) taking the lead. Even in the traditionally Russian-speaking East and South, these figures grew from 23% to 58.9% and from 26.9% to 55.5% respectively (Ministry of Statistics, 2003). The use of language presents a more complex picture, however, if we consider formal and informal use, the use of *Surzhyk* (a mixture of Russian and Ukrainian) and the ideological dimensions of linguistic diversity (Bilaniuk and Melnyk, 2008). The government's language policies sparked much controversy and, some believe, ate up valuable time and resources, leaving other goals disadvantaged (Byron, 2001). Others argue that ethnolinguistic self-identification is crucial for second wave Wilsonian states, which derive their legitimacy for independence primarily through ethnic and linguistic markers (Janmaat, 2008). Regardless of how one evaluates these changes, they undoubtedly became a source of horizontal institutional differentiation, with Western and Central Ukrainian HEIs being more ukrainianised than their Eastern and Southern counterparts. In addition to language as a marker of ethnic identity, shared Ukrainian history was revived via symbolic (but also very practical) re-birth out of mediaeval ruins of two HEIs: the Kyiv-Mohyla Academy in 1991 and the Oztrozska Academy in 1994. Several new HEIs were opened to supply qualified staff for the newly created state organs of the independent Ukraine: the University of Customs and Finance (1996), the National Academy of Internal Security of Ukraine (1992), and the University of the State Fiscal Service (1999).

In addition to the revival of language and history, the Law of Ukraine on Education (1991) and the Law on Higher Education (2002) made the statement that Ukraine's HE system was to be structured differently and to some extent

mirror the growing liberalisation of the economy and of property rights. The most radical change at this stage was the introduction of the private or non-state HEIs. This set the precedent for an alternative private HE system. By 2013, the proportion of private HEIs mounted to 21% of all the HEIs in the system. According to UkrStat, Ukraine had 162 private institutions in the 2015/16 academic year, comprising around 130,000 students (State Office of Statistics of Ukraine, 2016). New institutions have only loosely been regulated and were largely left to their own devices to find their way in the market. The impact of private HE providers on the quality of education in the system remains unclear. They appear to be a lot less competitive than traditional public institutions but tap into the same intellectual potential of the academic staff thus, according to some reports in the Ukrainian press, diluting the system. A more systematic approach, however, is needed to assess how this form of institutional differentiation is influencing the quality and relevance of HE in the country. From the students' perspective, the division between private and public higher education becomes less clear as more and more students across all institutional types pay the cost of their studies out of their own pocket. On the whole, 52.3% of all students, across all types of institutions, were paying tuition fees in the 2014/15 academic year, whilst 46.1% were funded from the state budget, with a small minority being funded from city budgets (0.9%) and from the budgets of private companies (0.7%) (State Office of Statistics of Ukraine, 2015).

The second prominent feature of systemic changes in the onset of independence has been the merging of parts of the vocational education system with higher education. Secondary specialised educational institutions (*uchilischa* and *technikumy*) were reclassified as HEIs of I and II levels of accreditation, and more established HEIs as level III and level IV. By changing the status of these institutions, the Law on Higher Education (2002) increased the institutional diversity of the HE system. HEIs at different levels served different functions and attracted different types of students (horizontal differentiation) but also enjoyed

different levels of prestige and status (vertical differentiation) both with the government and students. This becomes particularly obvious when we consider that number of HEIs of levels I and II exceeded that of the III and IV levels throughout the period of independence (Fig. 1), though the latter were leading in student numbers by 1995 (Fig. 2).

In addition to increased institutional differentiations and choice, the new structure incorporated a more diverse set of degrees, starting with junior specialist granted in HEIs of levels I and II and the new-for-the-system Bachelor's degrees, which left graduates qualified to enter Master's programmes, alongside specialist degrees inherited from the Soviet system which in principle enabled graduates to enter doctoral level studies. Doctoral level degrees were left unchanged from the Candidate of Science and Doctor of Science until later reforms (specifically the Law on Higher Education passed in 2014). At this stage, the new structure thus combined elements of Western degrees with the Soviet heritage. The second Law on Higher Education (2014) has left the status of level I and II institutions undefined, although the practice of students' direct entry from college into the second year of university continues, which implies that level I and II institutions remain a part of the HE system. The Soviet doctoral level degrees were replaced at this stage with the more familiar to the Western reader Doctor of Philosophy (PhD). The license to grant this higher level degree serves as an additional source of institutional differentiation, with the academies and the universities having the exclusive right to bestow it.

