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A longitudinal study of market-oriented subcultures in higher education

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With the withdrawal of state funding for students of business-related topics in 2012, Hungarian business schools have been under increased pressure to become market-oriented, especially as enrolment levels have at times shown a 50% decline in applications for business-related studies. Assuming that subcultures exist in a large complex organisation, our study firstly seeks to identify the subcultures and then, for each subculture, to determine the dominant market orientation. Market orientation in higher education is split into three areas: interfunction orientation (co-operation); student orientation; and competition orientation. The quantitative studies were conducted in 2011 and 2016 in order to compare the period before and after students became fee-paying. Our findings from the 2011 study provided five subcultures, two of them with dominant clan types, two with hierarchy types and one with a dominant market type. It was found that the clan subcultures had a dominant cooperation orientation, market subcultures a dominant competition orientation and hierarchy subcultures a dominant student orientation. Our study from 2016 examined whether subcultures and their orientations remained the same, and if the apparent correlation between dominant subculture type and dominant market orientation still existed. Our findings indicate that, despite some similarities, staff values have changed, and a new subculture type has emerged (i.e. the adhocracy type). Furthermore, the orientations have changed to a greater extent – from a student orientation towards a cooperation orientation for the majority of the subcultures.

Keywords: orientation, market, subculture, higher education.
JEL codes: Z130, M31.

Introduction

The dynamic and evolutionary nature of organisational culture is well-documented as cultures adapt to a combination of internal and external pressures on values and perceptions. This picture becomes even more intricate when we entertain the idea of subcultures existing in large complex organisations: we

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are now faced with a combination of heterogeneous subcultures evolving not only in relation to internal and external pressures, but also in reaction to one another.

Our study seeks to examine the change of subcultures over time through a repeated cross-section study. More specifically, we seek to examine how market orientation has changed in subcultures. The market orientation of higher education institutions (HEIs) is of particular interest as there appear to be simultaneous drives towards market orientation (e.g. in the form of lower government funding and withdrawal of grants for the majority of students) and away from market orientation (e.g. with government exercising greater control over HEIs through the introduction of chancellors).

Market orientation in organisations

Before considering the specific case of higher education in Hungary, the concept of market orientation in higher education should be clarified. Kasper (2005) claimed that there is a link between strategy, organisational culture and the market orientation of the organisation. However, opinions differ when it comes to the values related to a market orientation. Kasper (2005) characterises the market culture type as: dominant attributes as competitiveness and goal achievement; a leadership style emphasising decisiveness and achievement orientation; bonding to the organisation via goal orientation, production and competition; a strategic emphasis on competitive advantage and market superiority. Narver and Slater (1990) see market orientation as an orientation towards the customer, the competitor, and interfunctional coordination. From a higher education standpoint, if the student is taken as the consumer, then student satisfaction becomes the central focus for a market-oriented HEI. Kohli and Jaworski (1990) define the market orientation as intelligence generation, intelligence dissemination and responsiveness. The latter seems somewhat geared towards the context of higher education. Slater (2001) stressed that a market orientation is centred on the needs of the customers and the organisation's aim to satisfy those needs. However, the focus of this study is on the market orientation in organisational culture (i.e. pertaining to staff at all levels) rather than purely from a strategic angle.

Market orientation may vary by degrees between organisations. Kasper (2005. 6) refers to "a scale ranging from being truly market-oriented to not being market-oriented at all". Hence, the market orientation definition is: "the

degree to which an organisation in all its thinking and acting (internally as well as externally) is guided and committed to the factors determining the market behaviour of the organisation itself and its customers" (Kasper 2005. 6). Although market orientation may not be the only source of competitive advantage, Day (1999) suggested that the following may be considered a means by which new information concerning trends in the market may be accessed: creating a spirit of open-mind inquiry; analysing competitors' actions; listening to staff on the front lines; seeking out latent needs; active scanning of the periphery of the market and encouraging continuous experimentation.

If we consider market orientation as a particular direction taken by staff, and chosen by management, then we also need to consider how this direction might impact upon staff values and behaviours, i.e. the organisational culture. By using the six dimensions of Hofstede (1991), Kasper (2005) concludes that market cultures will be more pragmatic than normative (the 6th dimension) with customer needs taking priority above procedures and a strong external focus (on competition). Day (1999. 6), Cameron and Quinn (1999) confirm the need for an externally focussed culture as part of a market orientation. Hurley and Hult (1998. 45) found a strong link between market orientation and innovation: "A market- and learning-oriented culture, along with other factors, promotes receptivity to new ideas and innovations as part of the organisation's culture (innovativeness)".

Kumar et al. (2011) examined the market orientation and its effects within 261 companies. They found that market orientation has a positive effect on business performance in both the short and the long run, including a lift in sales and profit. More interestingly, this advantage was more sustained for firms that developed a market orientation earlier than others. Kirca et al. (2009) suggest that national culture has a role in the extent of market orientation in organisations. They used Schwartz's cultural value dimensions to propose that national culture affects the internalization of market-oriented values and norms.

With these issues for market orientation in general, we now turn to the specific context of our study: market orientation in a higher education institution.

Market orientation in higher education

Not all organisations develop a competitive, arguably consumerist approach with detriment to history and traditions (Chandler 2011). According to Meadmore (1998), in Australia certain Higher Education Institutions are using their history

and traditions as a means of achieving a niche, although, of course, this applies much more to the elite universities rather than those lower in the rankings and hierarchy.

Higher education institutions are seeking equilibrium between external demands and the values and needs of the members. Changes in the strategy and structure of universities and colleges are often influenced by various external and internal forces. Merger, as one of the most radical form of institutional reorganisation, is often the response of the institution to such forces (Chafee–Tierney 1988). According to Hemsley-Brown and Oplatka (2010), the marketing of higher education institutions is centred upon relationship marketing. The student may be perceived as the customer and the culture may be considered student-driven. However, when considering market orientation (MO) as a concept, the higher education institution needs to take into account the following dimensions: customer orientation, competitive orientation and interfunctional orientation (Slater–Narver 1994; Oplatka–Hemsley-Brown 2007).

Higher education in Hungary has been experiencing many change drivers, steering many HEIs towards greater market orientation. Day (1999. 9) claimed that the climate of market instability and fierce competition have led to the increased need for a market orientation for all organisations. The change drivers in both public and private organisations are often cited as: globalisation, economic rationalism and information technology (Burke–MacKenzie 2002; Weber–Weber 2001). In Hungarian higher education, Business Faculties or Business Schools of universities and colleges are left with significantly less income from the government and with less student applying for their programmes, which are now almost all tuition fee based. Initially, the enrolment statistics dropped by 50% for applicants to business programmes, but these figures crept back up to those before the change over the following two years.

The School has the advantage of having the reputation of the most practice-oriented business school on the Hungarian market. On a strategic level the practice-orientation of the courses, the further strengthening of corporate collaborations and projects, the fundraising for the formerly non-existent corporate scholarships for students have all been taken on board by the management of the school. But the question, for which this paper also seeks the answer, remains: how much are the subcultures of the Budapest Business School in support of the much-needed market orientation, and to what extent have they changed between 2011 and 2016.

Cultural complexity in higher education

The concept of a homogenous organisational culture is referred to as the unified or 'unitarist' perspective which allows the classification of organisation culture as in the case of Handy (1993) with the four culture types: task, power, people and role-oriented cultures or Hofstede (1980) with an organisation having a role, achievement, power or support culture. However, the larger and more complex an organisation becomes, the less likelihood there is of a monolithic culture with all members of the organisation ascribing to the same values. Kuh and Whitt (1988. 27) highlight this point in the context of higher education: "the 'small homogenous society' analogue… is surely strained when applied to many contemporary institutions of higher education". Moreover, Bowen and Schuster (1986) found that members of different disciplines showed different values, attitudes and personal characteristics.

Bergquist and Pawlak (2008) consider six types of organisational cultures in higher education: collegial, managerial, developmental, advocacy, virtual and tangible. At a first glance, this may appear to be yet another of many typologies of organisational cultures taken from a unitarist perspective, however Bergquist and Pawlack (2008. 7) are quick to point out that "although most colleges and universities…tend to embrace or exemplify one of the six cultures, the other five cultures are always present and interact with the dominant culture". Likewise, Cameron and Quinn (1999) in the development of the Organisational Culture Assessment Instrument (OCAI), based on the Competing Values Framework, maintain the assumption that more than one culture may exist within an organisation at any given time.

Subcultures are more likely to develop in bureaucratic, larger, or more complex organisations since these organisations are more likely to encompass a variety of functions and technologies (Trice–Beyer 1993). With a variety of functions and technologies, professional groups may appear. Bokor (2000) found that subcultures were identified according to technicians (profession culture), customer-oriented parties (market culture), business-oriented parties (return culture) and a subculture of employees referred to as 'small labourers'. Through these typologies it can be seen how the different interactions and values resulted in subculture formation.

Table 1. Subcultures in the development process

	Return Culture	**Market Culture**	**Profession Culture**	**Small Labourers**
Members	Product Managers (Top Managers [to some extent]; potentially: Finance)	Sales (potentially: Customer Care)	Technicians (to some extent: the Lawyer)	Invoicing, MIRA, Lawyer, Customer Care, Finance
Self portrait	The conducting midfielders	The magic forwards delivering goals	Libero, defender serving the others	Secret talents on the bench
Perception of others	Skilful gamblers	Over occupied little star alike	Overloaded geniuses somewhere in the building	Ambitious ballasts
Internal – external focus	Intermediate internal	Strong external (customers)	Intermediate external (suppliers)	Miscellaneous (potentially internal)
Attitude towards risk	Intermediate	Risk taker	Risk avoider	Risk avoider
Time orientation	Intermediate	Shorter	Longer	Intermediate-longer
Professional – task orientation	Task orientation	Task orientation	Professional orientation	Task orientation (some professional)
Professional – business orientation	Business	More business than professional	Professional	Professional

Source: Bokor (2000. 7)

It can be seen from Table 1 that the orientations and attitudes presented vary according to each subculture and, as such, can be seen as either the cause or effect of the subcultures, depending upon the perspective taken of the culture itself: it could be argued that these classifications occur as each person adopts this orientation upon becoming a member of the subculture, in which case it is a process of acculturation, alternatively it could be seen that cultures formed according to staff interacting and finding shared values, orientation, attitudes and so on.

Becher (1987) saw organisational cultures in higher education as a number of subcultures based upon the discipline, with their own boundaries and conflict ensuing through competing interests. Becher (1987) classified the academic cultures into four categories: hard, pure, soft and applied knowledge. A pecking order ensued, based upon these types (with the basis being hard-pure, soft-pure, hard-applied and soft-applied). This complexity signified by the existence of multi-cultural academic institutions is further amplified when Bergquist (1992) claims that the borders between the disciplines and specialisations in HEIs are vehemently upheld to such an extent that in many cases only the administrative staff and librarians are allowed to be interdisciplinary. These borders also create a feeling of ownership concerning symbolic territories (spheres of ownership) and present a significant potential for resistance to change, especially when a proposed change may threaten these perceived territories (Kashner 1990). Thus, it seems that whether a unicultural or multicultural perspective is adopted, the upshot for HEIs is a tendency towards resistance to change.

Tierney (1988) asserts there may be numerous subcultures in a university or college and the basis could be: managerial; discipline-based faculty groups; professional staff; social groups of faculty and students; peer groups (by special interest or physical proximity); and location (offices arranged by discipline).

Schein (1988) entertains the possibility of an organisation's members having a combination of both shared and diverse values through members having both pivotal and peripheral values. Pivotal values are central to an organisation's functioning; members are required to adopt and adhere to the behavioural norms derived from these values and are typically rejected from the organisation if they do not (Chatman 1991; O'Reilly–Chatman 1996). Peripheral values are desirable but are not believed by members to be essential to an organisation's functioning. Members are encouraged to accept peripheral values, but can reject them and still fully function as members, as in higher education faculty members share common pivotal values concerning issues such as learning, but may diverge when concerned with values associated with their respective disciplines. Becher (1987) reinforces this when pointing out that the academic profession has many more similarities than differences and that all faculty members share a common view of the world and scholarship. Kuh and Whitt (1988) indicate that the shared (and strongly held) values of the academic profession are: the main responsibility is to be learned and convey this

learning (through teaching, inquiry and publication); autonomy in the conduct of work; and collegiality (e.g. mutual support).

Martin and Siehl (1983) developed a typology of organisational subcultures as follows: enhancing; orthogonal; and counter cultures. Within the context of Schein's (1988) pivotal and peripheral values, this typology clarifies how subcultures can co-exist in an organisation without detracting from the strength of the overall culture. This first type is called Enhancing subcultures. In this case, members adhere to dominant organisational culture values enthusiastically. They agree with and care about both pivotal and peripheral values, consistent with the larger organisation's core values, resulting in intense commitment to particular peripheral values that are consistent with those of the overarching culture. The second type is Orthogonal subcultures. Members embrace the dominant cultures' values, but also hold their own set of distinct, but not conflicting, values. This does not mean that orthogonal subcultures should be classed as countercultures, as members embrace the pivotal organisational values but, simultaneously, hold values that are peripheral to those of the overarching culture. The third type is Counter cultures. Members disagree with the core values of the dominant culture and hold values that directly conflict with those core values.

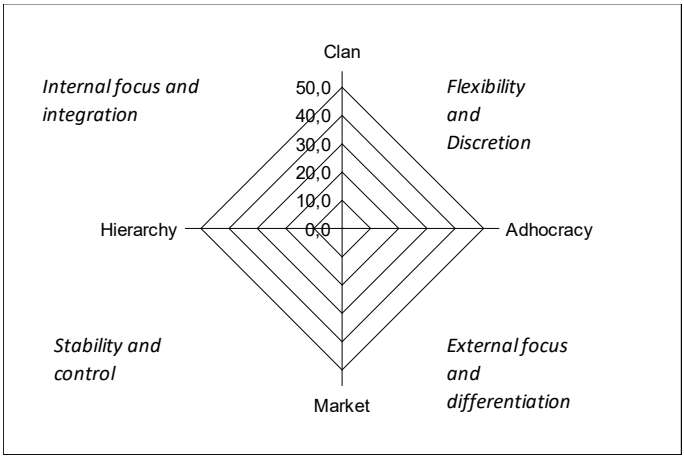
These typologies have been found to exist in higher education. Martin and Siehl (1983. 53) discovered an orthogonal subculture in faculty as they "simultaneously accept the core values of the (institution) and a separate, non-conflicting set of values particular to themselves". Whilst countercultures may be a rarity in higher education, that does not mean there is no opposition to the dominant culture: according to Kuh and Whitt (1988. 50), "conforming or orthogonal enclaves, such as the faculty senate, may challenge aspects of the dominant culture". According to Boisnier and Chatman (2003. 92), the "members' degree of conformity to peripheral norms can vary considerably". Thus, it seems that subcultures may vary in the extent to which they are related to the dominant organisational culture. The following section considers the cultural aspect of mergers with reference to higher education.

Method

Our explorative study's research questions tackle two aspects, with the latter building upon the findings of the former: what subcultures can be identified in the organisation and then, for each subculture, what is the dominant market orientation.

