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**Estimating the impact of the university
on the local economy
Case study: Babeş-Bolyai University in the
city of Cluj-Napoca**

PH.D. THESIS SUMMARY

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Higher education funding, university impact, local economy, students' expenditure, Babeş-Bolyai University

Introduction

University, more than any other institution or organization, has the capacity of influencing the socio-economic development of the area in which it is located (Armstrong, 1993; Bleaney et al., 1992; OECD, 2007; Pastor et al., 2013; Schubert and Kroll, 2016; Valero and Van Reenen, 2016). As a large-scale consumer of inputs (labor, goods, services) and generator of outputs (skills, know-how, local attractiveness), the university cannot fail to be a major factor in metropolitan economic development (Felsenstein, 1996, p. 1566).

The mark left by university upon a local community can be observed under various forms, be they tangible and intangible, overt or covert, dependent on several factors, internal and external to the academic environment. Warsh (2006) asserts that it is enough to take a look at any map to observe that cities housing universities have remained on top or renewed themselves around the world; the idea that knowledge is a powerful factor of production requires no more definitive proof than that.

The complexity of the impact and role played by university in the socio-economic environment has generated countless discussions and debates, yet surprisingly, they have made the object of not so many quantitative studies, especially destined to measuring and quantifying it. The higher education system in Romania, in its attempt to align and attune itself to the European higher education system – specific to the Western European countries – is best characterized by its perpetual and mostly incoherent reforms, and by its overwhelming unpredictability.

In the absence of scholarly undertakings of assessing the role, importance, impact of Romanian universities upon the local economies of their host-cities, I aim to tackle the complexity of Babeş-Bolyai University's economic impact and its contribution upon the local economy, through the spending generated by its presence in Cluj-Napoca.

Research motivation

The 2014 *Economic Impact Guidelines* handbook, carried out by the *Association of Public and Land-grant Universities* with the *Association of American Universities*, states that universities keep so focused on learning, research, and engagement missions, that they fail to lend proper attention to the contributions brought to the economy and, on a wider scale, to the socio-economic context. Put simply, the guide postulates that universities no longer have the

capacity of showcasing what they actually represent within the host-city, from an economic standpoint.

In the specific case of Romanian higher education institutions, this assertion is just as applicable. Moreover, accomplishing their mission becomes an ever more unattainable target when facing an incoherent and deficient legislative system, chronic underfunding of higher education, and negative demographic evolutions. Universities' capacity to study, measure, and communicate their contribution to local and regional economic development becomes, thus, increasingly improbable.

The main line of reasoning behind tackling this topic consists in the absence of impact studies generated by higher education institutions, as well as the lack of debates on this subject in the Romanian public sphere. The absence of such studies does not just overlook the universities' economic role and contribution into the host-community, but also leaves unexplored several aspects linked to higher education, such as the structure of spending made by the university, students' living costs, migration and tourism generated by the university, the economic burden for sustaining higher education, and – most importantly – the distribution of this burden between the public and the private sectors.

The largest Romanian cities hosting universities (Cluj-Napoca, Bucharest, Iași, Timișoara) represent the most suitable environment for carrying out such studies, as they are dealing with the perception of the students' importance for the cities' economies, even if left unmeasured. What is more, these university centers host nationally prestigious universities, and their appeal becomes evident not just through the numbers of student applicants, but also through their geographical pool of origin.

The most representative case consists in the presence of the Babeș-Bolyai University (BBU) of Cluj-Napoca, which encompasses half of the students in the city, who altogether make up over 20% of the city's population. BBU students originate from all Romanian counties and abroad, and account for a permanence in Cluj-Napoca of ten months per year, on average. Moreover, BBU ranks among the most important employers in Cluj-Napoca, and the university's budget could place it among the top ten companies in town, according to its turnover.

The issue's topicality stems from the realities of Romanian higher education, undergoing a fairly difficult time because of legislative inconsistencies, the national decrease of student

population, and the already chronic underfunding. Deemed a national priority, both by the Education Law and by gatekeepers – on a discursive level –, education – especially higher education – does not benefit from proper attention, which is shown in the allocation of insufficient funds, legislative and procedural changes, and especially the lack of relevant empirical studies regarding its importance, role, and impact.