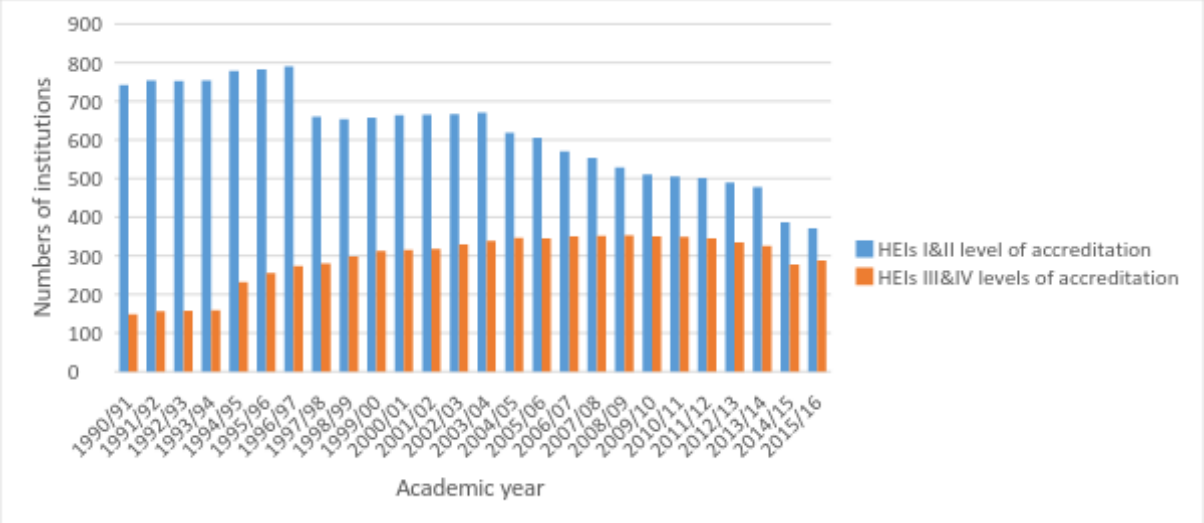

Fig. 1. Numbers of HEIs by levels of accreditation, 1990-2015[2]

Source: State Office of Statistics of Ukraine, 2016

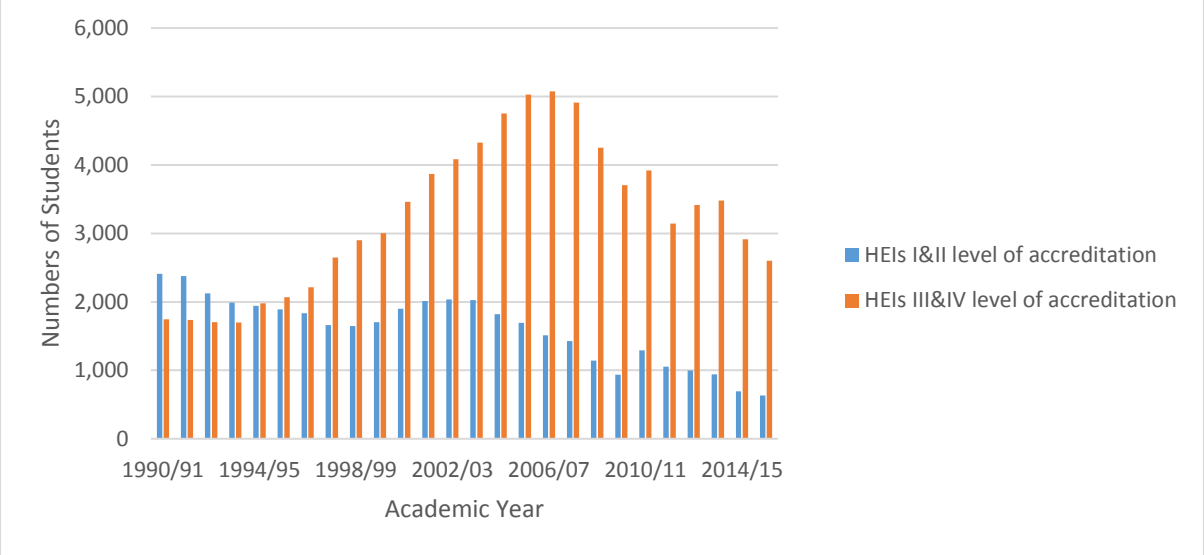

Fig. 2. Numbers of students in HEIs by levels of accreditation, 1990-2015[3]

Source: State Office of Statistics of Ukraine, 2016

[2,3] The data for 2014-15 and 2015-16 are not fully comparable to data from previous years as they do not take into account institutions that remained in the occupied territories and the zone of military conflict in Donetsk, Lugansk and Crimea.

