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Competition and Controlling in Higher Education, a Crucial Segment of the Public Sector

SUMMARY: Among the diversified areas of controlling, this paper focuses on the role of financial as well as cost and P&L controlling – as management supporting tools that are indispensable for the successful governance and efficient decision-making mechanisms of entities operating in a competitive environment – in the Hungarian public sector. The basic question is to what extent market competition is present in the life of organisations fulfilling community tasks, which needs to be and may in fact be answered by developing either strategic or tactical or operative management functions and controlling. As far as higher education is concerned, it can be said beyond doubt that as a result of market competition – which has intensified in Hungary as well as internationally – the processes that lay an increasing emphasis both at industry and at institution level on the role of strategy building and planning, including performance measurement at entity as well as organisational unit level, strengthening the role of controlling, have started. It can also be seen that in the management supporting role of controlling tools, the cash accounting of the budget still plays a dominant role as compared with accrual accounting, the underlying cause being the different characteristics of management of profit-oriented companies and of organisations spending budget allocations, and the different proprietary attitudes of these two types of businesses.

KEYWORDS: financial controlling, cost and P&L controlling, budget allocation management, accrual accounting, modified cash accounting based on the performance principle, budget planning

JEL CODE: M41

There is more and more talk about the role of an efficient state, and the requirement of fulfilling government functions economically, whereas the proper fulfilment of tasks in accordance with the laws and the provisions of the institution's deed of foundation still has predominant significance for the entire budgetary sector. The reduction of accumulated debts is formulated as a general requirement towards the management of budgetary or-

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ganisations, as well as accurate reporting and bookkeeping, and the reliability of institutional forecasts. (Banai, 2016)

THE STRENGTHENING OF COMPETITION AND A MANAGEMENT APPROACH IN THE LABYRINTH OF OVERREGULATION

The functionalities of the state are implemented via complicated processes and the operation of complex organisations, and the resources

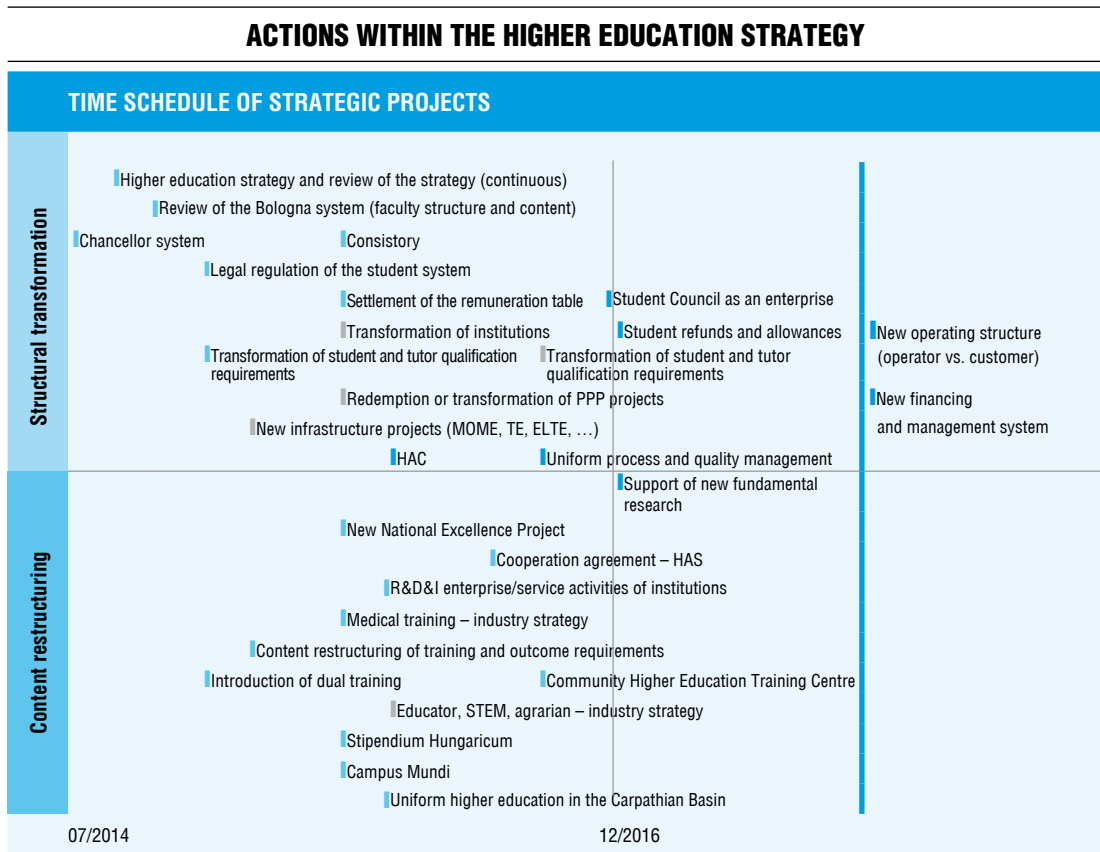
available to them are limited, therefore transparent economy has an increasing significance for the managers of the organisations as well as the groups of stakeholders providing such resources. (Szekeres – Ecsegi, 2014) As regards the public functions to be performed, there are of course very significant differences depending both on the nature of the task and on the market environment of operation. *“According to the traditional school of public administration, the purpose and the set of tools of the organisations are granted externally (formulated in their deeds of foundation and in the laws), and performance evaluation should also serve this (if anything at all), i.e. compliance with the rules (bureaucratic control). As they frequently have monopoly in their respective areas of service, in their case the competitive strategies customary for business organisations do not make sense either. It is not hard to see that higher education institutions – that traditionally operate in heterogeneous ownership structures, and are rather influenced by the spirituality of the founders and the professors than excelling in regulatory compliance – have by now got even farther from this schematic idea.”* (Drótos, 2010) The question in 2016 is how far higher education has got from traditional bureaucratic control, and to what extent management approach has appeared in the state higher education industry – a sector exposed to both domestic and international competition – and in its institutions, and how all this relates to the expected regulatory compliance. One may also ask the question to what extent an efficient and compliant management can be supported by the operative controlling toolkit, whether on an accrual or cash basis.