Practices of assessing the universities' contribution within the local and regional economies, while enshrined and well-known in EU countries and USA, are absent from the Romanian setting. The direction assumed by the EU, and Romania implicitly, as a member state, targets the development of an economy based on knowledge and innovation. One of the five main objectives present in the Europe 2020 strategy aims directly at education, and one of the two indicators for measuring this objective endorses higher education; more specifically, that by 2020, at least 40% of the young generation in the EU have higher education degrees.

Research objectives and hypotheses

The main scope of this research is, on the one hand, to highlight the complexity of the impact generated by higher education institutions upon the economy, in order to initiate such discussions in Romania, and on the other hand, to elaborate a case study to assess the impact of the largest Romanian university, BBU, upon the local economy of Cluj-Napoca.

From a conceptual standpoint, the study aims to:

- Present the evolution of the main ideas contributing to the development of impact studies;
- Present the complexity of impact and endeavors of measuring it;
- Present the main established mechanisms and methodologies for assessing the economic impact of universities; and
- Draw attention to the concern of private versus public investment in higher education and the efficiency of various funding mechanisms.

From an empirical standpoint, the study aims to:

- Present the main challenges of the Romanian higher education system, due to demographic and, more prominently, economic evolutions;
- Quantify the contribution of the largest and most prestigious Romanian university into the host-city's economy;

- Quantify BBU's impact upon local economy both in a direct manner, and assess the impact in its indirect and induced form;
- Signal the importance of impact studies through the findings from BBU and the problems left unsolved due to the absence of such studies.

Research hypotheses:

1. BBU, through the total spending generated by its presence in Cluj-Napoca, exerts an essential role in the city's economy, determining an direct annual impact at least double than its spending budget for that year;
2. BBU students' spending in one calendar year levels BBU's entire spending budget for the same year, thus doubling the direct impact upon the economy of Cluj-Napoca, as estimated solely based on the university's spending;
3. Visitors of Cluj-Napoca owed to the presence of BBU, during admissions, represent an important component of the impact upon local economy, comparable to other impact generating agents, such as students' and university's spending, and remain a segment of spending difficult to trace, due to their short and unrecorded local presence;
4. Visitors of Cluj-Napoca owed to the presence of BBU, as visitors of its students, represent an important component of the impact upon local economy, comparable to other impact generating agents, such as students' and university's spending, and remain a segment of spending difficult to trace, due to the impossibility to record their local presence;
5. The structure and contribution of different impact generating agents to the total impact within the economy will show the importance of quantifying each agent's spending, and drawing comparisons between their proportions should be featured in the higher education system;
6. Applying impact multipliers will double the total amount obtained as direct impact, thus estimating the total economic impact that will include indirect and induced impact, tripling the direct impact.

Methodology

In developing the present thesis, several research methods were employed. The first phase consisted in documentation, selection and systematical analysis of the wide array of

references, as well as tracking legislative procedures on a national, as well as European scale. This documentation served as a basis for introducing and presenting the Romanian higher education system, its positioning within the European context by highlighting recent challenges, chiefly those generated by the recent economic crisis.

Moreover, the references from international literature fundamented my overview of the evolutions of concepts such as impact and contribution of universities into the economy, as well as conceptual bases and methodological frameworks I further capitalized on in presenting theories, as well as fundamenting the practical section of the thesis.

The practical part was elaborated as follows:

- Content analysis through collecting, processing, and analyzing data offered by BBU for constructing the working method;
- Effecting a sociological inquiry through conceiving and implementing a survey in order to generate new data and information;
- Statistical analysis of data collected through the survey, result processing, and generation of new data and information;
- Analyzing the data in order to generate general, comparative and highly significant and relevant information; and
- Using economic modeling, respectively the Input-Output analysis in order to estimate the multiplication effects within the economy of the initial direct impact.