Whilst the number of HEIs continued to grow along with the student numbers, the demographic situation in Ukraine took on a negative turn from the early 1990s onwards. While 1990 saw 657,000 children born, in 2001 when the birth-rate hit its lowest there were only 376, 000 births. This trend has been accompanied by high emigration and brain drain rates. The first decline in student numbers can be seen in 2008 for level III-IV institutions, which corresponds to the 1991 born cohort. At the same time, the number of HEIs of III-IV accreditation levels increased from 156 in 1991/92 to 351 in 2006/07; a 125% increase.

Although the negative demographic trend has been partly offset by growing participation rates and increasing popularity of second HE degrees amongst already employed university graduates, on the whole, these trends taken together represented a time bomb for the HE system. Unfortunately, very few Ukrainian policy makers and university managers chose to acknowledge them with any strategically developed response. Hence, the inevitable oversupply of HEIs posed a serious problem and the question of mergers has arisen for the recent and the current Ministers of Education, Serhiy Kvit and Liliya Grynevych.

3.2 *Comparison and critique*

The second policy rationale -- *comparison and critique*, or more precisely *self-critique* has generated discourse around the desired states of decentralisation, quality control, modernisation, democratisation, internationalisation and equal access, often noticed by Western observers as positive developments (Johnston & Bain, 2002; Silova, 2009). Such aspirational goals on the one hand and acute awareness on the other of the real state of affairs - which is seen as lacking in all these qualities by the Ukrainians themselves - is what generates most of the self-critique and the notion of a persistent educational crisis. Specific facets of the crisis are described in Presidential (1995) and Parliamentary Decrees (2002) and admit to the low status of the academic profession, unacceptably low salaries, the

low and decreasing level of prestige of higher education, limited diversity in the forms of ownership, and declining inter-disciplinary links (Fimyar, 2008). This policy discourse identifies the reasons for the crisis highlighted in the Law on Education of 1991 (Fimyar, 2008) as significant reduction in educational spending, lack of implementation of policies on social protection of teachers, the legacy of the Soviet system of education (specifically politicisation and bureaucratisation) and, at the same time, nostalgic whining about the weakness of the modern state's control over quality of education. A large step from a highly centralised system to a more democratic and self-governing one is perhaps not possible without some ambivalence and hesitation, which comes across in the early educational discourse. What is troublesome, however, is that an 'impersonal' critique is fostered, 'limited to critical evaluation of the processes but not the actors behind these processes; the identification of which is crucial for understanding and overcoming the crisis' (Fimyar, 2008, p. 80).

Interestingly, similar types of issues pertaining to the notion of crisis in HE were raised by academic staff and administrators in the case study by Shaw, Chapman and Rumyantseva (2013), conducted a decade after these weaknesses were originally noted in official documents. The study additionally documented the complaints of university administrators on low levels of autonomy in terms of financial self-management and of academic staff in terms of the structure and content of degree programmes. Levels of autonomy are not identical across the system, however, serving as a source of vertical institutional differentiation. Currently, three state HEIs have the status of autonomous/self-managed universities with greater powers over their budgets, academic curriculum and capacity to forge external links (Table 3). There is also a plethora of private institutions that enjoy relatively high levels of autonomy from the government in terms of their own income generation and spending, and to a certain extent over curriculum planning and implementation.

Respondents in the case study conducted by Shaw, Chapman and Rumyantseva (2013) were drawn from a HEI that is less autonomous by formal criteria. Unsurprisingly, the accuracy of understanding of the status quo evident in the interviews was accompanied by an acute awareness of the informers' own helplessness with regards to reality, with only occasional sparks of optimism and sense of agency from selected top-level administration or very experienced academic staff.