After considering the available tools, the organisational culture was measured by using the Organisational Culture Assessment Instrument (OCAI), which is based on the Competing Values Framework (CVF). This Framework was chosen for a number of reasons. Firstly, its original design and implementation by Cameron and Quinn (1999) was in an educational context and it has since been used to analyse the organisational cultures in many HEIs around the world (e.g. Kleijnen et al. 2009; Ferreira–Hill 2008). Secondly, the model allows for a number of different cultural types to exist simultaneously within one organisation, which seems more suited to the fragmentary nature of HEIs. Thirdly, this framework has already been used in Hungary although not for a higher education institution (Gaál et al. 2010) and finally, the instrument is intended to show current perceptions in comparison with preferences in the organisation giving an additional dimension of not only values but perceptions of the organisation as well.

The CVF was developed by Quinn and Rohrbaugh (1983) as a means of describing the effectiveness of organisations along dimensions with two bipolar axes, one indicating the range from control to flexibility and the other with a focus on the range from external to internal. Based upon this framework, the OCAI was developed with four quadrants indicating four cultural orientations. With this model, it is not the question of whether the culture can only be one of the four, but rather a question of which orientation is more dominant (Figure 1).



Source: Cameron–Quinn (1999)

Figure 1. The four culture orientations and dimensions of the OCAI

The clan culture is characterised by internal cohesiveness with shared values, participation and collectivism. It focuses on internal problems and concerns of individuals and perpetual employment with an informal approach to work characterised by flexibility and discretion. The adhocracy culture uses ad hoc approaches to solve problems incurred from the surrounding environment with flexibility and discretion. This combined with the external focus and differentiation indicates a willingness to take risks, creativity and innovation. Independence and freedom are highly respected. The market culture has a distinctly external focus with an orientation to the market and maintaining or expanding current market share. Competition is emphasised but within the boundaries of stability and control as with the setting of ambitious, quantifiable goals. The hierarchy culture has an internal focus with centralized decision-making and attention to stability and control through formalized structures and rigidity with policies, instructions and procedures. In this type of culture, conformity is encouraged.

The OCAI results in a culture profile which may be used to illustrate the following: the dominant culture; the strength of the dominant culture (the amount of points given); discrepancy between present and preferred culture; the congruency of the six features (dominant characteristics, organizational leadership, management of employees, organization glue, strategic emphases, criteria of success); Evaluation of the culture profile with the average for the sector and a comparison with average tendencies.

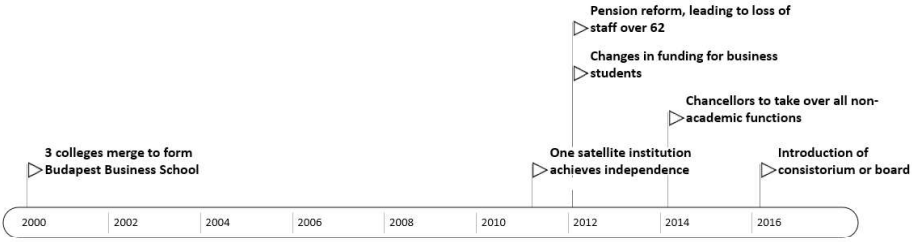
By using the Organisational Culture Assessment Instrument (OCAI) and the scores given by participants in relation to the preferred values within the organisation, a hierarchical cluster analysis was undertaken by using Ward's (1963) method as a means of attempting to identify potential subcultures according to common values and perceptions of the organisation. This method has been used previously as a means of identifying subcultures (Hofstede 1998; Jermier et al. 1991). This way, each participant is grouped into clusters based on the similarity of each score, and by using the SPSS software, this results in a dendrogram (tree diagram). As referred to by Hofstede (1998), the method for deciding which part of the dendrogram to select as an indication of groupings in the organisation i.e. the optimal number of splits, is similar to that of a scree analysis used in factor analysis, in that large jumps detected in the dendrogram from one cluster to another are the limiting factor after which groupings are not considered. If no jumps were found, then homogeneity could be considered prevalent in the

organisation. However, numerous small clusters with a significant number of outliers creating their own clusters would indicate a high level of fragmentation within the organisational culture. Hofstede (1998) assumed that these clusters were subcultures in the organisation and, assuming that interaction has taken place between respondents within this case study of a matrix organisation – albeit to varying extents -, these value groupings can also be considered subcultures.

To assess the market orientation in this case study, the Market Orientation Inventory (Hemsley–Brown-Oplatka 2010) was used. This questionnaire has been developed for a higher education setting and considers three dimensions which together form the market orientation in a higher education institution: customer orientation, competitor orientation and interfunctional orientation. This instrument has been tested in a number of countries and has reliability with Cronbach's scores of more than 0.8 (Hemsley–Brown-Oplatka 2010. 211).

Data

Our research focuses upon an institution that has already undergone some changes, with a merger in 2000 (see Figure 2). The HEI initially consisted of three separate colleges. The three colleges have remained in their locations after the merger, although the structure was changed from a hierarchical to a matrix one as a means of encouraging greater cooperation and contact across the three colleges. As shown in Figure 2, there have been a range of external and internal changes – the majority of which have occurred after our study in 2011.



Source: author's own design

Figure 2. Key changes for the Budapest Business School

A significant internal change occurred in 2013 at the BBS when a large number of employees had to retire due to changes in the way pensions were handled. At some faculties (colleges) of the BBS the rate of retirement of lecturers

over age 60 was as high as 30% of the total teaching staff. In the face of these changes uncertainty has grown higher than ever before.

Our initial study in 2011 took place before all these changes and we seek to discover how subcultures and their market orientations have evolved in the face of these external and internal developments through comparison with our second study in 2016.

For the 2011 study, from a total possible sample of 959 employees from all levels of the organisation, 369 completed questionnaires were received (38.5%), from which 3.5% were either incomplete or invalid due to miscalculations in the OCAI, giving a final sample of 35% (334 employees). Our study in 2016 resulted in a final sample of 348 employees from a total of 898 employees in the organisation.

Findings

Due to the size and complexity of the dendrogram, it has been omitted from this paper. It was clear from the dendrogram that significant jumps occurred from the point beyond which five clusters were found and these can be considered subcultures. Two respondents were outliers which resulted in two clusters with only one respondent in each. These were extracted from the study as this did not display a significant level of fragmentation on an individual basis with only two cases and, as subcultures may be defined as requiring interaction between members, subcultures containing one individual could not exist. The summary of the key characteristics of subcultures for 2011 and 2016 can be seen in Table 2 and Table 3.

Table 2. Summary of subcultures found in 2011

Dominant characteristic	Subculture				
	1	2	3	4	5
Size (number of persons)	140	84	34	30	44
Dominant culture type	Market	Clan	Hierarchy	Strong Hierarchy	Strong Clan
Perceived organisational dominant culture type	Hierarchy	Hierarchy	Hierarchy	Hierarchy	Clan
Position	Lecturer	Lecturer	Office staff	Office staff	Lecturer
Function (teaching/admin/ unskilled/management)	Teaching	Teaching	Admin	Admin	Admin
Age (years)	50-62	50-62	50-62	50-62	50-62
Tenure (years)	< 5, and 10-20	10-20	10-20	Less than 5	5-10

Source: author's own design

Table 3. Summary of subcultures found in 2016

Dominant characteristic	Subculture					
	1	**2**	**3**	**4**	**5**	**6**
Size (number of persons)	142	62	61	24	36	21
Dominant culture type	Clan	Clan	Hierarchy	Strong Clan	Adhocracy	Hierarchy
Perceived organisational dominant culture type	Hierarchy	Hierarchy	Hierarchy	Clan	Hierarchy	Hierarchy
Function (teaching/ admin/ unskilled/ management)	Teaching, admin, management	Teaching, management	Admin	Admin	Teaching	Admin
Gender	Male		Female			
Tenure	3+	<1, 10+	<1		1-5, 10+	<5

Source: author's own design

Upon finding the subcultural types, the market orientations were assessed for each subculture, as well as for the organisation as a whole. By using the Market Orientation Inventory (MOI) questionnaire for higher education institutions (Hemsley–Brown-Oplatka 2010), the findings can be found in Table 4 and Table 5.

Table 4. Market orientation of the five subcultures in 2011

	Market		Clan		Hierarchy		Strong hierarchy		Strong clan		BGE	
	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x
Student orientation	**0.71**	1.21	0.53	1.35	**0.92**	1.29	**0.74**	1.26	0.85	1.08	**0.71**	1.24
Competition orientation*	0.61	1.05	0.34	1.21	0.56	1.13	0.47	1.09	0.49	1.10	0.51	1.11
Co-operative orientation	0.64	1.03	**0.55**	1.14	0.79	1.00	0.56	0.94	**0.86**	0.94	0.65	1.04

*Note: although none of the subcultures have a dominant competition orientation, the market subculture has the highest figure for this orientation

Source: author's own design

Table 5. Market orientation of the six subcultures in 2016

	Hierarchy		Strong Clan		Market		Clan		Market-hierarchy		Adhocracy		BGE	
	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x	$\bar{x}$	s_x
Student orientation	0.60	1.35	**1.19**	1.16	0.55	1.31	0.31	1.38	**1.18**	1.04	0.62	1.40	0.60	1.31
Competition orientation	0.54	1.38	0.75	1.33	0.38	1.32	0.34	1.21	0.75	1.14	0.46	1.16	0.46	1.28
Co-operative orientation	**1.00**	1.02	1.28	1.23	**0.61**	1.09	**0.68**	1.10	0.98	0.92	**0.71**	1.15	**0.77**	1.09

Source: author's own design

Discussion

In our two snapshots of the organisation, we can see noticeable changes in the organisation. Bearing in mind our findings in the literature, there seems to be more divergences in some areas, such as the emergence of a new adhocracy subculture, which is especially significant as this type did not exist in our earlier study. Furthermore, although there doesn't seem to be any convergence, there are some subcultures that appear to be a repetition of the status quo, with the same types reoccurring. However, due to significant changes in the staffing over the period of the study, we cannot say that the same members of subcultures in 2011 'dug their heels in' and stuck to the same values and beliefs over a 5-year period, despite internal and external drives to change.

The variance figures have been included to give extra depth to our findings. However, there is a caveat within any culture study: it is conceivable that any 'outlier' with strong values above the rest, is actually the role-model or informal leader of the subculture and ignoring any figures in relation to a role-model or leader would also skew the results. It seems counterintuitive, but the outliers and variances may not be a distortion from the norm, but the norms and values that members are aiming for. To examine the variance further, we conducted box plots for each item in the instrument and found that in all cases, the high variance was not due to a majority of members differing from one another, but rather that in each case, there were two or three outliers. Furthermore, the outliers were not 'repeat offenders' as it seems that, in each subculture, there were only occasional divergences from the group, for the members.

In the 2011 study, the clan subcultures both had a co-operation student orientation, which is in line with the characteristics deigned to be associated with

this culture type (Cameron–Quinn 1999). Likewise, the market-oriented culture has the highest competitive orientation of all five subcultures in 2011 as it should have both an external focus and a tendency towards stability and control. This is also the case for the hierarchy culture which has to solve students' problems and administration on a daily basis, and has a correspondingly dominant student orientation. Despite these findings, the link between culture type and market orientation was not found to be statistically significant.

Our findings for the 2016 study destroy any preconceptions of links between a specific organisational subculture and a specific orientation. If we compare tables 4 and 5 overall, three out of five subcultures had a student orientation and two a cooperation orientation. There has been a noticeable shift as four out of six subcultures now have a cooperation orientation and two have a student orientation. This shift from a student orientation to a cooperation orientation could result from the impact of a range of internal and external changes increasing the need for working together. This finding indicates that the core belief of the majority of subcultures has shifted from an emphasis on collecting and processing information related to customer preferences, to a belief in creating superior value for target customers through the integration and coordination of the HEI's resources. This shift is also related to activities of the top management as, due to the changes mentioned earlier in this paper, there is a greater stress on the importance of attracting student-customers and sustaining recruitment not only falling under the responsibility of faculty management, but rather under the responsibility of everyone in the university community.

Conclusions

The findings of this case study have raised a number of questions which may require further research. They also highlighted some of the key issues to be taken into consideration in further research regarding cultures in higher education institutions.

The case study underscores a key issue in organisational development of aligning organisational subcultures in large organisations as indicated by Hopkins et al. (2005). Following management activities, there has been a clear shift of market orientation and the increased interfunctional orientation could arguably show greater convergence of subcultures in the future. Further research is planned with another step of the repeated cross-section study in 2021, to further examine this aspect.

Furthermore, the fact that the merger has not resulted in a single common culture after more than 10 years seems to point to a certain inevitability of subcultures continuing to survive in higher education institutions despite transformation efforts. Regarding acculturation in merged organisations (Heidrich–Chandler 2011), it seems that it may have taken place across physical boundaries with subcultures forming across all locations for both studies in 2011 and 2016 and this may be the result of the matrix structure and stress by top management on collaboration and cooperation across faculties.

Both internally (clan, hierarchy) and externally focussed (market, adhocracy) subcultures have orientations towards student and co-operation. This calls into question, firstly, whether the student is perceived as an internal or external element of the organisation. Secondly, it indicates that externally-focussed subcultures may also be oriented towards co-operation to a greater extent than other aspects associated with an external focus, such as competition. Further research would be needed to confirm this to be the case generally and if this finding is also applicable beyond a higher education setting.

Finally, this study builds upon the hierarchical cluster analysis used to identify subcultures and presents a methodology for making a direct comparison between the organisation and subcultures as a means of discovering and contrasting their adherence to the organisation values and perceptions over time.

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The differentiation and definition of money and capital markets

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The purpose of the article is to create a definition for money and capital markets, relying on previous theories and solutions used in provisions of law. In specialised literature the most usual division of financial markets entails splitting them into money markets and capital markets. The question is along which criteria the two can and should be divided beyond the usual pattern (time factor), and where will such a division have significance afterwards. After answering these questions, we aim to provide definitions that can be consistently applied in practice, in specialised literature and also in the legislative process.

Keywords: money market, capital market, financial market, definitions.
JEL codes: A11, G15, O16.

Introduction

The financial market is a platform that brings together the needs of sellers and buyers for the trading of financial instruments, which facilitates one particular form of financing, helping investors and savers find each other. Traditionally, we split the financial market into money markets and capital markets. The reason for distinguishing the two is that the funding of the economy is based on tradition and differs in individual countries/cultures, and therefore in some places, it is achieved through the intermediation of commercial banks (typically using loans with shorter tenors), while in others, it is done via funding through the stock exchange, in the form of securities (with typically longer tenors).

Financial regulation is increasingly drafted in an international, cross-border format. The concept of single financial regulation is also gaining ground within the European Union's legislative authority. The tightening of financial regulation, occurring as a result of the recent crisis, manifests itself mostly as a shift towards the maximum harmonisation guidelines and decrees that become directly effective, with both aiming to promote a single regulation. For the purpose of filling the gap in professional literature and supplementing regulations, it is especially important

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to create neutral notions that are resting on the EU's legal foundations and are void of any international characteristics.

However, we have noticed that the notions covering two segments of the financial markets, namely *money market* and *capital market* are not unequivocally defined. They are being referred to in provisions of law and in professional literature; however, no actual single definition exists for these markets. Our article looks into the traits along which money and capital markets are split, highlighting the distinction criteria, as well as the ways of use of the two notions. The purpose of the current article is to create the definitions for money market and capital market, relying on previous theories and solutions used in provisions of law.

Research methodology

The present article aims to highlight the traditional differences between money and capital markets and, based on these, to offer potential definitions for the two concepts.