Thesis summary

Chapter I. Romanian higher education funding in the European context

The first chapter presents the specificities of the Romanian higher education system. Starting from corresponding legislation, the chapter documents the funding dimension of public universities, the form, structure, and size of higher education institutions' finances. A stark negative evolution can be observed in regard to the total number of students in Romania. Thus, I identify several trends such as the national demographic evolution and the economic crisis in 2009 – the year that marked the debut of the decline of students' numbers on a national level. Higher education funding is later exhibited in European context, showing

not just a lower level of resources allotted to the education system, but also a year-by-year fluctuation.

Some changes are predictable, other not as much, but when adding a faulty and fluctuating legislation, with vacillate financial support, higher education is weakened on all accounts. Acknowledging education as national priority does not suffice, unless followed by adequate action. Ordinances that change a relatively new law, different and highly unpredictable year by year allocations are just a few of the realities facing the Romanian higher education. Change is pivotal, but it also has to be sustainable, and education must be rethought and restructured on a long term, even more so when we lag so much behind the rest of the EU.

Beyond quantitative strategic objectives, established in order to achieve significant progress in university education, the situation requires configuring qualitative objectives. Progress in terms of quality of the educational offer, a better adjustment to the labor market in order to increase the employability rate among graduates, reinforcing connections, and a better collaboration between the academic and the economic actors are priority objectives that must be put to value in achieving a medium- and long-term strategy for higher education institutions.

The main feature observed in the Romanian higher education funding remains a “top-to-bottom” one – out of the state budget, a specific amount is divided among universities. A “bottom-up” approach would entail a real estimation of costs involved in the education process. Even if carried out according to the number of students, fields of study, language, they only constitute a segmentation of the budget among the actors involved, thus generating perpetual conflict, suppressing meritocracy, generating political dependence, and sentencing the system to continuous underdevelopment. Higher education will only develop and rise to the expectations when investments and results can be seen and assessed on medium- and long-term, and not through an extremely faulty, unsteady, unpredictable short-term funding.

Chapter II. Theoretical frameworks of impact studies of universities upon local and regional economy

This chapter tackles theoretical concepts undergirding impact studies of higher education institutions upon local and regional economy. Approaches presented target not only ways of measuring impact, but also issues such as impact complexity, diversity that fosters

problematic issues in estimating this contribution. Specificities of institutions such as universities generate approaches in regard to the role and importance they engender or are able to engender within a city.

Universities, through their contribution to training human capital, through the research it carries out and its direct involvement in innovation, play an even more important role in an economy of knowledge. The role of universities is no longer reduced to education, research and – possibly – public service; universities are increasingly more often assigned the role of catalysts of local and regional economy development (Drucker and Goldstein, 2007; Steiner, 1987). This *third mission*, beyond the two classical – education and research – missions, gets increasingly more accommodated among higher education institutions.

In terms of short-term and demand-side effects impact, the university participates directly in the economic life of the host-city: it shops from local suppliers, has employees it compensate financially, attracts students who – during their studies – become city residents (Pastor et al., 2013). Moreover, it also attracts tourists, such as potential future students, relatives and friends of students, participants to university events. Estimating the universities' contribution through these factors that are directly attributed to universities may prove a more feasible and pragmatic approach.

Two methodologies used in assessing impact are further detailed. The first one (Caffrey and Isaacs) is a pioneering model dating back in 1971, still used in case studies and estimations of universities' contributions into local economies. The second (Pastor et al.) represents a more recent methodology, used by universities in Spain, and its validity is given by the ten economic impact studies carried out by Spanish universities during 2008 – 2014 period.

The number of impact studies is rather reduced among Romanian companies as well, which is just another proof of overlooking the importance, role, and impact of higher education institutions. Beside some comments on the importance of students in certain cities, especially in Cluj-Napoca, a clearer estimation of their contribution to the local economy has not been yet carried out. The complexity of the economic impact runs the risk of residing in a series of achievements with no real echo among local and national gatekeepers, civil society, as well as the media. A constructive approach of the economic importance must be launched, and estimating a short-term, demand-side impact – as presented in the methodologies above, but adjusted to specific needs –, constitutes the best strategy.