The Law on Higher Education (2014) has made some notable steps in the direction of creating an explicit sense of agency in the system by introducing actors apart from the government and charging them with specific responsibilities. Specifically, in creating provisions for a Quality Assurance Agency, which is expected to function as an arms-length body, similarly to its UK namesake, the Law makes an effort to delegate important monitoring functions away from the Ministry. The Agency has not started functioning at the time of this writing, however, which makes it impossible to comment on the actual realities of its work and division of responsibilities. Another thought-provoking phenomenon apparent in the most recent legislative changes is a tendency for policy makers to blame academic staff for poor implementation of the changes and a corresponding resentment of academic staff toward the government for not creating sufficient legal and system-wide provisions to enable the implementation processes. For instance, although universities are allowed in principle to hold their own bank accounts, the legal and procedural details of this change have not yet been implemented, making it impossible for universities to take advantage of this opportunity. These conversations appear to be happening at cross purposes and much gets lost in translation (e.g. Fedorchenko, 2016; National Aviation University, 2015). On the positive side, there is evidence of dialogue between the power and the people, which had previously been suppressed.

In addition to the most obvious stakeholders in HE, government, academic staff and university administrators who find themselves in strenuous and difficult relationships with one another, the discourse of comparison and critique also pervades the minds of students, many of whom prefer to study abroad and often fail to return to Ukraine after completion of their studies. This creates a problem known as 'brain drain' or 'brain waste' (Semiv and Hvozdovych, 2012). At the time of writing, this exit appears to be the primary if not the only mechanism accessible to students to communicate their views on the state of the national HE system.

Employers are equally dissatisfied. According to the World Economic Forum Global Competitiveness Report (2011), despite relatively comprehensive higher education coverage (8th place out of 142 countries), Ukraine takes the 51st place in terms of perceived quality. According to the survey, employers complain about the lack of important employability skills, including critical analysis, emotional, technical and even basic mathematical skills. Despite this documented dissatisfaction, the Federation of Employers in Ukraine's involvement in higher education reforms remains minimal. In stark opposition are the views of rectors on the quality and state of higher education in the country. According to a survey conducted by the Ukrainian Democratic Initiatives Foundation, most rectors report high quality of education in their institutions and raise concerns around poor funding and disinterested students (Democratic Initiatives Foundation, 2015). One may conclude that the views and opinions of various stakeholders on the state of quality of the HE system in Ukraine are akin to those of the fabled blind men touching an elephant, though most agree on the notion of crisis. Responsibility for the crisis, however, is pushed around like a football on a playing field. On the whole, the *comparison and critique* discourse lacks a clear sense of agency and, as a result, has not had any significant impact on the

structure or extent of differentiation of the HE system. The Soviet legacy remains largely untouched.

3.3 *Catch-up Europeanisation*

If the HE system is seen as being in crisis, Europeanisation or rather c*atch-up Europeanisation*, the third policy rationale identified by Fimyar (2010), is seen as the strategy by which to emerge from crisis. Based on extensive study of policy documents pertinent to higher education reform, Fimyar (2010) concludes that this narrative is widespread and all-pervading, seeking to reach "every subject, organisation, as well as the system of education as a whole, to align existing Ukrainian norms, capacities, and ethos with those in 'Europe' and the 'world'" (p. 81). The most obvious manner in which this narrative is manifested in practice is Ukraine's joining the Bologna Process in 2005. Experiments with Bachelors' degrees inspired by the Bologna Process started as early as the year 2000. More widely, this policy rationale pervades all strategies of moving from the 'old' system to the 'new', bridging the gap between the 'ideal' and the 'real', as well as all the tools and changes aimed at resolving the educational crisis described above. The practical implementations, however, are riddled with difficulties and often encounter insurmountable resistance from various actors in the system. In fact, resistance appears to be the most common way for various stakeholders to respond to changes implemented from above. A case study by Shaw, Chapman and Rumyantseva (2013) presents multiple examples of academics trapped by competing external pressures as well as the internal need for meaning derived from their work. These tensions lead to selective adaptation of the Bologna requirements. Clearly, the role of lower-level stakeholders should not be underestimated in the process of changes. Although the approach to the reforms has gradually become more democratic (as part of the catch-up Europeanisation