First, we introduce the definitions available at specialised literature, textbook and legislative level, reflecting on the evolution of definitions in time. The article also highlights theories that are based on the characteristics of traded products, including half-way solutions combining the time and product aspects. The role of intermediary institutions, the scope of users and the breakdown of markets by liquidity are also considered to ensure that the characteristics that distinguish individual markets are also described, thus supporting the creation of new definitions that can be used more widely.

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The concepts of money and capital markets in financial literature

The classical grouping of financial markets (Table 1) offers the opportunity to get to know markets relatively thoroughly.

Table 1. The grouping of financial markets

Criteria	Market types
time factor	money market and capital market
issuing	open and closed market
function of the market	primary and secondary market
due date of transactions	spot and forward market
based on the nature of the financial instrument	securities market can be highlighted

Source: author's own design based on Kerekes et al. (1998)

Beyond the above mentioned, there are numerous further grouping criteria, such as the degree of concentration, the level of organisation, the intentions of stakeholders, or even their quality (Kerekes et al. 1998).

The crafting of a definition cannot be self-serving or, in a branch of science that's developing fast, superfluous, owing to traditions. Consequently, there is a need for a definition that supports the logical structure, development and embeddedness of this branch of science. We look at the definitions of money market and capital market from this aspect – definitions created, mainly due to traditions, using the *time factor*. In financial literature, the timescale of using funding is widely used as a distinguishing factor. Typically, we can speak of short-term funding, which is up to one year, and medium-term (2–5 or 7 years) or long-term (longer than 5 or 7 years) financing. Splitting the financial market in two, along a subjectively defined timescale, is only justified if we see this timescale as a crucial component.

Let's take the classification of commercially traded receivables by *maturity*: "The market of short-term debt instruments (i.e. those with a maturity of up to one year) is called money market, while the market of long-term debt instruments and shares is defined as capital market" (Bodie 2011. 46). Pálinkó and Szabó (2006. 40) give a practically identical definition, as follows: "Money market covers short-term transactions with durations of a mere few hours to one year… while capital market focuses on deals with longer maturities". Frederic S. Mishkin (2010. 43) defines money market and capital market as follows: "Money market is a financial market that trades in short-term debt instruments only (those with maturities of up to 1 year), while capital market is the market that trades in long-term debt and equity instruments (with maturities of longer than 1 year)".

The distribution along the time factor is widely used in specialised literature (Zucchy 2016; Jaksity 2004; Bod 2001; Bailey 2005; Haan et al. 2015; Kohn 2007). Authors tried to resolve the over-mystification of duration by considering the time factor a characteristic of the product type. However, the half-way, time/product combination principle is not exact enough, and does not offer the possibility of moving forward. The differentiation by subjective maturity (the magic one year) does not distinguish sufficiently the two markets, as there are/may be short-term products and securities that would rather belong to capital markets, if assessed solely on the nature of the product.

This collision results from the difference between individual distinction criteria, meaning that some players try and define the concept of capital market on a product basis (securities), while others along the time horizon (short-term). However, existing definitions either do not clarify the contradiction between the two (e.g. short-term securities), or regard them as exceptions to the rule, that define the rule.

Markets are sometimes distinguished by the *type of receivables* or the *subject of trading*; such as the securities market or the market of other financial instruments. "Liquid cash that can be directly swapped for a product or service; i.e. money itself is the subject of money markets, where demand and supply are not necessarily linked through the act of sale/purchase" (Solt–Kiss 2007. 187). This approach is a subset within the maturity-based approach, as definitions contain the short period remaining until maturity (e.g. Bailey 2005), or in some places duration is set as up to one year (e.g. Haan et al. 2015).

Bailey (2005) uses a *product and time-based* approach, and says that the purpose of money markets is to create a trading platform for securities (3 or 6-month government bonds) or facilitate other short-term loans. As a result of such securities being traded on the market, the holder of the money market instrument does not typically have to wait until the end of the contract's full tenor; i.e. execution by the issuer.

The need to go beyond the time aspect was also pointed out by András Vígvári (2008. 177–178): "The conventional approach of looking at maturities was the right one until state regulations clearly distinguished the institutions of indirect and direct financing, and therefore also their markets, and the liquidity of financial markets wasn't overly high". In other words, with the development of financial markets, globalisation and the mixing of financial cultures and products it entails, the definition based on subjective timescales can no longer be sustained.

One solution for going beyond the maturity-based approach was to use the *types and financing methods of intermediary institutions* as key traits in the definition, instead of the timescale. This approach considers capital markets to be part of money markets. Iklódi (2005) splits the capital market into three parts: the market of capital instruments, the market of goods and the market of money and securities. The economic players are split into savers and those looking for resources/capital, the two being connected by the financial intermediary system, which helps them find each other. The scene of this connection can also be split into two parts: the money market, which, with the co-operation of banks, turns deposits into loans, and the capital market with the stock exchange as one of its constituents (Iklódi 2005).

The separation by *volume* and *risk-taking* might serve as a guideline to investors; however, it does not draw the market demarcation line with due precision. "Capital markets spread the ownership of capital or certain risky investments between numerous investors, thus allowing players to take on much larger investments and/or risks than what individual owners could tolerate" (Samuelson–Nordhaus 2005.189). Mishkin (2010. 43) says that "the trading of money market securities is typically conducted in a wider circle than that of long-term securities, and they are also typically more liquid". The author notes that the price fluctuation of short-term papers is smaller than that of long-term papers, and thus it is safer to invest into these. Therefore, companies and financial institutions use this (safe money) market to earn interest on superfluous but only temporarily available resources. At the same time, capital market securities are typically held by financial intermediaries, e.g. insurance companies and pension funds, as they have less uncertainty about the future availability of resources.

Gábler's (2008) definition unites various considerations and says that money market is basically the market of short-term (up to 1 year), liquid, fixed-interest, low-risk, easy-to-trade credit instruments. As such instruments are typically traded in bulk, individual investors may only access them in the form of money market funds. Money markets typically mostly serve the purpose of bridging the time gap between the realisation of the income and expenditure items of companies and the state.

It is clear that these approaches are based on customs and do not look into why it is even necessary to define and separate money and capital markets. Some argue that we should generally use the term *money market*, and if required, we can specify individual transactions after the products, keeping in mind the objective in hand.

By applying a more complex approach, we can state that the money market is the scene of money exchange, and the entirety of players contributing to the intermediation of money exchange (individuals and institutions), financial means, mechanisms, as well as provisions of law, regulations and customary laws. The primary function of financial intermediation is the conveying of free liquid cash generated in the economy (savings, in a broader sense of the word) and capital to users (Losoncz–Farkas 2011).

The definitions of money and capital markets from aspects such as time, liquidity, risk or product characteristics, do not offer additional information or investor protection guidelines to investors; however, it must be noted that they may be suitable for differentiating between the banking activities pursued by investors, which may serve as a logical starting point.

The concepts of money and capital market in the legislation

Although we do use the terms money market and capital market with natural ease in provisions of law and contracts, the underlying content is interpreted individually by each player, because, at present, no definitions exist for these markets in financial legislation. These concepts have not been defined in the EU's, Hungary's or the USA's legal systems either. In some cases, the legal approach also shows a certain degree of tautology in this respect when Section 17, Article 4 of the MiFID II directive (EP 2014), or Act No. CXX of 2001 on capital markets in Hungary defines the *money market instrument* as an instrument that is traded on the money market, without defining the exact nature of the money market. In addition, there is also a certain degree of contradiction in the sense that the law defines money market instruments as a subset of financial instruments, which, by the way, are traded on the capital market. Nevertheless, it can be assumed that here the legislator wishes to point out the unsecured and short-term nature of the product, instead of trying to define a market differentiator trait.

It must be noted that the general contracting terms and conditions of financial institutions also use the concepts of money and capital markets. However, the specialists who draft such general contracting terms and conditions have not attempted the precise description and definition of such markets either.

EU institutions also use these concepts without defining their underlying content. For example, according to the position paper issued by the European Parliament on 19 January 2016 (EP 2016), the capital market union (CMU) could be

an effective solution for creating a single, cross-border capital market. Amongst the underlying reasons, the document mentions that the capital market of the European Union remains dispersed, and therefore, the CMU may offer a valuable framework for providing equal access to SMEs to funding EU-wide, as well as for promoting the creation of innovative platforms for market-based financing. It also notes that the CMU creates the opportunity to strengthen the capital markets of the EU with a view to boosting their ability to supplement financing by banks. The objective of the capital market union is to deepen and even more tightly integrate the capital markets of the EU member states, where the legislator can set the content behind such objectives through the definition of EU pillars for individual capital markets.

It is to be noted that the concepts of money market and capital market are used at all levels of the EU legislation without being defined. The *Treaty on the Functioning of the European Union* (EU 2012) also uses these concepts, as well as the regulations specific to individual sectors.

Due to the inability to arrive at a definition of these concepts, in specific provisions of law, legislators bypassed the issue by enlisting the market components (e.g. products) required in that specific piece of legislation to achieve its purpose. However, such components were mostly mentioned as examples, even though the full list could be replaced by a single, unified definition.

The differences between money and capital markets from an economic perspective

Traditionally, in continental Europe, money market-based forms of financing are more typical and traditional, while the same is true for capital market financing in the US. The different financial structures prevailing in individual countries determine the typical access path for companies to the various forms of financing. In a different study, it may also be worth looking into how different forms of financing impact growth in different economic cycles. However, for us to be able to discuss economic issues in an effective manner, we need to fine-tune concepts and definitions, and get them generally accepted.

In boom periods legislative bodies are also more relaxed to see an institution, e.g. an investment bank performs more and more activities and sell more and more products "alien to the world of the institution in question', as there are also cost efficiency factors at play. At the same time, world crises and major economic declines yet again raise the rightful worry that can be typically linked to such

periods, that there is a lack of clarity when it comes to products and, ultimately, activity profiles, and such products and activities are not clearly allocated to specific types of institutions. Consequently, it can be rightfully argued that the notions of money market and capital market should be differentiated.

The distinction between the two concepts also carries statistical relevance, for example, when it comes to the balance of payments. Although the international methodological framework is mainly defined by the balance-of-payments/ statistics manual, yet, the original separation applied by the financial profession can also come in handy when it comes to real economy and financial deals taking place in the economy.

We instinctively identify financial institutions and financial intermediaries with markets, credit institutions with money markets and investment businesses (brokers) with capital markets (Szász 1947). Financial intermediary institutions collect small-value, temporarily available liquid cash from savers, and use them to satisfy the much higher-value financing needs of economic players. Intermediaries perform an efficiency-boosting, quality asset transformation (risk management) and resource-reallocation function between savers and companies to be financed, which gives them an important role on the financial market (Erdős–Mérő 2010).

The distinction of specific markets has significance for defining the concepts prevailing in financial intermediation, and, within that, for identifying the content of operating licences. The activities pursued by institutions on the financial market can be distinguished by the form and characteristics of financing offered by them; i.e. in what form they enjoy the utilisation of certain types of savings. Thus, it is not the target audience that determines the market's identity, but the scope of activity of the institution offering the service. The previous objective of the law, i.e. the classical institutional distinction could only be achieved through the precise allocation of activities, meaning that a credit institution can collect deposits or offer a credit facility of cash loan (i.e. perform credit institution or financial activities), while an investment business performs investment services, e.g. is involved in security trading.

At the same time, it is clear to see that no given bank can be present on the market as a money market player and a capital market actor at the same time; i.e. as an entity both offering and using such services. In order to be able to define the market, it is necessary to start out from the products and the provision of services, and the operating licence sets the framework for these. When defining

markets, looking at the services used by the institution as a starting point may trigger us to draw the wrong conclusions, as banks may, on occasion, acquire the resources required for performing their banking activities from the capital market. Accordingly, the scope of players emerging on the demand side does not offer good guidance for the distinction of the two different markets, as households, the state and the representatives of the non-financial sector also emerge on the demand side of individual markets.

Having established the importance of the supply side, it can be suspected that it may guide the process of market definition. However, in terms of the provision of services and the granting of operating licences it is also important to stipulate, right from the start, that there are the so-called universal 'banks', whose operating licences are not necessarily determined by the company's form of association or name under financial law, or even the possession of licences for activities that are classically linked to the name of such an institution. Legal stipulations also increasingly depart from the concept of linking clear-cut definitions of institutions to clear-cut definitions of activities, as the development of market requirements and economic rationales (cost efficiency) demand a certain degree of interchangeability between activities and institutions.

It's worth looking into whether the distinction between money market and capital market has significance from an investor and customer protection point of view as well. In the case of a universal bank, the client faces a specific institution, where it can benefit from multiple services, meaning that in his/her capacity as a buyer, the client emerges on different markets. Therefore, it is a rightful requirement from customers to have a clear picture on how they can settle any losses resulting from the services used by him/her or from issues faced by its business partner. To be able to make a decision based on a thorough risk assessment, the customer must also see how much the service they are using is 'protected', i.e. whether they can get any 'external' indemnification or damages, should certain events take place. The type of the institution itself does not clearly define the guarantees linked to the deals closed with the institution or the insurance system, as it always depends on the type of the service in hand provided by the institution; i.e. on which market the deal is concluded. We only briefly refer to customer and investor protection aspects because, on the one hand, the identification of the guarantee from the market's aspect does not offer the true picture, as not all services are offered. On the other hand, this aspect is only

relevant in relationships between universal banks and non-financial institutional investors and customers[3], e.g. in relationship(s) between natural persons, but not for institutional contracting parties, and therefore its usage for solely market-based distinction would be strongly misleading.

The scope and content of the operating licence can truly show the character of a given market through the services and instruments offered by the institution. Accordingly, the provision of financial services takes place on the money market, or, looking at it the other way, it is on the money market that financial services are being provided and such services are used. According to Act No. CCXXVII of 2013 on Credit Institutions and Financial Enterprises, financial services include the provision of credit and cash loans, financial leasing, deposit collection, the acceptance from the public of other repayable financial instruments, money exchange or the provision of payment services, whose underlying subject is cash or cash-substituting means of payment. This is also significant because there are services, e.g. custody services that can occur in the activity range of both credit institutions and investment businesses; however, their subjects are different (cash vs. financial instrument).

The subject of investment service activities is financial instruments, and therefore such services, as the taking and execution of orders, portfolio management or investment advice, may only be performed by institutions with a licence to perform investment services. Investment businesses and institutions with a licence to offer investment services provide such services on capital markets. Looking at it the other way, the capital market is the place where the provision of investment services takes place.

In summary, the market turnover that can be established from the above does not serve as a direct starting point or a distinction criterion from a consumer protection aspect, it does not offer guidance in terms of transparency or profitability, and it's not possible to draw direct conclusions from it regarding risk. It is, however, the place where activities and services detailed in the operating licence are performed/provided, where demand and supply for the subject of the service also occur.

In a nutshell, the first reading of economic and legal approaches may suggest the instinctive solution of associating credit institutions with money markets and investment businesses (brokers) with capital markets. However, in respect of the

[3] Customers not excluded from the indemnification scheme of the National Deposit Insurance Fund and the Investor Protection Fund in Hungary.

licensing of individual financial activities, we have come to a more sophisticated solution by identifying a clear demarcation line. The distinction criteria and gaps between markets are presented in Table 2.