Two years have passed since the adoption of the industry strategy “Gear Shifting in Higher Education” on 22 December 2014, and three years since the introduction of an accrual accounting system in budgetary institutions. The industry strategy provides guidance for 15 years, determining objectives and

tasks that are necessary for the development of a competitive and performance-oriented domestic higher education. The strategy can be termed “gap-filling” by all means, even if there are opinions that it lacks the “features of a good strategic plan”. (Barkonyi, 2014) The major objectives of the concept are to create cooperation and competition within and outside the system of institutions, develop an educational structure adapted to the expectations of the labour market, establish a world-class higher education based on academic excellence, develop a university research background supporting the innovation capacity of the economy, and establish a system of institutions enabled to ensure the implementation of all this. (Palkovics, 2016) *Figure 1* shows the actions attached to the strategy and their implementation.

Apart from the industry strategy, the institutions prepared their medium-term (5-year) projective Institutional Development Plans as well, which were accepted by the operator in May 2016. The Institutional Development Plans aim to record and approve the target system and actions of the institutions, and they also play a role in the complex rating of the activities of the rector and the chancellor, who participate in the management of the institutions in accordance with the restructured institution governance model. The emergence of the Consistory was another change in the decision-making mechanism of the institutions of the industry, which has a declared role fundamentally in laying the foundations for strategic decisions. In the scope of this, the 5-member Consistory – with 3 external members, plus the rector and the chancellor – exercises preliminary right of agreement particularly in respect of the Institutional Development Plan, the budget, the annual report, the asset management plan, and in the event of the foundation of or acquisition of interest in a company.