narrative) as more and more information is shared with lower-level stakeholders and some consultations are taking place (e.g. with the Council of Rectors), the relationship between the government, institutions and academic staff within them appears to be pervaded with low levels of trust. This, in turn, causes difficulties in communication and panic amongst the lower levels as a response to changes, and possibly a hesitation to communicate more openly on the part of such strategic actors as the Ministry. Such tensions may be indicative of more deeply seated problems described by Kovryga and Nickel (2006) as a cycle of false necessities in the reform processes in Ukraine, for which they partly blame excessive pressures for reform from the West and the very high speed of change. Admittedly, Europeanisation has impacted different parts of the system to different degrees. Larger, national level HEIs have had better access to student mobility programmes, staff professional development opportunities which often bring Western notions into the Ukrainian realities (e.g. empowerment), and joint degrees with overseas institutions. HEIs located in Kiev also tend to have an advantage due to their relatively better accessibility for foreign visitors. Smaller institutions located in smaller towns tend to have less contact with their EU counterparts, less funding to finance international conferences or institutional visits and, as a result, develop fewer international links. International links and academic staff with overseas backgrounds form an attractive and prestigious feature for students. Hence, to a certain extent, Europeanisation policies have contributed to the vertical diversification of the institutional landscape.

3.3 *The Law on Higher Education (2014) and the most recent changes in the institutional landscape*

The recently adopted Law on Higher Education (2014) has a special significance in the process of HE reform in Ukraine and comes at a significant time in Ukrainian history, following the Revolution of Dignity and the assertive stance Ukraine adopted on national self-governance. As insufficient time has yet to pass

from its adoption it would be unreasonable to expect fully fledged implementation at the time of writing. It is, however, important to note several aspects which weave in the above-mentioned changes, leading to already noticeable alterations in the institutional landscape.

First of all, there is an explicit effort to engage all the most immediate stakeholders of HE with the quality assurance process. The newly created Quality Assurance Agency is expected to draw on representatives of academic staff (excluding senior managers), employers, and students. Secondly, rectors will once again be elected, with students' voices having a greater impact (15% in proportional representation) on the outcome than before, which democratises the system. The Ministry of Education will be obliged to appoint rectors who have been elected in this fashion, regardless of the Ministry's own views. This is a clear step towards supporting institutional autonomy and self-governance. The Law abolishes the concept of levels of accreditation, which simplifies the typology of HEI and leaves four types of institutions: comprehensive universities, specialised institutes, academies and colleges. This change has not yet been fully implemented. Moreover, the Ministry of Education is planning to discontinue the direct financing of colleges, leaving them attached to the municipal budgets. Expert observers predict that this will cause colleges to merge with higher status HEIs, thus reducing their overall number. Given the extremely high number of level I and II colleges at the time of writing (over 1,500) and the high likelihood of forthcoming comprehensive changes in this part of the system, the authors have chosen to present only level III and IV institutions in the most up to date typology of Ukrainian HEIs. Although this part of the overall system appears to be more stable than institutions with lower levels of accreditation, it is not completely shielded from changes. The recent Minister of Education Serhiy Kvit had tackled the rather high numbers of HEIs of III and IV levels of accreditation with plans and some actions to reduce their numbers via closures and mergers. For example, the Lugansk State Institute of Housing and Utilities and Building was closed in

2015 (Cabinet of Ministers, 2015). Moreover, the Accreditation Commission that functions under the jurisdiction of the Ministry of Education announced a list of 60 HEIs in 2015 that may be closed following quality control revisions of their curriculum and study programmes. The process is on-going and the full impact on the institutional landscape remains to be seen.

At the time of writing, the Ukrainian HE system amounted to around 300 HEIs of levels III and IV of accreditation with clear elements of vertical and horizontal differentiation. Flagship institutions present the most successful ones, both in terms of the status granted by the government (highly autonomous with their own budgets) as well as consolidated independent rankings (a market element of the system) (Osvita.ua, 2016). These institutions, however, occupy very low positions in the Times Higher Education Rankings of HEIs worldwide (Times Higher Education Rankings, 2016). The overall picture suggests that the number of technical HEIs has been considerably reduced in comparison with 1988 (Table 2), with only 22 institutions remaining, 20 of which are state owned. The total number of comprehensive universities amounts to 28 state (22 national and 6 regional) and 11 non-state establishments, whereas specialised institutions are much more numerous, with 181 state-owned, 44 non-state-owned and 6 supported by municipal budgets.