Table 2. Distinction criteria for money and capital markets

Criteria	Money market	Capital market
Role	Serves the purpose of compliance with working capital requirements in the economy, and it has a role in ensuring sufficient liquidity for banks	It serves an investment purpose with a view to achieving an increase in capital
The content of interest (rate)	The money market interest rate is determined by the demand for and supply of money; i.e. it represents the value of money. Therefore, in any given country, the short-term interest rate is the indicator of monetary and banking conditions.	The operation of the capital market largely depends on the conditions characteristic of money markets. The short-term interest rate affects longer-term interest rates characteristic of capital markets.
Key institutional players	Central bank, commercial bank, non-financial institutions	Stock exchange, commercial bank and other financial institutions (e.g. insurance company and mortgage bank)
Characteristic of the market	Informal	Formal
Typically traded financial instruments	Draft, cheque, short-term certificates of deposit, treasury bonds, commercial loans, short-term bonds, FX derivatives, interest rate swap transactions, commodity derivatives, loan derivatives)	Shares, bonds (medium or long-term), other long-term securities
Liquidity	Typically high	Relatively low
Risk	Lower risk Investors step on the market with the expectation that liquidity is available, and they can trade on a secure market.	Relatively high risk Objectives include savings and the realisation of medium and long-term investments.
Yield	Lower	Relatively high

Source: authors' own design based on Marmilava (2017), Haan et al. (2009) and O'Sullivan (2003)

In view of the above parameters, we suggest the following definitions:

Money market: *a system of transactions closed in respect of liquid cash or other short-term financial assets typically involving short-term financial obligations (of up to one year), where the purpose of the deals is typically to ensure financing for current operations, short-term profit-making or the management of financial risks in the short run.*

Capital market: *a system of transactions closed in respect of financial assets, including, in particular, securities, derivative deals or financial agreements which typically involve long-term financial obligations, whose objective is to satisfy capital requirements or boost capital.*

These new definitions, on the one hand, identify the product itself and – through the product's unique traits – the characteristics of the market (maturity, risk), and, on the other hand, they define participants on the supply side.

Conclusion

In financial literature, the definitions of money market and capital market are inconsistent, and are characterised by significant deviations and definition gaps, in the spirit of author's freedom. We could not derive a single, consistent definition from the provisions of law prevailing in Hungary, the European Union and in the US either.

The new definitions proposed combine previous approaches; however, it eases the previous practice of erecting a Chinese wall between the two markets based on, for example, the product's features, and uniqueness (one year, risky, etc.).

Due to the clarity and simplicity of the new definitions – which correctly grab the character of the matter, and combine the various classical notions that exist about financial markets without citing categories from corporate law –, they can be easily extended if so required by potential changes in law, and therefore they are put forth for general acceptance.

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Causes and effects of the mismatch between demand and supply on the Romanian labour market[1]

KINGA KEREKES[2] – IUDITA MOLNÁR[3]

The increasing mismatch between demand and supply on the labour market has become a main concern of economists and policy makers all over Europe. In Romania, despite around a half a million people being unemployed, employers complain about the difficulties they face to fill up job vacancies, and labour shortage is considered an obstacle in the development of certain economic sectors. The objective of our paper is to identify the causes and effects of the labour market mismatch in Romania. Based on statistical data, we compare the evolution of the main labour market indicators in the Romanian development regions, as well as the Romanian averages to other European Union countries, pointing out similarities and differences which may have implications on wages and on internal and external labour migration flows. Our results show that labour shortage in Romania is caused by qualitative mismatch: skills mismatch, unattractive wages and increasing qualification requirements across all types and levels of occupation. But, in time, labour shortage can become also quantitative, because of aging and emigration.

Keywords: labour market mismatch, unemployment, job vacancy, wages, human capital, Romania.

JEL codes: E24, J21, J23.

Introduction

By getting aligned with the European trends, Romanian companies find it increasingly difficult to fill up job vacancies. Labour shortage has been reported in several sectors and it has been considered a major obstacle to economic growth. The demand for manpower is the highest in manufacturing, administrative and support services, hotels and restaurants, as well as in construction.

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Despite the growing demand for labour, the unemployment rate did not decrease significantly and a large share of the population is economically inactive. Wages are slowly increasing, but are still much lower than the EU average. As a result of the low living standards, many Romanians have decided to work abroad, at first seasonal work, but after entering into the EU labour market, the number of those working in permanent jobs increased.

The objective of the present paper is to identify the causes and effects of the labour market mismatch in Romania, guided by the following research questions:

- What is behind the labour shortage complaints of Romanian companies?
- Can we demonstrate labour shortage by using the available official statistics?
- What are the future perspectives for the Romanian labour market?

We start our paper with an overview of the theoretical concepts and considerations, based on which we will outline the conceptual framework of the paper. We present the recent evolutions on the Romanian labour market by using statistical data, and we summarize future perspectives based on a secondary analysis of recent studies.

Theoretical background

The neoclassical model assumes that labour markets are flexible and wages clear the market, the economy operates at full employment, and labour is paid its marginal product (Briones 2006). In reality, labour markets are imperfect, limited markets, jobs and workers are heterogeneous (and thus cannot be replaced unlimitedly by each other), employers and employees do not always behave in a rational manner and follow the criteria of optimization. Capital and labour are not unlimitedly interchangeable, labour market information is costly and imperfect, labour market actors react with delay to the changes on the market, and there are several barriers (geographic, institutional and sociological) to labour mobility (McConnell–Brue 1986; László 1996; Sparreboom–Powell 2009).

Employment represents the cross-section between labour supply and labour demand. Labour demand is derived from product demand; therefore, its immediate determinants are the labour's marginal productivity and the value (price) of its output (McConnell–Brue 1986). Labour demand is structured by occupations (Tímár 1996b) and it relates to the characteristics of jobs, such as skill and educational demands, employment stability, and wages (Bauder 2001).

Labour demand, being a derived demand, is influenced by several factors, such as: economic growth or decline, the demand for goods and services, the structure of the economy by economic branches, the number and size of enterprises, the prices of other resources, the labour costs, the legal and institutional regulations, the adaptive strategies and future expectations of employers, as well as the expanding employment in the public sector (McConnell–Brue 1986; Dávid–Fülöp 2008; László 1996; Schneider–Burger 2005; Pavelescu 2007; Preston–Jefferson 2009; Cedefop 2016).

Labour supply is defined by different authors in slightly different ways as "the work capacity which an individual or a group is ready to use at a certain moment in time" (Pavelescu 2007. 5), a "potential workforce, represented by the population of a country" (Otiman 1999. 69), or "the sum of individual willingness for work present on the labour market" (Tímár 1996a. 684). Labour supply has many dimensions: the size and demographic composition of the population, the activity rate (the percentage of the working-age population which is actually working or seeking work), the quality of the labour force (education, abilities and skills), the occupational preferences, the attitude towards work and risk, as well as location (McConnell–Brue 1986; Lipsey–Harbury 1992). Authors identified several determinants of labour supply, such as wage rates, non-wage income, preferences for work versus leisure, non-wage aspects of the job, number of qualified suppliers, demographic changes, employment policies, the tax-benefit system, the existing occupational structure, the employees' income-earning strategies, the educational system and policies (McConnell–Brue 1986; Tímár 1996a; Schneider–Burger 2005; Dávid–Fülöp 2008). Factors that can encourage labour market participation include: rising life expectancy, changes in statutory retirement age, the availability of childcare facilities, and education attainment, while the increases in the average age of the population, the availability of generous public packages of social benefits and disability insurances, the existence of high unemployment, the structure of the nuclear family unit, the absence of policies to reconcile work and family life negatively affect participation rates (Cedefop 2016).

In market economy labour demand is higher than employment, as there are always unfilled jobs on the labour market (due to frictions and structural differences between demand and supply) (Tímár 1996b). Total job opportunities are the sum of newly created jobs (expansion demand) and job opportunities arising because

of the need to replace people who either go on to other jobs or leave the labour market, for example due to retirement (replacement demand). Often, replacement demand provides more job opportunities than expansion demand, which means that there will still be job opportunities even if the overall level of employment falls (Cedefop 2015).

Labour demand can also be lower than labour supply, leading to unemployment. Frictional unemployment occurs because "at any moment not all active job searchers have yet found or accepted employment and not all employers will have yet filled their job vacancies" (McConnell–Brue 1986. 496), while "structural unemployment results from a mismatch between the skills needed for available jobs and the skills possessed by those seeking employment" (McConnell–Brue 1986. 517). Frictional unemployment of 3-6% is considered acceptable and manageable, and does not lead to big social tensions (László 1996). Involuntary, demand-deficient unemployment arises when declines in the aggregate demand for goods and services cause a deficiency in the aggregate demand for labour, because wage rates tend to be inflexible downward (for a variety of reasons, including the presence of explicit and implicit contracts), and thus demand and supply cannot equilibrate (László 1996; McConnell–Brue 1986). The inability of people to leave unemployment for employment causes the long-term unemployment (Terrel–Boeri 2002).

Labour shortage occurs when labour demand exceeds labour supply. Barnow et al. (2013. 3) defined labour shortage as "a sustained market disequilibrium between supply and demand in which the quantity of workers demanded exceeds the supply available and willing to work at a particular wage and working conditions, at a particular place and point in time".

We can differentiate between quantitative labour shortages and qualitative labour shortages (European Parliament 2015). In case of a quantitative labour shortage, labour demand is larger than labour supply, which can result from the increase in the demand for labour generated by economic growth (increased demand for the goods or services) or a decrease in the supply of labour, due to a particular market, which can also create a labour shortage (Barnow et al. 2013; European Parliament 2015). In case of a qualitative labour shortage, there is simultaneously a large share of unfilled vacancies and a high unemployment rate, caused by qualitative discrepancies between supply and demand. A high level of unemployment and, in parallel, persistent unfilled job vacancies show a mismatch

between labour supply and labour demand; the reasons for a mismatch can be that the educational level and skills of job-seekers do not correspond with the profiles sought on the labour market, or the lack of geographic mobility (Zimmer 2012; McGowan–Andrews 2015; European Parliament 2015). There is significant variation across countries and industries in the degree of both qualification and skill mismatch (OECD 2013). In case of a skill mismatch, employers may also decide to hire under-qualified/under-skilled or over-qualified/over-skilled workers (European Parliament 2015). On average, qualification mismatch is more common than skill mismatch and being over-qualified/over-skilled is more common than being under-qualified/under-skilled (McGowan–Andrews 2015).

Schneider and Burger (2005) consider that the most important factor for matching demand and supply are the wage level, the endowment of human capital, as well as regional aspects. According to Desjardins and Rubenson (2011) labour demand characteristics are more important than labour supply characteristics in explaining earnings differentials: skills matter for earnings only if they are required by the job. Van der Velde and Wever (2005) pointed out that mobility can level off disequilibria between demand and supply, as workers from an area with an oversupply will move to an area with a lack of workers, where wages are higher.

Competitive theories of wage determination (e.g. the human capital model) suggest that wages are primarily determined by market forces and reflect the relative value or productivity of individuals, while non-competitive explanations (e.g. the institutionalist view of the labour market) point to different or additional determinants such as: the level of aggregate demand, the bargaining power of employers, unions and wage setting institutions (Preston–Jefferson 2009; McConnell–Brue 1986). Labour market institutions introduce rigidities in the labour market, which may be partly responsible for the lack of recovery of employment and the rising share of long-term unemployment, and have an impact on the composition of the labour force and employment (Riboud et al. 2002).

Labour force-attraction areas are such local regions where employees and managers can change jobs without being forced to move from their homes (Lengyel 2000). In contrast to the view that a series of predominantly local, internally segmented labour markets are nested in regional and national structures, Weller (2008. 2220) has described “an array of interdependent occupational labour

markets, each with a distinctive scale of operation and geographical reach", and argues that the "socio-spatial scales at which these labour markets operate were actively produced through social processes and constantly reconfigured with the changing strategies of capital in relation to labour and regulation". McQuaid (2006) pointed out that those with high levels of human capital or high skills are more willing to commute long distances as rewards are relatively high, than the less skilled (and lower paid), who are more likely to face both skill and frictional mismatch or other barriers to getting a job match and it points out the importance of transport, job search and job support infrastructure.

Research methodology

To build up the conceptual framework of our paper (Figure 1), we adopted the differentiation between quantitative and qualitative labour shortages proposed by the study *Labour market shortages in the European Union* (European Parliament 2015), and then we grouped the possible causes of labour shortage mentioned by several sources, accordingly.

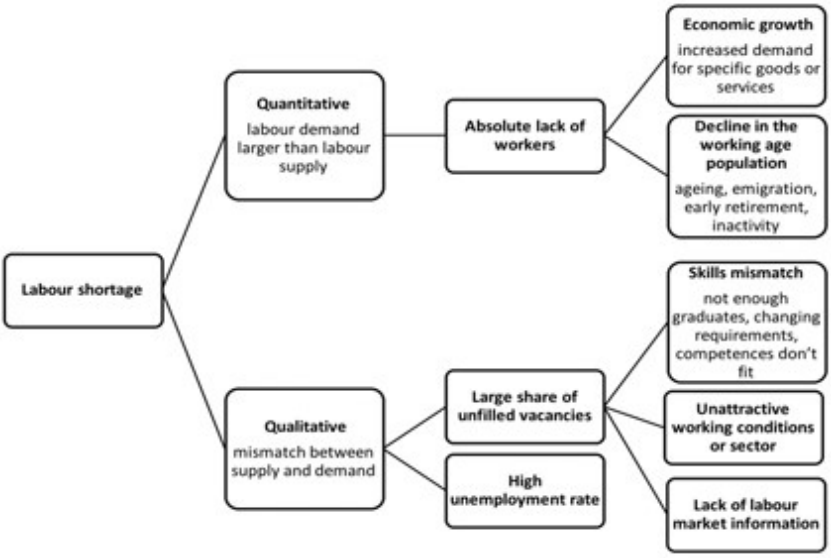
Based on statistical data, we study which of these causes can be detected on the Romanian labour market. The period covered for studying the dynamics of the Romanian labour market indicators is 2006-2015/2016, depending on the availability of statistical data in the databases of Eurostat and the Romanian National Institute of Statistics.

The evolution of total employment, employment rates and job vacancy rates[4] reflects the trends of labour demand. As labour demand is strongly related to the performance of the economy, we give an overview of the evolution of the gross domestic product (GDP) growth rates and of the gross value added (GVA) by activities, pointing out which economic sectors are mostly affected by the labour shortage.

In order to understand labour supply we analyse, besides the employment, the evolution of unemployment, and of the working-age population size and education. In Romania, there are two available indicators that measure unemployment: the unemployment rate calculated based on the International Labour Organization (ILO) methodology and the registered unemployment rate, determined by the National Employment Agency (NEA). The difference between the two rates is

[4] Job vacancy rate measures the percentage of vacant posts (newly created, unoccupied or about to become vacant), as compared to the total number of occupied and unoccupied posts.

that the first measure includes the unemployed persons who actively sought a job in the past four weeks, whereas the second takes into account people registered in the NEA records.