Figure 1



Source: Palkovics, 2016

According to the evaluation of the operator, the new governance system of state-owned higher education institutions is working; however, fine-tuning is needed by all means, in the scope of which a motivation system should be developed that is able to strengthen the readiness of the rectors and chancellors to cooperate, and the activities of the consistory and the chancellor also need to be harmonised. The range of information available on the institutions should be widened and deepened, to serve the information demand of the operator (owner), based on a reporting service adapted to the individual features of the institutions, but in principle also resting on uniform guidelines. (Palkovics, 2016) At this point, the expectation of the operator in its capacity of owner comes palpably close to

the focus of this paper in the narrow sense, i.e. the topic of controlling. The accuracy of bookkeeping, and the fulfilment of the reporting services on this basis are strict requirements that budgetary institutions, including higher education institutions, are expected to meet in order to ensure that the expectations connected to interim budgetary prognoses can be fulfilled at the level of public finances, the data of public finances become publishable, and the amount of debts traceable, and the country shall be able to fulfil its next reporting obligation towards the EU. (Banai, 2016)

The State Audit Office of Hungary conducted the priority audit on the regularity of the operation of the industry in respect of the period of 2009–2013, of which it issued its relevant reports in 2015, and in 2016 the

follow-up audits of the implementation of action plans took place. In respect of higher education institutions it can be said that due to the nature of their activity and the content of the relevant laws the integrity survey of year 2015 found that public procurements, European Union tenders, the existence of services that are subject to fees and the right to determine such fees in the institution's own competence, the utilisation of real estate property, and the existence of ownership interest, all act as factors increasing vulnerability to corruption. The factors that are able to significantly reduce vulnerability to corruption include the mere existence of SAO audits, the development of systemic risk analysis, the establishment of internal regulations for the protection of whistleblowers within the organisation, and the adequate regulation of the terms of accepting gifts, travels and invitations, as well as of the use of third party expertise. (Warvasovszky, 2016) The goal of the SAO is to make sure that the experiences gained in the course of the audits are utilised by as many institutions as possible, to which they wish to contribute by presenting "best practices" identified during the audits, by the transparency of the reports, by having the audit findings included in action plans and by conducting follow-up audits in respect of these. At the time of writing of this paper, the reports concerning the follow-up audits of some higher education institutions are already available, on the basis of which one may conclude in general that – although in different measures – significant steps were taken at each institution in the period of 2015–2016, available after the closing of the audits, for the elimination of the deficiencies identified in the period of 2009–2013. (SAO, 2016) However, one cannot relax yet, as regular operation also requires compliance with the effective regulatory environment of the time. The continuously changing legal environment constitutes an ongoing challenge for all mem-

bers of the system of institutions. As far as the institutional side is concerned, it can be said by all means that the frequently changing legal background is a serious risk-increasing and competitiveness-decreasing factor. The ever-changing legal environment requires continuous alertness, the permanent task of creating and amending regulations from the internal regulations of the institutions, which at the same time also absorbs considerable resources. There is no way or opportunity to develop stable, well-regulated processes, which are supposed to constitute one of the most important prerequisites not only of the compliant, but at the same time of the efficient operation of the organisation. The impenetrable cobweb of rules, the bureaucratic control of operative activities – going into increasingly minute details – unfortunately greatly jeopardises the very goals formulated in the industry strategy "Gear Shifting in Higher Education", i.e. domestic and international competitiveness and innovativeness, and the operation of organisations is largely crippled by the administrative restrictions, including the licensing mechanisms (that are applied to almost everything) and the purchase moratorium that have existed for years.

To what extent will operative controlling – built onto a dual basis, i.e. cash and accrual approach – as the totality of methodological tools be able to become an efficient management-supporting tool in a strongly competitive environment, and against a perpetually changing overregulated framework?

MANAGEMENT SUPPORTING CONTROLLING TOOLS

The diversified areas of controlling support the management to efficiently implement their strategic and operative tasks. Remaining in the area of higher education, we could dis-

cuss strategic controlling tools as well, since recently mission and vision have been both formulated at the industry as well as the institutional level, in the scope of which the operator and the institutions both conducted a situation analysis. In the course of this, the participants identified future opportunities, applying the methodologies in support of strategy building, such as SWOT analysis, PEST analysis, etc. Despite the topicality of the ongoing strategy building in higher education, this paper examines the role that operative controlling tools play in the industry, among which special emphasis is given to financial controlling, that can be deeply embedded in the accounting information system, and to cost and P&L controlling.