Table 3 Typology of Higher Education Institutions in Ukraine in 2016

Type	Examples of HEIs	Quantity	City or Region	Educational Profile	Research Activity	International Activity	Form of Governance / Form of Ownership / Source of Budget	Ministerial Jurisdiction[4]
Flagship Universities	Kyiv National University of Taras Shevchenko; Kharkiv National University of Vasyl Karazin; National University 'Ostrog Academy'.	3	Kyiv, Kharkiv, Ostrog	Multidisciplinary	High	High	Autonomous/Self-Managed/State and own budget	Ministry of Education and Science
Nationwide HEIs								
Comprehensive								
National Comprehensive Universities	Ivan Franko National University of Lviv, National University of Kyiv-Mohyla Academy, Donetsk National University[5], Taras Shevchenko National University of Luhansk, Lesya Ukrainka East European National University, Khmelnytskyi National University.	19	Lviv, Kyiv, Odessa, Chernivtsi, Dnipro, Zakarpattia, Vinnytsia, Luhansk, Khmelnitski, Poltava, Zaporizhia, Volyn, Mykolaiv, Cherkasy, Ivano-Frankivsk	Multidisciplinary	Medium but above average for HEIs	High	State	Ministry of Education and Science
Specialised								
Academies/State	Bogdan Khmelnitski's National Academy of State Border Service, Academy of Internal Troops of Ukraine, Ukrainian Academy of Internal Affairs, National Metallurgical Academy of Ukraine,	10	Khmelnitski, Kharkiv, Kyiv, Dnipro	Sectoral speciality	High to Medium	High	State	Ministry of Education and Science
Academies/Non-state	National Academy of Management	1	Kyiv	Sectoral speciality	Medium	Medium	Private	Ministry of Education and Science

[4] According to Order No. 1191-p of the Cabinet of Ministers of Ukraine (2011), all HEIs in Ukraine will be transferred over time to the jurisdiction of the MoE which licences their operations. However, in practice, sectoral HEIs have to coordinate and agree their curriculum with sectoral Ministries before seeking approval from the MoE.

[5,6] These and several other institutions from the Donetsk and Luhansk Regions have been evacuated from the region of military operations to other areas of Ukraine. In some cases, parallel versions of these institutions continue to operate in their original locations but their formal identification with Ukraine (through licencing) is not recognised by the Ukrainian side.

Table 3 Continues

Type	Examples of HEIs	Quantity	City or Region	Educational Profile	Research Activity	International Activity	Form of Governance / Form of Ownership / Source of Budget	Ministerial Jurisdiction
Nationwide Specialised								
Technical HEIs/State	Kharkiv Petro Vasylenko's National Technical University of Agriculture; Lviv National Polytechnic; Kharkiv National Polytechnic; Kyiv National Polytechnic; Donetsk National Polytechnic; Central Ukrainian National Polytechnic; Ivano-Frankivsk National Technical University of Oil and Gas; Donbas State Technical University	15	Kharkiv, Lviv, Kyiv, Donetsk, Kirovohrad, Kherson, Volyn, Poltava, Zaporizhia, Ternopil, Vinnytsia	Technical	Medium but above average for HEIs	High	State	Ministry of Education and Science
Sectoral HEIs/State	National University of Pharmacy , Odessa National Economics University, Sumy National Agrarian University, Tugan-Baranovsky's Donetsk National University of Economics and Trade[1], National University "Yaroslav the Wise Law Academy of Ukraine", National Aviation University, National Pedagogical Dragomanov University, Ukrainian National Forestry University, South Ukrainian National Pedagogical University, Admiral Makarov National University of Shipbuilding, Tchaikovsky National Music Academy of Ukraine, Banking University, Ukrainian Academy of Banking of the National Bank of Ukraine*	65	Kharkiv, Kyiv, Mykolayiv, Donetsk, Lviv, Vinnytsia, Zhytomyr, Dnipro, Ternopil, Ivano-Frankivsk, Volyn, Sumy	Sectoral speciality	Medium	High to Medium	State	Ministry of Education as well as a corresponding Sectoral Ministry (e.g. Ministry of Healthcare for Medical HEIs); *These HEIs come under the jurisdiction of the National Bank of Ukraine.
Total Nationwide and Flagship HEIs		113						