Source: authors' own design based on Zimmer (2012); Barnow et al. (2013); European Parliament (2015); Cedefop (2016); McGowan–Andrews (2015)

Figure 1. Causes of labour shortage – conceptual framework of the paper

The relationship between the unemployment rate and the job vacancy rate is illustrated with a Beveridge curve. First described by William Beveridge in 1958, the curve has been widely examined in the economic literature and found its most famous application in the search and matching model of Blanchard and Diamond (1989). The Beveridge curve is widely used to describe the cyclical state of the labour market and the efficiency of the labour market in terms of matching unemployed workers to job vacancies. It delivers essential information about the labour market tightness and the impact of shocks on the efficiency of labour market matching. When the job matching process is functioning well, the Beveridge curve shows a negative relationship between unemployment rate and job vacancies (Zimmer 2012). The curve is tracing the evolution of the economy from expansionary phases (with lower unemployment and higher

vacancies) to contractions in activity (with higher unemployment and lower vacancies) (Bova et al. 2016). Therefore, movements along the Beveridge curve have typically been interpreted as reflecting cyclical labour market dynamics, whereas shifts in the Beveridge curve as changes in matching efficiency or structural changes in the unemployment-vacancy relationship, and thus the labour market as a whole (Bonthuis et al. 2013). A labour market in which vacant jobs are filled quickly will generally exhibit flatter curves and curves which are closer to the origin.

In our paper, we analyse the Beveridge curve in Romania's labour market over the period 2006-2016, focusing in particular on its development since the onset of the global financial crisis and try to explain its deviations from the pre-crisis pattern. Our analysis of the Beveridge curve is based on annual data referring to unemployment rates for the 15-74 years old and job vacancy rates from the Eurostat (2017) online database.

Being referred to in literature as the main reason for qualitative labour shortage, we address the problem of qualification mismatch, which is measured by using mismatch indices at national and regional levels. By following a methodology used by Estevão and Tsounta (2011) and Zimmer (2012), we have calculated the qualification mismatch indexes for Romania and its regions, which reveal the imbalances between the structures of labour supply and demand broken down by educational levels. Estevão and Tsounta (2011) calculated the skill-mismatch indexes for the USA, but for Romania only statistical data related to educational levels are available, thus we had decided to calculate the qualification-mismatch indexes instead of the skill-mismatch indexes. The approach adopted to measure the extent of the qualification mismatch consists in comparing the relative share of each type of qualification in the labour supply and demand respectively. The formula used is the following (Zimmer 2012):

$$M_{it} = \sum_{j=1}^{3} (S_{ijt} - D_{ijt})^2$$

where M_{it} is the qualification mismatch index for educational level j in region i at time t, S_{ijt} is labour supply (population aged 25-64 years[5]) with educational level j in region i at time t, and D_{ijt} is labour demand (employed population aged 25-64 years) with educational level j in region i at time t.

[5] We have chosen the age group 25-64 years instead of the 15-64 years, because many people in the age group 15-24 years are still in education.

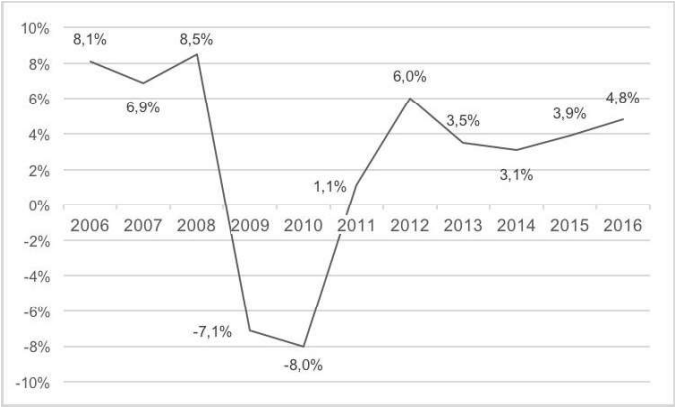
In theory, the most reliable measure of employer demand would be that of job vacancies by level of qualification required (Zimmer 2012), but statistical data for this indicator are unavailable in Romania, therefore we used employment as an indicator for labour demand.

According to Estevão and Tsounta (2011), skill-mismatch indexes can be used to identify regions which are facing difficulties in employing their skill base and to determine whether surges in the mismatch indexes are cyclical or structural. The question of geographic mismatch is addressed by analysing the dispersion of employment and unemployment rates in the various Romanian regions.

Results

The evolution of the Romanian labour market in the period 2006-2016

The first three years of the studied period (2006-2008) were characterized by economic growth in Romania (see Figure 2), but the global financial and economic crisis had a severe negative impact in the period 2009-2010 and the GDP growth rate fell sharply from 8.5% in 2008 to -7.1% in 2009. In 2011 a slow recovery started, followed by positive evolutions of the GDP.

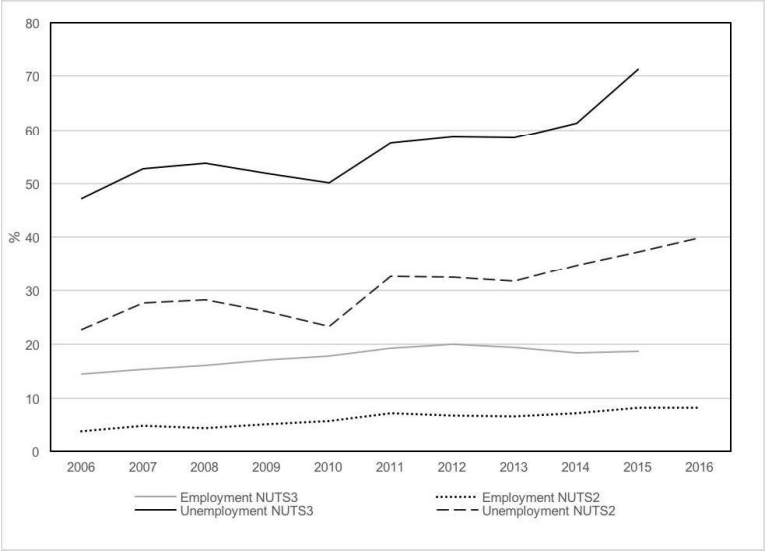


Source: authors' own design based on Eurostat (2017) data

Figure 2. Real GDP growth rates in Romania (%) in the period 2006-2016

Recent economic trends in Romania are favourable: in 2016 an economic growth of 4.8% was registered (Eurostat 2017), mainly due to the increase of private consumption, determined by salary increases and fiscal relaxation measures, which improved the population's purchase power (Government of Romania 2017).

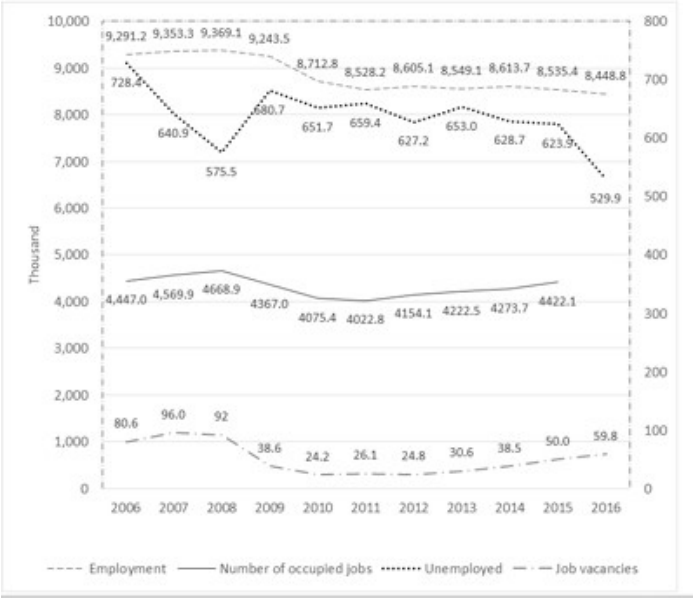
The employment rates fluctuated around 60% in Romania and its regions during the studied period, the national average lagging behind the average of the 28 countries of the European Union (EU28) by around five percentage points (Eurostat 2017). Since 2011 the employment rates have increased in most Romanian regions, and in 2016 the national indicator reached 61.6% (compared to the EU28 average of 66.6%), but the regional values were placed in a quite large interval from 56.5% in the South-East region to 69.0% in the North-East region, leading to a growing regional dispersion (Figure 3).



Source: authors' own design based on Eurostat (2017) data

Figure 3. Evolution of the dispersion of regional employment and unemployment rates among Romanian regions (2006-2016)

In the period of economic growth (2006-2008) the number of occupied jobs was increasing, the job vacancy rate was set at a relatively high level and the unemployment rate was decreasing, but after the financial crisis hit Romania, the number of jobs and vacancies sharply dropped and the number of unemployed increased (Figure 4). After 2012, the number of employees and job vacancies started to grow, but neither reached the before-crisis levels. The number of unfilled job vacancies is much lower than the number of unemployed, so we cannot speak about an absolute lack of workers, or a quantitative labour shortage on the Romanian labour market.



Source: authors' own design based on Eurostat (2017) and NIS (2017) data

Figure 4. Evolution of total employment, unemployment, number of occupied jobs and job vacancies in Romania in the period 2006-2016

The analysis of labour market developments after the crisis outbreak shows that the strong contraction in the economic activity (aggregate GDP decrease by almost 8 percent during 2009-2010) was initially reflected by higher short-term (less than one year) unemployment (1.20-1.25 percentage points above 2008 levels), which mostly affected the youth and people with a low education level, according to Eurostat (2017) and NIS (2017) data. The worrying fact about this evolution is that some of these people retained the unemployed status even after the economy resumed positive growth rates. The unemployment rate is considered to be a lagging indicator. During economic downturns, usually it takes several months before the unemployment rate begins to rise. Once the economy starts to pick up again, employers usually remain cautious about hiring new staff and it may take several months before unemployment rates start to fall.

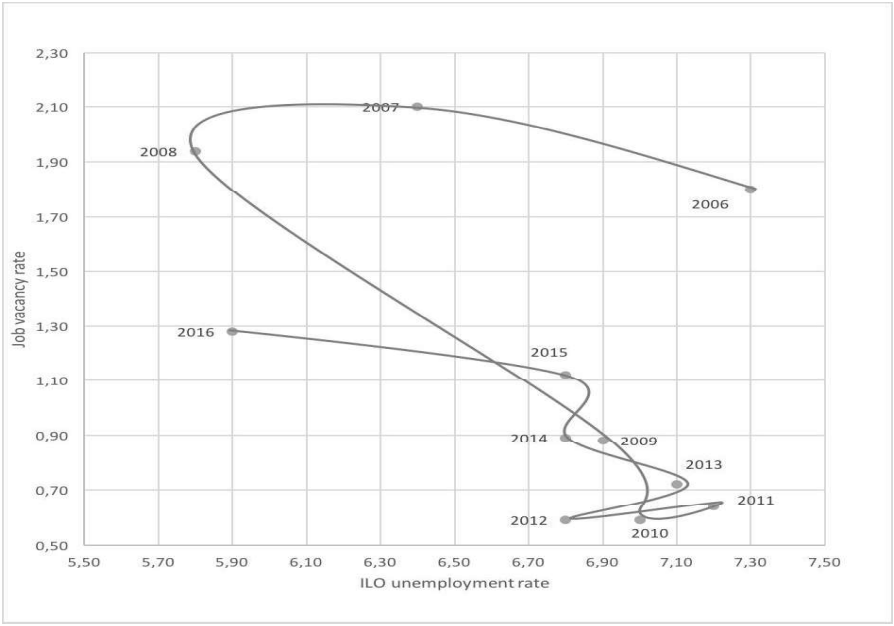
In the period between 2010 and 2016, the ILO unemployment rate remained relatively stable hovering around 7% (Eurostat 2017). However, the registered unemployment rate dropped sharply by about two percentage points, due to the new

legislation, which became effective as of 2011 and provided for unemployment benefits to be cut off in case of the jobseekers' refusal of a job offer consistent with their training or education (Iordache et al. 2016).

The deterioration of job matching on the Romanian labour market

In the period 2006-2008 the Beveridge curve for Romania (Figure 5) shows a negative relationship between unemployment rate and job vacancies, demonstrating an increasingly efficient job matching process.

From 2006 the Beveridge curve shifted to the left, this process being accelerated from the mid of 2007 due to overheating and labour migration, which resulted in the reduction of the short-term unemployment rate to a minimum of 3.25% in 2007 and to the increase of the job vacancy rate to a maximum of 2.1% in 2008 (Eurostat 2017).



Source: authors' own design based on Eurostat (2017) data

Figure 5. Beveridge curve for Romania (2006-2016)

The movements along the Beveridge curve during 2009-2010 reflect the influence of the recession. The vacancy rate dropped to 0.59% in 2010 and the unemployment rate increased to 7%, the two indicators recording opposite

development. The crisis led to large employment losses, especially in constructions and industry (the sectors with the largest shares of unskilled workers), where total employment in 2011 reached only 88.3% and 88.5% respectively of their 2008 values (NIS 2017). Consequently, it seems clear that the major forces driving the large outward shifts in Romania's Beveridge curve are the large declines seen in these sectors.

Since the employment recovery started in 2011, the curve has seen multiple outward shifts. In the period 2010-2015 the unemployment rate hovered around 7% while vacancies kept rising, which hints to a possible deterioration of job matching and may reflect large structural changes in the Romanian labour market. These changes manifest themselves as shifts in the Beveridge curve and may stem from a wide range of factors, including those reflecting an increased mismatch between the attributes of the unemployed and the available vacancies (for instance, due to skill, sectoral or locational mismatches), and those reflecting broader institutional features of the national labour markets (such as the generosity of the unemployment insurance system, the impact of employment protection legislation, etc.).

The after-crisis job recovery was slow because the process was impeded by a high mismatch between the skills required by companies and those offered by potential candidates. This was due primarily to the low level of transferability of workers' skills from construction[6] to other sectors.

The mismatch between required and offered qualifications and skills is due also to the development of more competitive sectors such as the automotive industry and the IT&C services, where specific skills are required. Therefore, the demand for skilled workers (programmers, engineers) increased (total employment in the ITC sector in 2015 was 41.7% higher than in 2008), in a context of growing difficulties in finding qualified staff. Moreover, this discrepancy is also visible in the case of people with a medium educational level. Thus, companies in food and light industries (accounting for around a quarter of the manufacturing sector), as well as in accommodation and food services, encountered more pronounced difficulties in finding appropriately skilled workers (Iordache et al. 2015). As a result, the economy experienced a jobless recovery, with the output reverting to its pre-crisis level in 2014 and only half of the jobs lost being regained.

[6] Gross value added (GVA) in the construction sector shrank by 30% after 2008, and in 2016 has still not reached the level of output from which the collapse began in 2009 (NIS 2017).

More frictions on the labour market generally lead to higher long-term unemployment, which is harder to deal with in the absence of active policies. The effects of the recession were reflected by a steep increase in the short-term unemployment, which was only partially reversed as the economy picked up, resulting in higher long-term unemployment. Between 2011 and 2015 the share of long-term unemployment in active population increased by 25%, which signals an increase in structural unemployment (NIS 2017). The phenomenon, referred to as "the hysteresis effect" in the literature, is driven by the fact that the longer the period a person seeks a job, the lower the chances to succeed, as a result of both skill depreciation and the change in companies' requirements concerning the training of candidates. The latter is particularly relevant in the context of the post-crisis economy repositioning on a more competitive structure, oriented towards more technology-intensive sectors.