The topic is narrowed down – without disputing its significance – to exclude the area of HR controlling, which could also be an intriguing subject-matter if we considered the importance and motivational role of individual performance evaluation beyond mandatory reporting (e.g. FIR). Article 12 (2) ec) of Act CCIV of 2011 on National Higher Education (the “National Higher Education Act”) provides that the Senate should adopt the principle of distributing income differentiated on the basis of quality and performance. Within a rather narrow range of Hungarian higher education institutions, the internal regulations aimed at the introduction of a performance-oriented, individual motivation enhancing remuneration system have already been elaborated and adopted. Although this paper does not wish to discuss the controlling of investments and projects, we would like to emphasise the importance of these as well, as it is indispensable that sustainable structures were developed as a result of investment activities and in the scope of projects. There are tenders underlying most investments and projects, in the case of which it should be regarded as a key criterion that the funds cur-

rently available should be utilised in the long term. This area of controlling is focused on the issue of return, as well as determining and continuously monitoring the indicators. Return is a rather special factor to grasp, as it is true for the majority of investment and project activities implemented in higher education that future cash flows directly related to the project – an estimated value that is the sine qua non of return calculations – are hard to measure. Just think of a research investment where the use of the instrument for example supports medical education and health care, which means that one cannot talk about the creation of a directly marketable product and sales revenues originating from that after the implementation of the investment. We could go on citing examples for other areas of controlling that this paper will not dwell on, although they indisputably play important roles in serving efficient and effective management with information of good quality; at this point, however, we would rather start discussing the areas of controlling defined as the subject-matter of this paper.

PLANNING AND REPORTING IN THE CASH AND ACCRUAL APPROACHES

As of 1 January 2014, the accounting information system of budgetary organisations changed significantly, in the scope of which in addition to the accounting system, which was previously based on the modified cash approach (hereinafter “budgetary accounting”), the accounting approach based on the realisation principle typical of the private sector (the “accrual accounting”) was also incorporated in the closed, integrated system of double-entry bookkeeping. This dual approach provides a wider scope for controlling as well, as not only the data necessary for financial controlling are available in the accounting information sys-

tem reliably, in accordance with the principles of certification, but also those needed for the measurement of costs and performance, i.e. for the assessment of the profitability of the activity. However, in spite of all this, in 2017, after three budget years, it can still be said that the emphasis in both planning and reporting is on budgetary accounting – although the role of forms of reporting based on accrual accounting has widened –, which means that the management supporting functions of financial controlling are still present more markedly in 2017 than accrual-based performance measurement. It is important to emphasise, however, that although planning and management reporting are fundamentally dominated by the cash approach, the significance of cost accounting is increasing continuously in the area of accrual accounting. As regards higher education, there is special emphasis on the role of the costs of own financing within the institution's financing.

It can be said in general about financial controlling that it is focused on financial planning (in line with the strategy), operative governance serving the implementation of the financial plans, and the evaluation of the financial performance of the organisation. It lays emphasis on the cash requirement and cash coverage of operation, i.e. the making of cash flow plans, and on liquidity management. (Bordáné, 2001)

If one moves from a purely competitive environment towards the public sector, the field of financial controlling is characterised by strict budget allocation management as a feature in respect of public finances as a whole, as well as the budgetary organisations and their different organisational units. Of course when approached from the direction of the budgetary organisations, controlling can be interpreted as a system of management supporting tools within the organisation, at the level of organisational units operating in accordance with the

principle of responsible management. Looking at it from a “bird's eye view”, however, from the perspective of the Hungarian State as an owner, we can talk about “controlling” also when we are thinking of budgetary organisations as the “organisational units” constituting the parts of public finances. From the point of view of the foundations of the public budget and the implementation of the plan, the Hungarian State as the “owner and manager” – similarly to the managers of companies – also needs useful and reliable information on the “organisational units”, i.e. the budgetary organisations, and this information requirement is of course based on a statutory background.