Table 3 Continues

Type	Examples of HEIs	Quantity	City or Region	Educational Profile	Research Activity	International Activity	Form of Governance / Form of Ownership / Source of Budget	Ministerial Jurisdiction[2]
Regional HEIs								
Comprehensive								
Regional Comprehensive Universities	Sumy State University; Kherson State University; Zhytomyr State University; Nizhyn Gogol State University; Mariupil State University; Mukachevo State University	6	Sumy, Kherson, Zhytomir, Chernihiv, Mariupil, Zakarpattya	Multidisciplinary	Medium to Low	Medium	State	Ministry of Education
Regional Comprehensive Universities/Non-state	Ukrainian Catholic University; Alfred Nobel University; European University; Lutsk University Institute of Human Development "Ukraine"; Classic Private University; International Solomon University ; Bukovyna University	11	Dnipro, Lviv, Kyiv, Volyn, Zaporizhia, Odessa, Chernivtsi	Multidisciplinary	Medium to Low	Medium	Non-state	Ministry of Education
Specialised								
Academies/State	Dnipropetrivsk State Medical Academy, Donbas State Machine-Building Academy, Academy of Municipal Management, Ukrainian Engineering Pedagogics Academy, Odessa State Academy of Civil Engineering and Architecture, Prydniprovska State Academy of Civil Engineering and Architecture, Military Academy, Kirovograd Flight Academy	29	Dnipropetrivsk, Donetsk, Kyiv, Kharkiv, Odesa, Poltava, Zaporizhia, Lviv, Kherson, Kirovograd, Poltava, Dnipro	Sectoral speciality	Medium	Medium	State	Ministry of Education as well as a corresponding Sectoral Ministry (e.g. Ministry of Healthcare for Medical Academies)
Academies/Non-state	Lawyer Academy of Ukraine; Interregional Academy of Personnel Management; Academy of Work, Social Relations and Tourism	3	Kyiv	Sectoral speciality	Medium to Low	Medium	Non-state	Ministry of Education as well as a corresponding Sectoral Ministry (e.g. Ministry of Healthcare for Medical Academies)

Table 3 Continues

Type	Examples of HEIs	Quantity	City or Region	Educational Profile	Research Activity	International Activity	Form of Governance / Form of Ownership / Source of Budget	Ministerial Jurisdiction
Regional HEIs								
Specialised								
Academies/Municipal	Kremenets Regional Humanitarian Pedagogical Academy; Vinnytsia Academy of Continuous Education; Kharkiv Humanitarian Pedagogical Academy of Regional Council	3	Kharkiv, Ternopil, Vinnytsia	Sectoral speciality	Low	Low	Municipal	Ministry of Education
Technical HEIs/State	Podilsky Technical University of Agrarian Science; Mykolaiv Polytechnic; Pryazovskyi State Technical University; Dneprodzerzhinsk State Technical University; Zhytomyr State Technological University	5	Mariupil, Khmelnitski, Donetsk, Mykolaiv, Zhytomir	Technical	Medium to Low	Medium	State	Ministry of Education
Technical HEIs/Non-state	International Science Technical University of Yuri Bugay; Mykolaiv Polytechnic Institute	2	Kyiv, Mykolaiv					
Sectoral HEIs/State	Bukovinian State Medical University, State University of Telecommunications, Ternopil State Medical University, Zaporizhia State Medical University, Podilsky Technical University of Agrarian Science, Izmail State University of Humanities, Tavria State Agrotechnological University, Kosiv Institute of Applied and Decorative Art	87	Chernivtsi, Kyiv, Ternopil, Zaporizhia, Dnipro, Ivano-Frankivsk, Khmelnitski, Kherson, Odessa, Kharkiv, Poltava, Dnipro, Lviv, Chernihiv, Luhansk, Zaporizhia, Zhytomyr, Kropyvnytskyi, Donetsk,	Sectoral speciality	Medium to Low	Medium		Ministry of Education