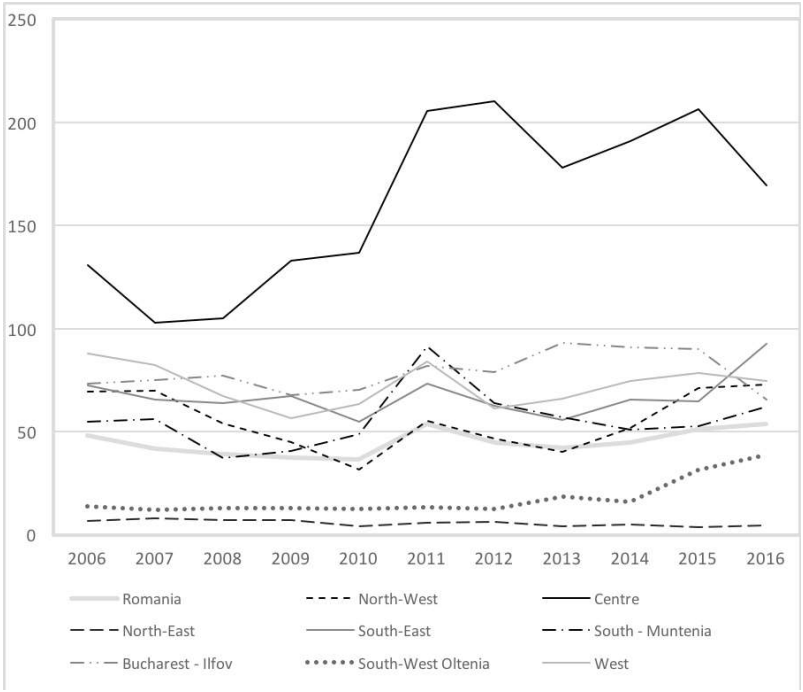
Qualification mismatch and low wages – the main causes of labour market inefficiency

A high level of unemployment and, in parallel, persistent unfilled job vacancies show a qualitative mismatch between labour supply and labour demand, and, according to the literature, the cause is often that the educational level does not correspond to the profiles sought on the labour market. Thus, we have calculated the Qualification Mismatch Indexes (QMI) for Romania and its regions (Figure 6).

We can see that the overall QMI for Romania is much lower than for most of the regions, except for the North-East and South-West Oltenia. These results suggest that in-country migration could improve the labour shortage felt by companies located in regions with high levels of the QMI.

To better understand the nature and extension of qualification mismatch, we also analyse the QMIs related to different educational levels separately (Table 1). We can notice that the QMIs are generally high for the low and high education levels, and are low (except for the Centre region) for the medium education levels. Low education labour supply exceeds demand, while the demand for labour force with tertiary education exceeds supply, both resulting in high QMIs.

Unattractive working conditions, such as low wages, can also be a reason for the large share of unfilled vacancies. The annual net earnings of a single person without children in 2015 was of 5119 Euro in Romania, as compared to the EU



Source: authors' own calculations based on Eurostat (2017) data

Figure 6. The evolution of the QMI in Romania and its regions

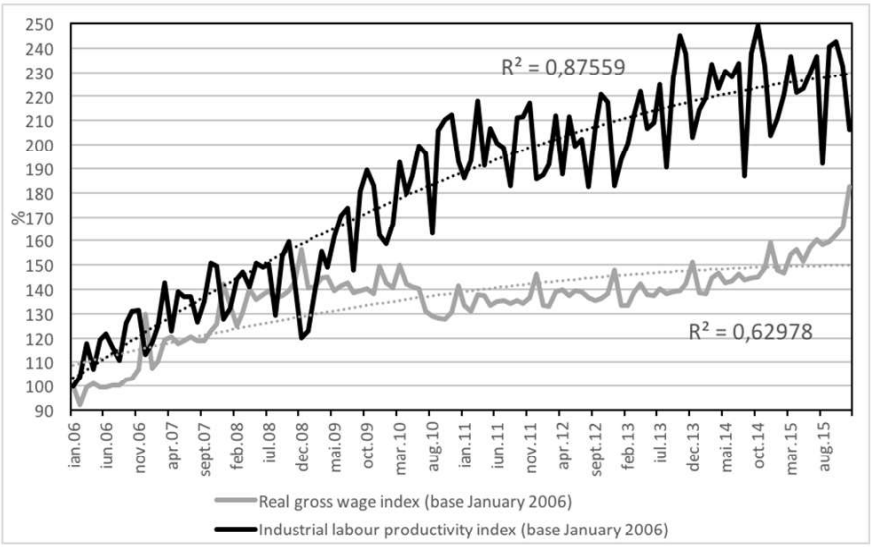
average of 24 162 Euro (Eurostat 2017) and low income is the Romanians' main reason for emigration. According to the World Bank (2016), Romania is among the top 20 emigration countries with 3.4 million emigrants in 2013 (17% of the whole population), over 20% out of them being tertiary educated. They have an important contribution to the national economy as they send yearly around 3.2-3.5 billion US$ remittances.

Even though companies complain that they cannot attract skilled workers, productivity increase did not lead to a proportional increase of the wages (Figure 7). In about nine years the government doubled the minimum wages, from 138 EUR in the first half of 2008 to 276 EUR in the second half of 2016 (Eurostat 2016), but this increase affected only the lowest wages and did not solve the problem of the emigration of skilled workers and specialists.

Table 1. QMIs in Romania and its regions, by education levels

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	Less than primary, primary and lower secondary education (levels 0-2)										
Romania	31.79	26.98	24.19	22.44	22.22	33.80	27.65	24.84	27.43	29.74	31.18
North-West	46.01	46.08	35.38	27.75	19.55	35.98	31.05	25.41	34.46	45.62	47.23
Centre	84.56	68.04	69.99	88.54	90.53	135.55	139.72	118.72	126.86	137.36	111.53
North-East	2.44	0.19	0.51	0.17	0.62	2.28	2.82	1.30	2.21	1.12	1.05
South-East	47.56	42.94	42.85	44.61	36.39	48.46	41.16	35.93	42.90	42.59	61.16
South - Muntenia	35.90	36.51	24.67	27.15	32.34	59.83	41.82	37.91	33.93	33.85	40.80
Bucharest - Ilfov	32.24	28.48	28.48	28.91	29.10	21.87	23.93	24.53	26.32	27.48	16.82
South-West Oltenia	7.90	6.08	3.94	0.77	0.61	2.77	0.07	0.18	0.05	2.96	10.12
West	57.46	54.37	44.37	35.55	42.12	55.81	38.77	43.16	49.28	48.44	45.88
	Upper secondary and post-secondary non-tertiary education (levels 3-4)										
Romania	5.74	3.47	1.77	1.27	1.62	2.90	1.93	0.67	1.71	0.86	0.71
North-West	14.79	12.55	5.28	1.84	1.41	7.23	6.46	2.34	7.39	6.15	5.97
Centre	36.48	21.03	19.70	25.91	25.48	42.99	42.60	22.58	25.07	24.25	18.08
North-East	0.24	3.01	1.96	2.63	0.66	0.14	0.03	0.22	0.02	0.28	0.43
South-East	14.81	15.18	11.46	12.31	8.72	10.52	7.40	4.31	6.72	5.49	10.98
South - Muntenia	12.58	14.35	8.27	7.08	9.04	20.05	12.00	8.65	7.40	5.20	5.38
Bucharest - Ilfov	0.46	1.60	2.10	0.62	0.87	6.81	4.75	7.89	5.80	5.34	5.85
South-West Oltenia	0.17	0.00	0.90	3.88	4.03	1.70	5.78	7.83	7.35	7.89	3.15
West	20.15	16.59	7.40	2.95	9.54	12.88	3.59	6.71	15.51	3.19	2.94
Tertiary education (levels 5-8)											
Romania	10.52	11.10	12.89	13.76	12.54	16.91	14.98	16.55	15.43	20.48	21.54
North-West	8.57	11.12	13.25	15.39	10.45	11.70	9.19	12.34	9.93	19.14	19.62
Center	9.89	14.16	15.51	18.66	20.75	26.77	27.89	36.67	39.14	44.82	39.95
North-East	4.17	4.67	4.46	4.11	2.60	3.57	3.44	2.60	2.63	2.23	3.15
South-East	9.91	7.06	9.43	10.11	9.54	13.90	13.65	15.44	15.66	16.58	20.41
South - Muntenia	5.97	5.08	3.99	6.46	7.18	11.27	9.63	10.34	9.64	13.24	15.75
Bucharest - Ilfov	40.27	44.89	46.18	37.90	40.04	53.07	50.02	60.41	58.34	57.05	42.50
South-West Oltenia	5.78	5.88	8.03	8.11	7.76	8.81	6.70	10.42	8.60	20.53	25.41
West	10.18	10.90	15.42	17.91	11.57	15.18	18.77	15.83	9.58	26.78	25.60

Source: authors' own design based on NIS (2017) data



Source: authors' own design based on NIS (2017) data

Figure 7. Wages and labour productivity in Romania, 2006-2015 (base January 2006)

Romania has one of the lowest taxation rates on the income from salaries from the EU (16%), but the shares of total social contributions paid by the employee and employer are of 39.3%, which is over the EU28 average. The fiscal burden for the employees with low salaries is disproportionate and, together with the low level of the salaries, impacts negatively the motivation of these employees to enter the labour market (Government of Romania 2017).

Future trends on the Romanian labour market

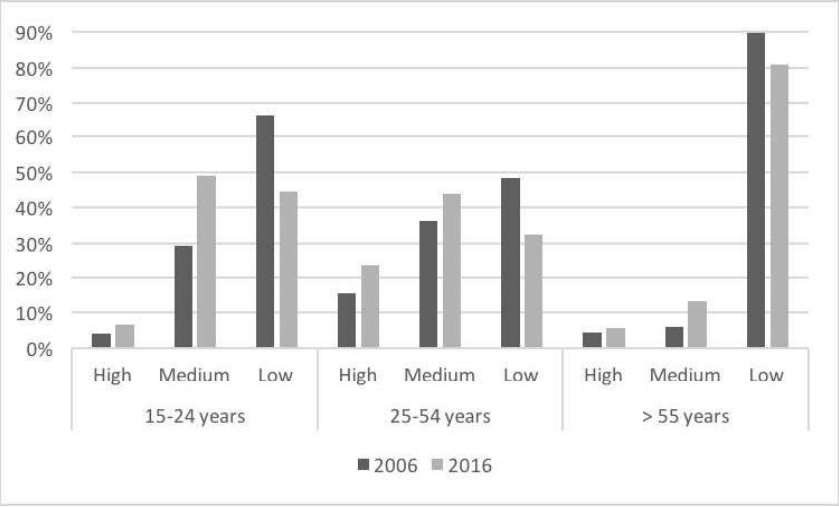
Demographic change is a key challenge for the European, as well as for the Romanian labour markets. Participation rates and the working-age population are expected to decline in most countries, regardless of the economic conditions, and the decline of the working-age population could reduce the labour force to the extent that potential economic growth will be at risk (Cedefop 2016).

The fast aging process will change the ratio between the population at retirement age and the active population, which will lead to major changes in the age structure and to negative implications on the labour market (Government of Romania 2017).

By studying the age structure of the employed population in the period 2006-2016, we can observe that the proportion of the younger age groups (15-34 years) in the employed population decreased, while the proportion of the older age groups (44-49 years) increased (NIS 2017).

The average of standard retirement ages in the European Union is of 64.6 years for men and 63.4 years for women. Romania is close to the European average in the case of the retirement age of men, and follows the recommendation of the European Commission to equalize the retirement age between men and women to 65 years (Government of Romania 2017).

Population aging has also an impact on the replacement rate[7]. In order to calculate the replacement rates for the period 2006-2016, we considered that the 15-24 years old enter and the 55-64 years old leave the labour market. According to these calculations, the evolution of the replacement rate was unfavourable in the studied period, declining from 129.8% to 81.0%.



Source: authors' own design based on NIS (2017) data

Figure 8. Educational level of the employed population, by age groups

Although older, Romania's labour force will become more qualified. In the period 2006-2016 the educational level of the employed population has improved

[7] The replacement rate is the rate between the population quitting and the population entering the labour market in a given period.

in all age groups (Figure 8). Moreover, Cedefop (2015) forecasts that, by 2020, around 50% of the 30-34 years old and around 39% of the labour force will have high-level qualifications (compared to 26.6% in 2013).

Employment is forecasted to increase slightly, but will remain below its 2008 pre-crisis level. Slow employment growth and an ageing workforce means that until 2025, replacement demand in Romania will provide almost all job opportunities. Owing to high replacement demand, most job opportunities (around 47%) will be for skilled agricultural workers (Cedefop 2015).

According to a study on the job opportunities of graduates (Ciucă 2013), in the period 2016-2020 the demand for staff with higher education will increase by 14%, especially in the fields of ITC, health, business and administration, constructions and engineering. Likewise, the Cedefop (2015) study envisages a significant number of job opportunities requiring high-level qualifications, but it expects the highest employment growth in the distribution and transport sector.

Another study (Cedefop 2016) foresees that, in Romania, labour demand will increase in the services sectors, particularly in hospitality, personal services and financial and business services, and that there will be reductions in the low-qualified employment. The changes in the content of jobs and in work organisation, as well as the increased automation and robotisation, are likely to affect occupational and qualifications structures. Despite the increasing demand for skills, some well-qualified individuals may need to take up jobs that have typically not required such high formal qualifications in the past (Cedefop 2016).

The *Convergence Programme 2017-2020* (Government of Romania 2017) foresees the improvement of the Romanian labour market: an increase of 1% per year of the employment rate, of the total employment (despite of the negative demographic evolutions) and of the total number of hours worked, a labour productivity increase of 4-5% per year, and a yearly 5-6% increase of the compensations per employee. The share of employees in total employment is estimated to increase to 79% in 2020 compared to 75% in 2016 and the unemployment rate will decrease from 5.9% in 2016 to 5.3% in 2020. For the same period, the *Convergence Programme* foresees that the GDP will increase at an annual average pace of 4.8-5.0%, which exceeds the value estimated by the European Commission (3.8% for the interval 2017-2018).

As a first step on the way to reach its targets, at the beginning of 2017 the Government of Romania raised the gross minimum wage from 275 EUR to 319 EUR (Eurostat 2017), as well as the wages of public employees (education, health, local public administration).

To increase the mobility of the workforce, the Government of Romania has adopted three types of non-taxable subsidies for the people who get a job in a different locality than their domicile: the employment premium, the installation premium and the relocation premium. The resumption of activity by the unemployed who do not receive unemployment benefits is stimulated by granting them an activation premium, conditioned on getting full-time employment for at least three months (Government of Romania 2017). The condition of full-time employment is important in the light of a recent analysis of job creation patterns (ILO 2017), which pointed out that part-time and temporary jobs are becoming increasingly prominent, but many workers take on such an employment status involuntarily, because they cannot find any full-time or permanent employment opportunities.

Conclusions

The global financial and economic crisis has deeply marked the Romanian economy with unemployment persisting at relatively high levels even when the economy returned to positive growth rates. The economy experienced a jobless recovery, with the output reverting to its pre-crisis level in 2014, but with only half of the jobs lost being regained. Romania's labour market basically witnessed a reshaping, which meant increasing the importance of highly-skilled employees at the expense of medium- and low-skilled workers.