Chapter III. Estimating BBU's direct impact upon Cluj-Napoca's economy in 2015 study

Starting from international methodologies, I advance my own method in order to assess the impact of BBU upon the economy of Cluj-Napoca city. The methodology aims to be as clear and easy to replicate as possible, and based on few explicit assumptions. The methodology also aims to identify and quantify the total impact of BBU in the economy of Cluj-Napoca city, on a short term and on demand-side. Short term means one calendar year, and this reference year is 2015. On demand-side, as literature agrees, consists in the spending generated in the local economy due to the presence of the university.

Thus, the methodology engaged in quantifying BBU's impact in the economy of Cluj-Napoca city in 2015 encompasses the following aspects:

1. The first methodological aspect consists in making a distinction between the total impact and the direct impact. The direct impact represents direct spending generated by the presence of the university in a city, respectively the first-degree shock generated by the initial injection of demand of goods and services through spending made by the generating agents.
2. Identifying impact generating agents, so who exactly effects the spending. Four such agents are identified:
 - a. The university – through its own spending, minus employees' salaries;
 - b. University employees – through their spending;
 - c. Students – through their spending in Cluj-Napoca city, throughout their studies; and
 - d. Visitors to Cluj-Napoca city due to the university. This category targets students' visitors, and visitors owing to college admissions sessions.
3. Quantifying and accurately estimating the total spending of each individual agent. The total direct impact represents the sum of these agents' spending, during 2015. Spending is divided into categories, so that the economic sector benefitting from it can be easily identifiable. Universities' spending is estimated based on the budget execution report for 2015. The assessment of students' spending is carried out through a sociological inquiry. The survey comprises both questions aimed at quantifying their spending and estimating spending of the two visitors' groups.
4. Excluding from the total amounts those sums that are prone to being counted twice. For instance, students' scholarships paid by universities are student incomes and will

transpare in their spending; administrative and boarding fees are paid to the university by students and will transpire in the university's budget. Besides, amounts that do not qualify as spending into local economy will be excluded, such as state contributions paid by the university for the employees, as well as income tax paid by the employees.

5. Estimating the total impact by quantifying the indirect and induced impact. The total impact represents the sum of the direct, indirect, and induced impacts. The sum of the indirect and induced impact is obtained by applying Π^{nd} degree multipliers to the spending obtained as direct impact. To compute multipliers, the Input-Output analysis is employed, and national Input-Output tables for 2014 – the most recent ones available – are used.

The result of quantifying BBU's direct impact upon the economy of Cluj-Napoca city for 2015 is summarized as follows:

- 847,373,804 lei (190,635,276 euros) were injected into the economy of Cluj-Napoca city due to the presence of BBU;
- 71% of this total is due to students' spending;
- 15% - employees' spending;
- 9% - university's direct spending; and
- 5% - visitors' spending.

The total amount of annual spending of BBU students turned out to be significantly greater than initially presumed. This total attained in 2015 not only leveled BBU's spending budget, it actually surpassed it by over 83%. These results further prove the issue of underfunding higher education institutions in Romania, and substantiate that the economic burden, due to lack of university funds, is passed onto the student, and especially his family.

The salient issue of underfunding is most significantly displayed through estimating students' average spending on various categories. The total annual average spending one can expect, when enrolled as a tuition-paying student and paying rent, is significantly higher, more than double than that of a budgeted student who's boarded in the university's dormitories.

Due to the size of students' total spending, the contribution of visitors through their spending in Cluj-Napoca is relatively modest, of about 5%. These amounts are not negligible, and must be studied as any other touristic phenomenon. These two categories of visitors can

be joined by others, such as visitors who participate in conferences and sports events or other special events organized by the university.

Through the results presented above, the task of quantifying students' spending proves to be of utmost importance, and should not be overlooked by any university. Estimating students' financial effort should be a type of information available by and to any university over long terms, in order to estimate evolutions, open debates on this topic, and offer working options for various strategic directions.