Table 3 Continues

Type	Examples of HEIs	Quantity	City or Region	Educational Profile	Research Activity	International Activity	Form of Governance/Form of Ownership/Source of Budget	Ministerial Jurisdiction[2]
Regional Specialised								
Sectoral HEIs/Non-state	Kyiv Medical University Of Ukrainian Academy of Untraditional Medicine; International University of Business and Law; International University of Finance; Kyiv University of Law; KROK University; Hungarian Institute of Ferenc Rákóczi II; Kyiv School of Economics; Tourism Institute of Federation of Trade Unions of Ukraine**	40[6]	Kyiv, Kherson, Ternopil, Khmelnytskyi, Zakarpattia, Rivne, Odessa, Kropyvnytskyi, Lviv, Volyn, Kharkiv, Dnipro	Sectoral speciality	Low	Medium	Private/Cooperative/Joint Ownership	Ministry of Education, **This institution is also under the jurisdiction of the Federation of Trade Unions of Ukraine
Sectoral HEIs/Municipal	Zhytomir Institute of Nursing, Institute of business "Strategy", Kyiv Cooperative Institute of Business and Law	3	Zhytomir, Dnipro, Kyiv	Sectoral speciality	Low	Low	Municipal	Ministry of Education
Total Regional		189						
Other Types of IHE (Branches of Overseas or Joint HEIs)	Wisconsin International University in Ukraine; Central European University (Ukrainian-Polish)	2	Kyiv	Specialised (Economics and Business)	Low	High	Private	Ministry of Education
Total HEIs		304						

[6] The total number of non-state institutions in this typology amounts to 59, which is considerably fewer than the 169 reported to exist in Ukraine by the State Office of Statistics of Ukraine (2016).

4. Conclusions

Ukrainian HE developments inevitably testify to the path-dependency and reliance on the post-Soviet legacy as the point of departure – either by seeking to overcome it or to incorporate it into the new realities. Similarly, the fascination with EU developments and the zeal to modernise the system represent an equally strong driver that impels Ukraine to implement changes, assimilate Bologna alterations and seek developmental inspiration from the West. The black box in the middle between these two drivers represents authentic and unique Ukrainian concerns, aspirations and visions of how and why the HE system has to function for the distinctive needs of Ukrainian economy and society. Like most other post-Soviet but also European nations, Ukraine is seeking to re-shape its system of Higher Education to fit into the globalised world, whilst ensuring the country's interests are sufficiently protected.

The chaotic 1990s released a great amount of creative resources, which up until then had been securely hidden under Soviet regulatory pressure. This, in turn, unleashed the process of growth and institutional diversification along with the increased participation rates, resulting in a somewhat hectic and overgrown higher education system. The diversity of institutional types and horizontal differentiation in the system have also increased with the proliferation of non-state and municipal universities, academies and institutes. The number of technical institutions has decreased in comparison with the late Soviet period, whereas institutions specialising in the social sciences have outperformed the needs of the economy to a certain extent. On the other hand, many HEIs have achieved a fairly respected status, thus driving vertical differentiation, both as recognised by the government and in the market driven rating systems, and they continue to perform critical functions in supplying the nation with qualified graduates.

Multiple political, demographic, economic and social currents underpin the dynamics of the HE system in the country. Although the most visible agency of change remains in the hands of the government, the role of the academic staff, students and employers is becoming more and more noticeable and impactful, which is being gradually recognised via official mechanisms (the Quality Assurance Agency). Still, many of the factors influencing change are not fully incorporated into conscious decision-making processes or influential debates, which perpetuates the bottleneck in the communicating vessels metaphorically representing various stakeholders. Low levels of trust, divergent points of view on the suitability of quality and functions of higher education, and lack of dialogue amongst stakeholders hold the developments back but may also be maintaining an illusory equilibrium which is needed for stability and continuity. Having outgrown the country's needs, the HE system is now viewed as being in need of closures and mergers of individual HEIs. This process is inevitably painful and fear-inducing at the institutional level as well as that of individual academics and university graduates. It may be a necessary undertaking but how it is managed will make a big difference for the future health and stability of the system. Top-down threats, even when justified, still echo painfully in the post-communist mind-set and demand special care in the implementation process. Ironically, the government appears to lack precisely the understanding of the implementation processes and mechanisms required to ensure a smoother and less traumatic experience for stakeholders at the lower levels. Although the Western literature is full of such recommendations concerning implementation of reforms, it rarely takes into account the depth of pre-existing disturbances that proliferate in post-Soviet societies (e.g. Bittner, 2014). Ukraine, like other post-Soviet states, needs to find its own path to continue modernising and organising the HE system more effectively, reflecting its specific geographical location, demographic trends, including the levels of mobility amongst young and intelligent students, history and future prospects, whilst maintaining a fragile equilibrium. The

uniqueness of one's path, however, does not preclude collaboration or seeking support from outside actors, both Western and from fellow post-Soviet states. The devil as always hides in the details.

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