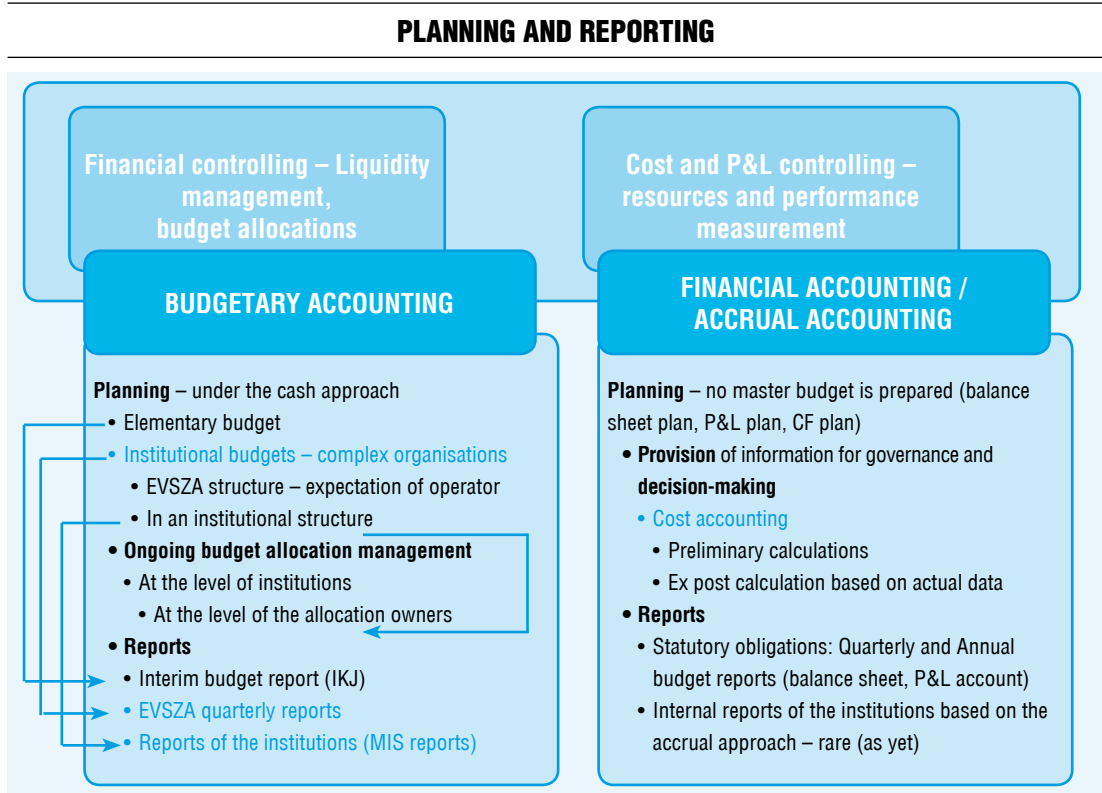
Figure 2 summarises the planning and reporting obligations that organisations in the public sector must meet, and how budgetary organisations – including higher education institutions – lay the foundations of an efficient economy by using controlling tools with a view to increasing competitiveness.

Planning

It can be said that in the case of budgetary organisations planning is basically done on a cash basis, which may be derived from the principles of the central budget of public finances. It is top-down type planning in so far as the elementary budget of the organisation as a whole is planned starting from the central budget of public finances via the operator's decisions. Of course the elementary budget, which includes revenues and expenses according to budget allocations (headings), is not suited to support the efficient operation of a complex organisation – such as a higher education institution – via planning. (*Figure 3*)