These developments bring attention to the structural nature of labour market dynamics. The main factor driving the stagnation and even a moderate rise in long-term unemployment since the crisis has been the inability of the labour market to accommodate the inflows of workers made redundant as a result of restructuring, either due to insufficient labour demand and/or to increased mismatches between labour demand and labour supply. The share of long-term unemployed actually increased despite the improvement in overall labour market conditions, most likely because they lack the necessary skills to take the newly created jobs. Long-term unemployment in Romania affects certain groups, such as young people and low-skilled workers more than other groups on the labour market, and especially hits those that work in declining occupations and sectors. Some sectoral rebalancing

will therefore be required, so as to provide the preconditions to absorb displaced workers from permanently downsized sectors.

In 2016 the unemployment rate stayed on a downtrend, reaching new post-crisis lows of 5.6 percent. This development along with the increase in labour demand economy-wide (as reflected by the stepped-up hiring via the National Employment Agency) signals the persistence of tight labour market conditions. However, as the number of unfilled job vacancies is still much lower than the number of unemployed, we cannot speak about an absolute lack of workers or a quantitative labour shortage on the Romanian labour market.

Labour shortage in Romania is caused by qualitative mismatch: skills mismatch, unattractive wages and increasing qualification requirements. If not reversed, the worsening labour mismatch may imply that a higher share of unemployment becomes structural and that a given reduction of the unemployment rate would require a stronger degree of wage adjustment. Policy measures will need to target active labour market programmes focusing on the up-skilling and re-training of low-skilled workers, so as to equip them with the broader transferable skills necessary to allow for sectoral reallocation.

Although not the case right now, quantitative labour shortage will also be an issue in the near future because of aging and emigration. In order to stop/slow down the emigration of young and skilled people wage increases are necessary and expected to catch up with the EU averages.

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The sustainability of completed EU-funded cultural projects

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The aim of my research is to examine how sustainability requirements are handled within a cultural project's life-cycle, both during the planning stage and after the actual event. The requirements for receiving European Union funding are the following: the project should contribute to sustainable development and its results should be considered sustainable on the long term, from both social and financial points of view.

This paper presents the results of a survey focussed on collecting data about projects with complex, cultural and cultural tourism-related aims. It can be concluded that the evaluations carried out after these projects were completed did not cover indicators which directly prove financial sustainability.

Keywords: sustainable development, sustainability, project sustainability, cultural projects.

JEL codes: O22, Q55, Q57, Z19.

Introduction

In the case of European Union (EU) funded projects, sustainability can be defined, on the one hand, in terms of its contribution to sustainable development and, on the other hand, in terms of the long-term maintenance of its outcomes. European Union funding directives and guidelines define what sustainability means and emphasize its significance (EVALSED 2014; EC 2013).

Whilst sustainability should be demonstrated during a project's preparation phase, an ex-post assessment process is essential.

This paper analyses the sustainability of cultural tourism projects from Hungary, based on data collected through a survey. The investigation focussed on what outcomes were quantified, whether sustainability was among them, and, upon completion of the project, whether the expected outcomes had been realised and if the results had been compared to the expected outcomes.

The definition of sustainability and project evaluation

Explaining how the project will contribute to sustainable development and demonstrating that social and financial outcomes of the projects can be maintained in the long run should be part of the planning phase. The project plan

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and feasibility studies should show that the project meets the funding criteria of the European Union regarding sustainability in both respects.

In the literature, there is no clear definition of sustainability, and no distinction is made between the two approaches, meaning that, before examining or discussing the sustainability criteria, it is important to define both meanings.

The clear definition of the terminology framework is essential also because, in many cases, well-known terms have different meanings, and the confusion between the two different approaches to sustainability is frequently detectable.

Sustainable development

Finding the balance between economic growth and social welfare has proved to be a challenge for both politicians and managers over the past 150 years (Dyllick–Hockerts 2002).

The term "sustainable development" was first used in the United Nations' 1987 Brundtland Report. The Commission chaired by Gro Harlem Brundtland released a report titled *Our Common Future*. They saw the possibility of a new era of economic growth that was based on the realization of sustainable development on a global scale and also one that sustained the environmental resource base. The concept of sustainable development implies the existence of limitations. It refers to "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (UN 1987. 41). In other words, "*sustainable development is the continuous increase in social welfare without growing beyond the carrying capacity*" (Daly 1991. 302). Sustainability refers to the maintenance of the value of both the natural and the built environment.

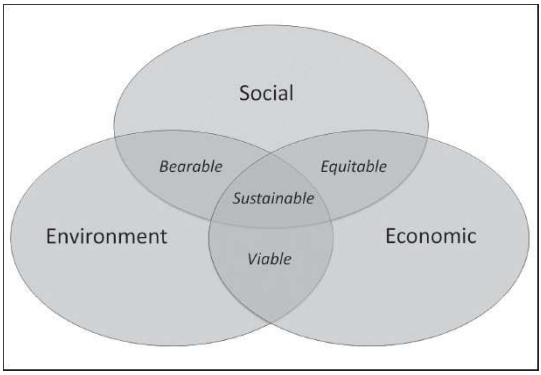
We differentiate between "strong" and "weak" sustainability. According to the former, natural capital cannot be substituted by other capital goods, while there is no such constraint according to the latter (Málovics–Bajmócy 2009).

Within the framework of the United Nations' Millennium Project, 15 global challenges were identified. The future of humanity depends on how these challenges are addressed (UN 2009). It is difficult to envisage effective actions based on current paradigms in response to environmental problems that we are facing both at the economic and social level.

Regarding economics, two schools of thought can be identified. Ecological economics is a trans-disciplinary, problem-oriented approach, while environmental economics applies the same approach and uses the same methods as neoclassical welfare economics. Ecological economists challenge the views and proposed

solutions of environmental economists in numerous ways. They believe that environmental problems are not simply a result of market inefficiencies, and hence that more complex changes are necessary (Málovics–Bajmócy 2009).

The basic criteria of a sustainable society are social justice, striving for a better quality of life, using natural resources in a sustainable manner, and maintaining environmental quality.



Source: Dyllick–Hockerts 2002. 132

Figure 1. The Triple-P concept of sustainability

Sustainable development rests on three pillars: society, economy, and environment (Figure 1). All three have to be taken into consideration, including the interactions between them, to maintain a dynamic equilibrium between society, economy and environment, that is, all three pillars have to be sustainable (DGEC 2006).

When sustainability is taken into consideration during project planning, the entire plan's chances of contributing to/towards sustainability should be assessed based on the principles of prevention and prudence (Gyulai 2013). Also, the following should be investigated: has the project been evaluated according to the criteria of social utility, have its potential long-term impacts been assessed, and have the direct impacts of the investment been investigated?

Concerning the relationship between *culture and sustainable development*, culture is considered to be a cornerstone for the sustainable organic development and an important integrating role is attributed to it. The cultural and tourism investments considered to be sustainable are those which (NFÜ 2007):

- permit the renewal of natural resources by taking into account the carrying capacity of the natural environment,
- understand that local communities are an important component of cultural and tourism products,
- accept that local communities should get a proportionate share of the positive economic outcomes of tourism,
- respect the interests and requests of local communities regarding the development of culture and tourism.

The principle of sustainable development should be taken into consideration when compiling proposals, and efforts should be made to protect and improve the environment during project implementation.

The sustainability of projects

The European Union's development policy places an emphasis not only on making contributions towards sustainable development but also on sustainability, that is, on the durability of the results of interventions – i.e. events or activities – funded at multiple (programme or project) levels (EVALSED 2014). In the case of individual projects, it should be assessed whether sustainability criteria are met during the different phases of the project cycle, whether the project can set up a system that is viable on the long run, and whether it can maintain its intended impacts. Impact assessments and feasibility studies compiled in the preparation phase form the basis for selecting the best projects for funding based on their cost-effectiveness, sustainability and output (Magyarország Kormánya 2014).

Project evaluation criteria were first laid out by the Development Assistance Committee (DAC) of the OECD (Organisation for Economic Co-operation and Development) in the *Principles for Evaluation of Development Assistance*, which has since become widely accepted. These evaluation criteria, namely relevance, efficiency, effectiveness, impact and sustainability, are also included in the EU's standard evaluation methodology (OECD 1991; EC 1999).

The purpose and timing of the different evaluation criteria are presented in Table 1. Further, we discuss the sustainability criteria in more detail. Projects need to be environmentally as well as financially sustainable. *Institutional sustainability* refers to the ability to provide efficient management and an efficiently functioning organizational framework. *Financial sustainability* refers to the ability to secure the funding necessary for sustainability (NFÜ 2008a), meaning that the project can operate within its planned budget without the need for additional funding.

Table 1. Purpose and timing of the project evaluation criteria

Timing of evaluation	Purpose of evaluation criteria	Evaluation criteria
Ex-ante	The extent to which the aid activity is suited to the priorities and policies of the target group, recipient, and donor. It analyses the programmes, examines their objectives and expected results.	Relevance
Mid-term	The extent to which outputs and/or the desired effects are achieved with the lowest possible use of resources. It analyses the efficiency of implementation, whether it meets requirements, and whether deadlines are kept.	Efficiency
Mid-term	The extent to which the project's objectives were achieved. It measures the outputs – qualitative and quantitative – about the inputs.	Effectiveness
Ex-post	The positive and negative changes produced by a development intervention. This involves the effects resulting from the activity on social, economic, environmental and other development indicators.	Impact
Ex-post	It measures whether the benefits of the activity are likely to continue after donor funding has been withdrawn following the completion of the implementation phase. It analyses the effects of programmes about the needs they have set out to address.	Sustainability

Source: Nagy 2011

During the preparation phase, it should be assessed whether the project will be sustainable within planned budgetary constraints and whether its results can be maintained once funding has ceased.

The cost-benefit analysis (CBA) is a basic tool used when aiming for an optimal choice. It identifies every possible effect and assigns a monetary value to it, to determine the project's overall costs and benefits. The cost-efficiency analysis (CEA) is used to find the optimal solution to a specific objective (KVVM 2002).

Not every socio-economic effect is measurable. Therefore, in addition to estimating performance indicators, costs and benefits that cannot be expressed in terms of money, one should also take into consideration the following aspects: the (net) effect on employment, environmental protection, social equality and equal opportunities (EC 2006). When analysing different alternatives, every project is an optimisation problem where the goal is to find the optimum between individual and social utility. The methods proposed for the financial analysis of projects are presented in Table 2.

Table 2. Methods for the financial analysis of projects

Cash-flow analysis	Expenditures and cash inflows	Profitability analysis	Cost-benefit analysis
	Cost recovery		Cost-effectiveness analysis
	Financing		Simplified analyses
	Liquidity and sustainability		Socioeconomic cost-benefit analysis

Source: Szegediné 2012

In the case of European Union proposals, sources of funding, policy areas, and responsible individuals have to be identified, and the data that describe sustainability and their time frames also have to be provided.

When drawing up the *operational and sustainability plan*, the expected outcomes of the development intervention and the financial sustainability plan should be presented, and the long-term financial equilibrium should be demonstrated, i.e. (NFÜ 2008b):

- the expected costs of maintenance and operation of the investment/ development activity up to the end of the operational period,
- sources of funding and risks involved,
- expected income.

Regarding the development activity, the aspect which is primarily assessed is the extent to which the benefits of the programme or project can be continued after the funding has been withdrawn. In addition, the following are examined (OECD 1991): the extent to which the beneficiaries have utilised the realised outputs, and whether this has contributed to any change in practice; in case new institutions had been created as a result of the intervention, whether these continue to function; whether the intervention-related long-term objectives of the donor and beneficiaries can be reconciled; and what were the major factors to influence the achievement or non-achievement of the programmes' sustainability.

Sustainability indicators can be monitored up to five years following the conclusion of the EU-funded projects.

Project maintenance commitment refers to the beneficiary taking on the obligation of maintaining and operating the project's output following project implementation, or else repaying the funds received. This guarantees to finance for the long-term operation of the investment (Magyarország Kormánya 2014). The maintenance period is five years, although in the case of micro enterprises and SMEs it is three years. Maintenance reports and indicator assessments can be requested, and the maintenance of the investment can be inspected on site.

The project's cost-benefit analysis, which takes into account the benefits generated by the project at the level of the society as a whole, is the main source of information for the socio-economic impact assessment. A study evaluated the quality of the cost-benefit analyses in some countries and found that they were of extremely poor quality (PwC 2005). In the case of in-depth evaluations, evaluators compare ex-post information with the ex-ante CBA.

Indicators are widely used in project assessment. They help quantify the extent to which the objectives of the project have been achieved. An indicator is a number, which points to the real nature of a phenomenon, signals changes and their characteristics and extent, but it is not suitable for identifying causes. Indicators do not express everything about a project's performance, but they give an overview of how the implementation was carried out and how the objectives were achieved (EVALSED 2014).

Good indicators meet the so-called SMART criteria; that is, they are specific, measurable, achievable, realistic and time-based (Fekete 2013). There are several types of indicators, such as: resource, output, result and impact. Sustainability-related indicators belong either to the *result indicators* group, which consists of the immediate and direct effects of the project or to the impact indicators group, which consists of the indirect and longer-term consequences of the project.

In the case of cultural investments, it is more expedient to use the term "sustainability" rather than "returns", as, in the majority of cultural projects, long-term operability is ensured both by the income generated by the project and by some form of community contribution. Investments also produce external economic effects, and the benefits generated by the project should be considered at the level of the society as a whole. The evaluation process of the sustainability of cultural events can be divided into phases – the determination of critical values and factors serving as a basis for safe capacity planning for the venue or event (NFÜ 2007).

The State Audit Office (ÁSZ) periodically checks the monitoring and evaluation of programmes and projects. Their findings suggest an evolution in terms of evaluation practices from the mainly natural evaluation principle of development activities financed entirely from domestic sources to the evaluation practices of development activities financed from EU funds.

Nevertheless, it was confirmed that the result-oriented indicator system was not fully suited to the comparison of objectives and results, and with *the focus*

being on fast-tracking payments, often less attention was paid to whether the funds were being efficiently used.

In addition to making sure that no funds are lost, the compliance with regulations is achieved, and the strategic goals are realised, a project's sustainability should be considered equally important. At project level, the maintenance requirement could not be applied. It is often planned that the achieved result will be maintained by using government budget surpluses. The compliance with the maintenance requirement of investment projects is hindered by changes in the economic environment (ÁSZ 2002–2012).

The survey's results show improvements in the application and methodology of evaluation and monitoring. However, it is also obvious that there are still methodological and practical issues in the field of project sustainability evaluation.

Research method

This research was aimed at exploring what was happening during the completion of the projects, what were the main characteristic features of their fulfilment and what was the evaluation basis of the sustainability requirements. After defining the problem, the next step was to decide which respondents were to be surveyed, the way in which they should be approached and the method of data collection.

By primarily evaluating ex-post projects, I intended to have an overview of the extent to which projects had realized their objectives and whether the sustainability of projects had been examined. In the case of projects with cultural aims, according to the preliminary expectations, sustainability was to be evaluated not only in the planning phase, but also after the actual completion of the projects. Based on a few years of operation, it is possible to assess whether a project's effects are sustainable beyond the implementation phase.

By using materials published on the Internet by the beneficiaries of EU funded projects, a database was created containing all those projects with cultural aims. The following sources were used:

- the "Széchenyi 2020" page of the governmental website "MAGYARORSZÁG.HU",
- the homepages of county seats (capitals),
- the homepages of the Forster Gyula Centre for the Protection of the

National Heritage, the Hungarian National Museum, and the Hungarian National Asset Management Inc.,

- Internet search engines.