Chapter IV. Estimating BBU's total impact

Estimating BBU's total impact upon the economy starts from data on the direct impact. The direct impact is divided among various economic sectors, on national economy branches that generate spending. Econometric modeling is employed, and the corresponding instrument is the Input-Output analysis, in order to estimate the effect generated in the economy by an initial shock.

Through Input-Output analysis, it is presented and explained the way in which it substantiates the computation of multipliers of indirect and induced impact. For computing multipliers through this analysis, I used the most recent national Input-Output tables, for year 2014, supplied by the National Statistics Institute. In order to obtain accurate results, the analysis is replicated using the Input-Output table for Romania, for 2014 (the last year available), retrievable from the World Input-Output Database platform. The result of these computations amounts to the assessment of the total impact generated by BBU into the economy, in terms of total Output.

The Input-Output analysis presents economic connections between various economic sectors, resulting in a comprehensive image of general balance for that economy. Presenting the complete picture of an economy, one change within the matrix could lead us to estimating changes on the entire economy, with certain indicators of this change.

Thus, in 2015, BBU's total impact is estimated at 3,015,304,198 – 3,331,365,298 lei (678,538,650 – 749,463,510 euros). This interval represents the total impact computed in terms of Output, of money generated into the economy in 2015. The total economy, computed based on two different databases, presents relatively similar results, which substantiates the final result.

Even if the analysis uses multipliers generated based on 2014 – the most recent available – data, this is not a significant limitation. Due to the complexity of the Input-Output analysis, that takes into account the economic structure and flows between various sectors, results cannot vary in a significant manner. What is more, the average inflation rate has been very low the past years, of 0.1% in 2014 and -0,1% in 2015, just like the other macroeconomic indicators, which did not record significant variations between 2014 and 2015.

By applying multipliers generated by national Input-Output tables, the hypothesis that local and regional economy runs according to national averages is engaged. Even though the analysis represents a static image of the impact upon the economy, estimated for a single year, it is the first estimation of the total contribution a Romanian university makes to its host-city's economy – over three billion lei. Due to national Input-Output tables, we cannot certify the amount of the impact solely in Cluj-Napoca or in Cluj county. Finding and developing a method for conclusively estimating the local impact is an objective of future developments of this study.

Chapter V. Is public higher education truly public?

This chapter tackles the structure of economic contribution, based on spending made by different agents. Higher education, declared public and funded through the state budget, does not relieve the student's family off spending, which is a relatively natural phenomenon. What is worrisome, however, is the ratio of economic efforts between different agents. It is a concern debated in international literature, present in reports of international organizations (OECD), yet entirely absent in debates on higher education in Romania.

The size, as well as the structure of spending of different agents contributing to BBU's impact, presents a symptomatic issue for the entire Romanian higher education system and chiefly targets prestigious universities. Chronic underfunding signaled by CNFIS in recent reports becomes increasingly more visible through the structure of spending. Due to the absence of adequate funding, the burden is thus transferred to students and, mainly, to their families.

The lack of impact studies in Romania leaves unaddressed several aspects concerning the higher education system. The report between students' and universities' spending overall, the real cost of attaining higher education, and who specifically bears the burden of this cost represent loopholes that might generate severe consequences, especially on medium- and

long-term. What takes shape in the given situation is the acute necessity for implementing impact studies of Romanian universities as normal practice, happening periodically, based on a methodology agreed upon by as many higher education institutions or university consortia.

The first methodology of measuring the university's impact upon local economy emerged due to a university association – American Council on Education – in 1971; it might be suitable to advance such impact studies within university consortia in Romania. Beyond a better representation of economic realities of universities, more impact studies carried out in relatively similar cities, such as Cluj-Napoca, Iasi, Timisoara, would offer valid information in facilitating such comparisons, through similar methodologies, point out similar issues, and putting them to value through drafting public policy on education, and even more.

Conclusions

Education, declared a national priority, undergoes continuous difficult times and does not benefit from adequate focus. Funding higher education in Romania presents an eloquent image of challenges facing the higher education system and its realities, through the inconsistency of strategies, a defective, incoherent, unevenly applied legislation, and chiefly through an unpredictability of funding amounts. Ranking towards the bottom in regard to the Europe 2020 strategy indicator of higher education and funds allocated towards education compared to the EU average, now more than ever before, these issues must be given priority and addressed in order to identify medium- and long-term solutions.