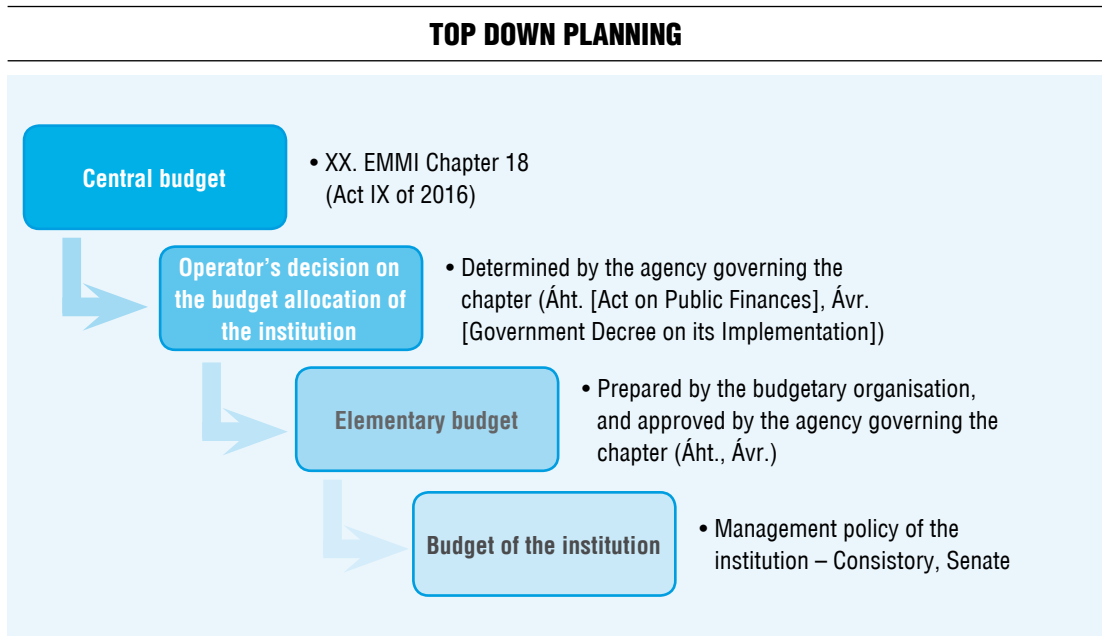
The “internal” budgets of the institutions (the “institutions' budgets”) are supposed to support management in accordance with the organisational structure. As regards manage-

Figure 2



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Figure 3



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ment, in respect of higher education institutions that are maintained by the Hungarian State, a basically identical feature is dual governance, where – in the manner regulated by the National Higher Education Act – employer’ rights and the right to assume obligations are divided between the rector and the chancellor, which may be delegated by both leaders within the organisation. The type of the actual operational and management model to be created within the given institution by decentralised operation based on the principle of responsibility is determined by the organisational structure as well as by the depth and width of the delegation of the principal rights.

The law provides total freedom for the development of the institutions’ budgets; however, as of 2015 the Hungarian State, acting in its capacity of operator, developed a Uniform Management Accounting Report (EVSZA) service, in the scope of which all state-owned higher education institutions must prepare budget plans and quarterly reports on the implementation of these plans, broken down into the major types of organisational units as defined in the National Higher Education Act¹, and send these to the operator. The budget plan to be so developed according to the EVSZA and the quarterly EVSZA reports to be prepared are adjusted to the organisational structure of the given higher education institution, as the concrete organisational units of the given institution may appear as items under the different organisational unit types as per the National Higher Education Act, and the development of a uniform plan and report template with a structure that is nevertheless enabled to manage the differences between the organisational structures of the individual institutions becomes possible.

There is no statutory obligation for planning under the accrual-based approach, i.e. to prepare balance sheet plan and P&L plan, and – although the possibility has been granted

in principle since 2014 – we do not know of any single state-owned higher education institution to provide for this in their internal regulations. An underlying cause must be the different interests of the Hungarian State as an owner as opposed to the interests of private owners, as demonstrated in a marked difference in their respective attitudes to property. The owners of enterprises operating in the private sector are fundamentally interested in the growth of assets, including in particular the growth of own funds originating from operation, which means the return on the invested capital through after-tax profit, in the form of dividend, or the growth of the market value of the equity participation, or may ensure the expansion of operation in case the owners decide to leave the capital increment in the enterprise. The balance sheet plan highlights the questions of creating a financial balance by forecasting the asset and liability impacts of investment and financing decisions. (Bordáné, 2001) The P&L plan includes expected revenues and expenditures. The balance sheet and P&L plans are complemented by the cash flow plan, the three constituting the master budget of enterprises. (Oliver – Horngren, 2010) The master budget is of course supported by diversified sub-plans, such as sales plan, production plan, procurement plan, logistics plan, salary plan, and others. (Bosnyák et al., 2010) It is easy to see that in the case of higher education institutions maintained by the state, due to the interests of the owner – even if we are talking about the industry most exposed to a competitive environment within the public sector – there is no trace of the proprietary attitude of the *for profit* sector that has an interest in increasing the profit of the enterprise and through this in increasing own funds. The primary focus is placed on the fulfilment of the annual budget, the sustenance of liquidity, and through these the avoidance of indebtedness.