The information on these homepages varies in terms of quality. In some cases, the entire documentation of the project is virtually available, and in other cases, only its title. The database assembled in 2015 consists of information on 125 projects related to culture, cultural heritage and cultural tourism development. The projects included in the database have the following characteristics:

- they implemented complex, culture-related development objectives,
- cultural impacts and objectives are indirect and cannot be delineated,
- in 94 cases out of the 125 investigated, the goals are tourism-related to demonstrate the projects' sustainability, positive social, economic and financial impacts,
- with few exceptions, information was available only regarding projects that had just been concluded, were ongoing or still in the planning stage,
- the beneficiary is most often a municipality, a company or an institution established by the municipality to engage in development activities, state-funded institutions responsible for asset management or heritage protection,
- municipal organizations that deal with projects operate in diverse forms. Since they differ in terms of organizational structure and in the way in which they assign responsibilities, it is difficult to identify the competent organizational unit and individual.

In the questionnaire, in addition to the basic project-related information, such as project budget, the amount of funding received and its composition, questions about sustainability, unused real estate, and the project's quantifiable results were also included. The respondents were also asked about the monitoring process following the completion of the projects.

Many among those invited to respond reacted only after several reminders, or not at all.

The project indicators were provided in the surveys by the respondents, whilst the qualitative analysis rests on the indicators included in the projects' funding contracts.

Data and results

Out of the 125 questionnaires sent out, 36 (28.8%) were returned. In the light of low survey response rates in general, this ratio is acceptable, although

the quality of the answers varies. The survey may be considered as a pilot since the number of respondents is low, but it is a cornerstone for a survey covering a later period. Should it be possible to reach a wider circle of the people surveyed, it would be somewhat easier to draw quantitative conclusions from their responses.

Five of the 36 projects were completed by using domestic sources, but with tiny budgets compared to EU-funded projects. The latter, on average, had a budget of close to two billion HUF with, on average, 87% of the funding coming from the EU. In six cases, the project was fully funded by the European Union.

Looking at the actual completion period of the projects, 31 projects were completed in the period 2010–2015, the other five projects having been carried out by using labelled support funds between 2005 and 2008.

Looking at the types of programmes within which the projects have been carried out, 26 out of 36 projects were completed within the framework of the Operative Programmes of the New Hungary Development Plan, and five were financed from different sources (Norwegian Fund, South East Europe Transnational Cooperation Programme, Hungary-Slovakia Cross-border Co-operation Programme, European Regional Development Fund Central Europe Programme). Four projects were completed by international consortia.

From the perspective of geographical distributions, eleven projects were located in South Transdanubia, five in Central Transdanubia, and the remaining projects were spread all over the country. It should, however, be noted, that, curiously, none of the returned questionnaires were from Budapest.

The project objectives, either directly or indirectly, almost exclusively relate to cultural tourism.

Eight city-centre restoration and tourism development projects form one group. Such investments are difficult to evaluate in terms of sustainability since, as public places and certain monuments have been restored, they are sustainable. An increase in visitor numbers and in spending by individual visitors may generate additional income, just as well as those elements of the projects which gave birth to more services and businesses. Hence there are no direct, measurable benefits, but only the tourist-attraction value of the restored sites and increases in visitor numbers. However, the monitoring of these indirect results is rarely found among the projects' indicators.

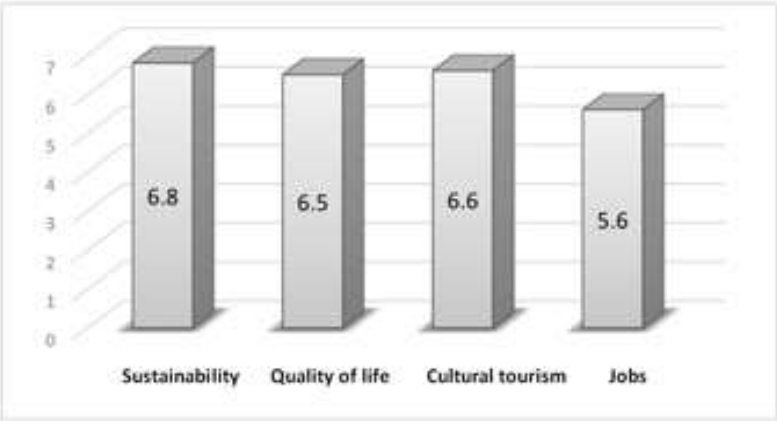
Eleven projects planned to increase visitor numbers by simultaneously restoring castles, fortresses, and monuments, by building visitor centres, and developing related services and exhibitions. In these cases, the increasing visitor numbers often appears among the targeted results and so it can be monitored.

Infrastructure development was targeted in five projects.

The intention to create new jobs is also often mentioned, although the total number of jobs created by these projects is not significant.

Consequently, the beneficiaries and those maintaining the results or the output in whatever form have little experience regarding the interval following project implementation, both regarding project sustainability and achieved results as measured by indicators. Apart from the indicators, the projects are not evaluated quantitatively, and so I asked for the opinions of those who had implemented the projects. They were requested to rate a *project's sustainability* and its impact on the *quality of life, cultural tourism* and the *number of jobs* on a scale of 1 to 7 (Figure 2). The answers given about *sustainability* can be grouped as follows:

- The majority of respondents gave maximum scores (average: 6.8) meaning that, in their opinion, the project results were sustainable.
- Only six respondents answered "yes" when asked whether the donor had monitored sustainability. In the other cases, the results had not been monitored, partly because little time had elapsed since the physical closure of development activities.
- Several respondents consider sustainability problematic since the economic and financial environment is subject to unforeseeable changes. Sustainability is, for example, adversely affected by increasing costs.
- The majority of respondents were, however, optimistic about their projects' sustainability. They foresaw increasing incomes and decreasing costs. A larger number of attractions and improved tourism-related services mean more visitors, which in turn means higher incomes to cover their costs.
- Energy-efficient operation, and energy and infrastructure-related investments also decrease maintenance costs.
- The obligation to create and maintain new jobs means additional expenses in wages and salaries and social security contributions, which are difficult to cover. The operation of renovated sites further increases costs but does not generate enough income.



Source: author's own research

Figure 2. Assessment of the analysed projects' sustainability and their impact on the quality of life, cultural tourism and the number of jobs (on a scale of 1 to 7)

One respondent said that the sustainability of the project's results, the achievement of the expected outcomes as measured by indicators was highly questionable, primarily due to an increase in operating costs. Following the granting of funds, there was a significant drop in visitor numbers, primarily due to the economic crisis which began in 2008. This external risk factor was not foreseeable, and the base data pre-date 2008. The project funding agreement was signed in 2010, but, due to delays, the project was closed only in 2014. In the meantime, the sum granted decreased by more than 10%, while the indicators remained the same.

In another case, the respondent said that the reconstruction and content realised as a result of the project were not enough in themselves and that the attraction needed to be continuously renewed for it to draw enough visitors to become profitable.

For the sake of adequate maintenance and continuous renewal, it is also important to choose the right operator. In the case of projects carried out by a consortium, following the closure of the project, it may cause problems if the main beneficiary, who is taking the highest risk, does not have enough information about the other members of the consortium.

In the case of in-depth evaluations, evaluators compare ex-post information with the ex-ante CBA. In the case of the projects that were included in our survey, they did not even attempt to make such analyses.

Regarding *unused properties*, we assumed that, within the framework of these projects, investments are made without any plan concerning the fate of the properties which are abandoned. They are not given new roles, their maintenance costs are not taken into consideration, and they cannot be sold as the income would reduce the amount of the funding received. Concerning the 36 projects, 12 abandoned properties were mentioned, out of which seven were linked to the "European Capital of Culture, Pécs 2010" project. The issue of unused properties has not been addressed to date.

I grouped the *indicators* based on their main characteristics. Next to the name of the group, in brackets, the number of projects is mentioned, where the given indicators were used.

Output indicators:

- Size and capacity of the new building, part of building (8)
- Size of the renovated building (5)
- Size of the area, the number of buildings made accessible to people with disabilities (6)
- Number of cultural heritage buildings, monuments (6)
- Number, size, and capacity of venues created for events, educational and communal purposes (5)
- Number and size of buildings that have been saved (1)
- Size of the area that has been developed (5)
- Virtual information points created (2).

Result indicators:

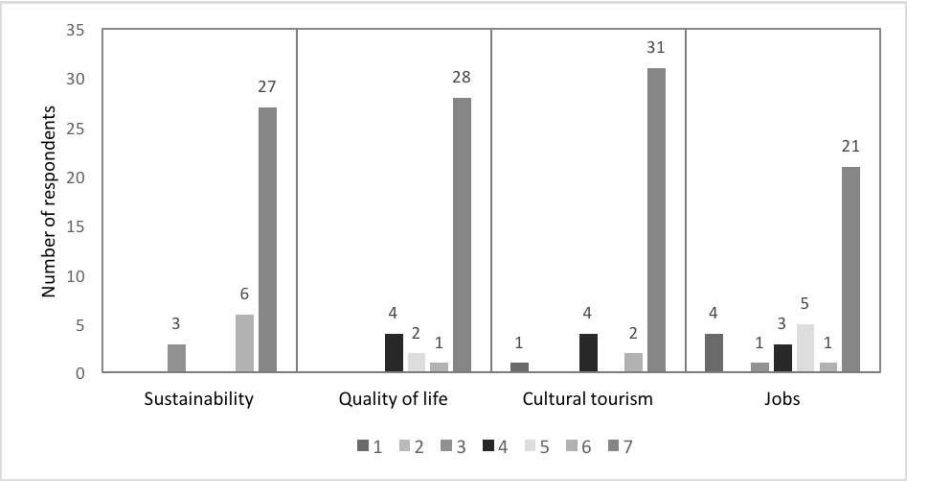
- Increase in income due to funded tourism service (9)
- Number of jobs kept or created for women or people with disabilities (19)
- Number of visitors and the increase in visitor numbers at the funded tourist attraction (17)
- Induced investment – private investments invited, new businesses established as a result of the programme (7)
- Network developed in collaboration, professional relationship, partnership (2)
- Number of institutions, municipalities, beneficiaries, residents affected (7)

- Number of promotional and marketing activities (3)
- Number of heritage attractions, cultural programmes and paying participants (6)
- New roles of the city (3)
- Number of satisfied residents, level of satisfaction with services (5)
- Nights spent and turnover in tourist accommodation establishments (2)
- Size and capacity utilization (rate) of commercial units, number of services offered (6)
- Renewable energy generation, energy saving, reduction in greenhouse gas emissions (2).

There were no indicators included in the funding agreements which would have permitted the direct and exact evaluation of sustainability. However, there are a number of result indicators which quantify an instant, direct impact – those factors which have a positive impact on financial sustainability: increases in income, increases in visitor numbers, induced investments, increase in the number of nights spent in tourist accommodation establishments, and the number of paying participants at cultural programmes (6).

A positive impact is only presumed since the costs associated with a given indicator are not known. However, it can be assumed that the increases in visitor numbers and income have a positive impact on financial sustainability. I found no example of a complex sustainability evaluation, where associated costs and funding requirements were taken into consideration. The evaluation is one-sided since an increasing number of paying programme participants is of little avail if the costs of the programme's implementation unfavourably affect financial sustainability. Long-term maintainability is not investigated based on the quantified indicators.

Figure 3 shows the distribution of opinions regarding the project's sustainability, its impact on the quality of life, cultural tourism and the number of jobs on a scale of 1 to 7. In the respondents' opinion, the projects have the most favourable impact on cultural tourism, which is understandable considering that these projects are related to tourism. Three-quarters of respondents did not doubt that the projects were sustainable since they gave a maximum rating (7) to sustainability. The lowest rating given was also relatively high (5). The projects have the least impact on the number of jobs.



Source: author's own research

Figure 3. The distribution of opinions regarding the analysed projects' sustainability and their impact on quality of life, cultural tourism and the number of jobs (on a scale of 1 to 7)

In summary, the cultural impact of development activities cannot be separated from the project's other, primarily tourism-related elements and their impact.

Conclusions

A significant number of my findings, regarding the evaluation and sustainability of projects, have general relevance; they are not solely characteristic of cultural projects. However, in the case of cultural projects, both in the planning and assessment phase, sustainability should be complexly evaluated, taking into consideration both its social and financial aspects.

In the preparation phase, the feasibility study serves as a basis for – and is part of – the proposal; it demonstrates that the given project can create a system, which is operational on the long term and can maintain the targeted effects. The demonstration of quantifiable results related to project sustainability is a key element of project planning. The project cannot receive any funding without meeting the sustainability criteria of a complex interpretation of benefits generated by the project and their presentation at the level of the society as a whole.

However, following the conclusion of the project, funding agencies fail to carry out a complex evaluation of the sustainability principle. The system that has been set up is not comparable – or at most only partially so – to the one described in the feasibility study due to frequent structural changes and frequent changes in funding.

Ex-post information is not compared with the ex-ante CBA. Only those quantitative indicators are monitored which are included in the funding agreement. In addition to this, the collection of data that would facilitate monitoring should be required of beneficiaries. Whether the project can operate without any additional intervention or funding is not monitored either, even though it is a relatively easy-to-check financial sustainability requirement.

Monitoring is carried out by primarily using administrative and not substantive methods. According to respondents, sustainability is not monitored. This is, in fact, not strictly true since those who are responsible for monitoring activities do check whether the project has been realised, whether the result of the investment is tangible, whether what has been realised is continuing and operational and the established institution is operating. However, they do not check whether these are done according to the original plan.

The indicators, which serve as a basis for the project monitoring and evaluation, are agreed upon in the funding contract. Even though the sustainability of cultural projects is considered to be important, these indicators are only very indirectly suitable for the evaluation of project sustainability. On the one hand, they do not tell everything about the project's performance, while, on the other hand, only those indicators are evaluated that are included in the contract and are sometimes not correctly chosen. As a result, following implementation, they cannot monitor whether the project's maintenance is in line with the social and financial sustainability objectives that were laid down in the preparation phase.

According to the respondents, none of projects' indicators measures financial sustainability, and the ones that measure the social aspect do so only indirectly.

The utilization of European Union funds and monitoring their sustainability are problematic in part due to the lack of objectives that can be properly quantified, and hence their realisation is difficult to monitor.

In the case of empty and unused properties, there is a need for change in the European Union practices, according to which when such property is sold the income generated by the sale reduces the number of funds received. Empty

properties mean a type of capital loss for the beneficiaries: properties found at key locations in cities, towns, villages, etc. are deteriorating as they are allowed to stand empty, and without any function, a new role would presumably mean extra costs for the operator.

It is a paradox of project and programme evaluation that we can get the most information from those actors whose objectivity is questionable since beneficiaries and project managers are interested in proving that their projects are successful. A more comprehensive quantitative evaluation than using the above indicators is not possible because of frequent structural changes, frequent changes in financing, and a lack of information gathering that could serve as a basis for the evaluation.

Ultimately, in the case of cultural and cultural-tourism projects, sustainability was not investigated thoroughly enough during the evaluation of project results considering its significance. It did not appear among the quantifiable results and following the projects' implementation. The numerical ex-post evaluation of the sustainability was done only indirectly, and no signs of complex ex-post evaluation could be detected.

Measurable sustainability-related criteria should be included among the indicators and it is also necessary to develop the evaluation methodology. As sustainability, owing to its importance, appears among the numerical indicators not only indirectly, its ex-post evaluation is essential.

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