The qualitative component in funding public universities in Romania must be substantial, predictable, and multi-annual. Only this way the discourse promoting quality in higher education will take shape and the quality of the educational offer will be tackled in a conclusive manner, as well as its adjustability to the labor market through graduates' employability, consolidating connections, and a tight collaboration between the business sector, and especially reducing political influence in the academia. Only in such conditions a better diversification of funding sources for university will emerge, along with attracting and involving the business sector in common projects, collaborations, sponsorship and private donations.

Tackling the impact university generates upon local economy can reveal even more cracks in higher education systems. The underfunding of higher education is most accurately shown through students' expenditure. The lack of funding of universities burdens students

and their families, and costs are transferred from the state onto the household, especially if these costs are not properly quantified and assessed.

The complexity of the impact universities exercise onto local and regional economy makes it even harder to estimate. However, international literature has been tackling this subject for several decades and presents a wide debate, working methods, and case studies. Impacts can be divided and classified, and a case study may estimate this impact in a partial or understated manner, but it may also generate and present various important data. Accordingly, tackling the impact into the economy on a short term and on demand-side, or, otherwise said, the impact of expenditure owed to the presence of the university places into this same context.

University, through its direct spending and paying its employees, has made up in 2015, in BBU's case, only 24% of its direct and total impact. Without quantifying other impact generating agents, the image of this contribution into the local economy would have remained deeply distorted. Completing this image by presenting several impact generating agents presents in a significantly more appropriate manner the university's real contribution into local economy.

The ratio between the contributions of different agents represents one of the most important contributions of this study. Aligned with the concern for the chronic underfunding of the Romanian higher education system, the ratio between students' and university's spending emphasizes the importance of studying this phenomenon in its depth. Impact studies on economy could represent a pivotal instrument in representing realities of the higher education system.

After estimating the total direct impact, its structure through the contribution of each impact generating agent validates the first research hypothesis. Thus, after estimating expenditures of students and their visitors, the total spending budget of the university only amounts up to 34% of the grand total. If we consider the direct impact, when we subtract state contributions of the university and its employees, and any expenditure prone to being counted twice, the contribution of the university through its own expenditure and salaries paid to employees only account for 24% of the total direct impact.

Students' spending represents the most important expenditure component owed to BBU's presence in Cluj-Napoca city. Not only does it level the entire spending budget of the

university – the second hypothesis –, but it is almost double its value (183%). Considering the direct impact, 71% of the total comes directly from students' expenditure. These measurements confirm the two research hypotheses and underline the importance that should be assigned to this component. At the same time, the proportions of these expenditures assigned to students overshadow the spending estimated for visitors, students' visitors, as well as admission time visitors.

Consequently, the third hypothesis is invalidated, as the expenditure of visitors to the city of Cluj-Napoca owed to the presence of BBU – admission time visitors – does not represent a component that can be comparable to other impact generating agents, such as students' and university's expenditure. Admission visitors' expenditure only accounts for 1.1% compared to students' expenditure, 5.3% compared to employees' spending, and 8.2% to university's spending. However, these expenditures are not to be neglected when assessing the impact into Cluj-Napoca's economy. These remain, as assumed in the hypothesis, expenditures that are difficult to track, because of the short and unrecorded local presence of these agents. The survey results show that only 20% of these visitors were accommodated in hotels and hostels during their stay in town.

Cluj-Napoca visitors owed to BBU's presence in the form of students' visitors, through the expenditure they generate, also represent a less significant component than students' and university's spending. The fourth hypothesis finds grounds for partial validation. The expenditures of this visitors' group only accounts for 42% of the university's direct expenditure, 27% of the employees' spending, and just 5.6% of the students' spending. The spending of students' visitors is even more difficult to track, due to difficulties posed by tracking and recording their local presence. The student survey shows that only 9.3% of these visitors chose to stay at a hotel or hostel during their stay in Cluj-Napoca.

The expenditure of students' visitors, however, amounted up to an estimated total five times bigger than the spending of admissions visitors. Were a tourism study due to the presence of the university to be carried out, this information might represent a good starting point. The relatively low proportion of visitors compared to other impact components remains the main reason why other visitors' categories – such as visitors for conferences and other special events – have remained unmeasured in the present study.

The underfunding of the Romanian higher education systems is even more clearly highlighted, when presenting it in this manner. The students' financial effort, disproportionate compared to the university's spending, shows the lack of proper funding allotment destined to students themselves – such as scholarships and social aids –, the lack and acute need for investments in social infrastructure, such as university dormitories. This validates the fifth research hypothesis, referring to the importance of quantifying each agent's spending, and comparing their proportions displays characteristics of the higher education system.

The task of quantifying students' expenditure, based on these estimations, remains a crucial one, and should not be overlooked by either higher education institutions, or state institutions. Students' financial effort must be acknowledged, easy to estimate, and to place among available data on different universities in various cities, along with changes in time and predictions of future evolutions.

Total Output multipliers computed for the national economy level in 2014 have an average value of 2.5. However, different multipliers computed at the level of the 10 economic sectors and applied to the initial spending vectors do not only double the direct impact estimated initially, but they increase it by over 3.5 times. The sixth and last hypothesis is thus validated, and BBU's total impact for 2015 accounts for over 3 billion lei.

Future directions

As the very first research of this kind among Romanian universities, there are plenty possibilities of developing such studies. Replicating the study for a different reference year, and regularly undertaking such an analysis would produce relevant data not just about the university's impact onto the local economy, but also changes that might occur on a yearly basis.

Replicating this study for a different university, in a different city, would generate an important comparative source of data obtained for this research. If there were a possibility to compare not just the amount of the total impact, but also its structure, the importance of each impact generating agent, the features of the Romanian higher education system would be clearer. Some cities known as university centers – such as Iasi or Timisoara – display some fairly similar features to those of the academic environment in Cluj-Napoca. A similar research could generate important data validation for conclusions obtained in the case of BBU's impact in the economy of the city of Cluj-Napoca. Moreover, replicating this research

could involve several universities. A group of universities hosted in the same city can estimate the common impact generated onto the local economy. It is the case of Cluj-Napoca's academic environment, and the level of representativeness would surpass 90% if three other universities in town would be coopted for a study.

The methodology used in the present study aimed, from the very start, to be as clear as possible, in order to easily replicate the study. However, the section of estimation of the indirect and induced impact can represent a way of developing this kind of research in the future. Finding and/or developing methods of better geographical anchoring of these impacts perpetuated into the local economy are part of this set of future directions for the present study.

Due to using the national Input-Output tables in the Input-Output analysis, the total impact is presented in terms of Output. Thus, another future direction could be estimating the total impact in terms of income, of added value, and employment. Regionalizing Input-Output tables, finding methods for estimating impact multipliers that are more representative for the characteristics of the economy of the study area, as well as income and jobs multipliers in that geographical area could also represent such future directions for studies.

Based on this study, I aim to formulate suggestions towards BBU leadership. Among the most important ones ranks the need to quantify the students' economic effort, in a continuous way. Identifying the structure of university's employees' spending by carrying out sociological inquiries could also generate important information, and not just for local economy impact.

The impact of the university in local economic development is a deep and multidimensional one, but the real engagement of the university, as the APLU guide suggests, must be established after the university knows, measures, and communicates its role. Drucker and Goldstein (2007) and Steinner (1987) argue that starting with the 1980s, universities in developed Western countries, especially USA, have taken on an active role in economic development. In Romania, universities must start to measure their role and contribution to the economic life of the community, in order to engage in sustainable, long-term development.

“Social scientific research is and always will be tentative and imperfect. It does not claim to transform economics, sociology, and history into exact sciences. But by patiently searching for facts and patterns and calmly analyzing the economic, social, and political mechanisms

that might explain them, it can inform democratic debate and focus attention on the right questions” (Piketty, 2015, p. 16).