Reporting obligation

Figure 2 illustrates the reporting obligations related to the planning tasks described above, on the basis of which one can see that as regards reporting, the interim budget report serves to monitor the elementary budget, thus providing “controlling information” on the fulfilment of the public finances budget for the State as an owner. The interim budget report, however, is only able partially to support the management of budgetary organisations, i.e. higher education institutions.

Management tasks can be supported by the financial reports of the institutions on the institutions’ budgets. Adequately built reports within the management information system are necessary to ensure that the required management interventions and decisions are made by continuously comparing actual processes with the plans and by analysing the deviations.

The operator monitors the financial impacts of the actual processes taking place in the institutions, and within them at the different organisational units, by following the budget plan as per the EVSZA, i.e. through the quarterly EVSZA reports that are compiled according to a structure identical with that of the plan.

FINANCIAL, AS WELL AS COST AND P&L CONTROLLING INTEGRATED IN THE ACCOUNTING INFORMATION SYSTEM

The accounting system of budgetary organisations is suitable to map the economic effects of processes both under the cash and the accrual-based approach in an integrated manner. Criteria other than external, statutory requirements may also be incorporated in this integrated system in order to fulfil internal demands for information, necessary for

management. Without adequate IT support, this would be of course unimaginable today, therefore well-built, integrated management systems are needed partly to satisfy the information requirement of public finances, and partly to supply good quality information for the efficient management. *Figure 4* summarises the key information requirements of external stakeholders, as well as those of the financial, cost and P&L controlling functions that serve the management.

The “black box” circled in *Figure 4* is the inside of the organisation, i.e. its controlling area, where the information necessary for the governance of a decentralised organisation designed in accordance with the principles of responsibility is generated; however, before looking into it, let us examine the environment surrounding the “black box”.

There is the accounting information system operating outside the “black box” in compliance with the statutory environment², in the scope of which the expenses and incomes registered on a cash basis appear partly adjusted to the order of the headings, and partly attached to the relevant government function (hereinafter “COFOG”). All this is implemented in account group 0, as in a system that is closed in itself.³ Of course there is the registry of allocations and commitments as well, connected to the settlement of expenses and incomes.

Economic processes are mapped in account groups 1 to 9 in accordance with the logic of accrual accounting. Cost accounting takes place according to cost types on a mandatory basis in account group 5, coupled, until 31 December 2016, with a mandatory cost accounting, according to specialised tasks and cost centres as defined in Government Decree 4/2013. As of 1 January 2017, the order of specialised tasks has been discontinued, and in accordance with Government Decree 4/2013 the institutions are free to design account groups 6 and 7 in their own discretion,

Figure 4

CONTROLLING INTEGRATED IN THE ACCOUNTING INFORMATION SYSTEM

Systematisation criteria	Effect of economic impact upon occurrence	Systematisation criteria	Effect of economic impact upon occurrence						
	Expense/Income		Cost	Expenditures	Income on an accrual basis				
Type	<p>According to order of headings (K1–K9., B1–B8)</p> <table border="1"> <tr> <td>05...(3)</td> <td>003 + COFOG</td> </tr> <tr> <td>09...(3)</td> <td>005 + COFOG</td> </tr> </table> <p>General Ledger: account group 0 – closed system: joint balance zero: dual monitoring</p>	05...(3)	003 + COFOG	09...(3)	005 + COFOG	Type	<p>Primarily Cost type – (General Ledger: account group 5) Secondarily – not mandatory as of 1 January 2017. If chosen by the entity, then against 591 Cost type transfer account</p> <ul style="list-style-type: none"> • Direct costs – General Ledger: account group: 7 • Indirect costs – General Ledger: account group: 6 <p>As of 1 January 2017, the systemisation of direct and indirect costs may be designed freely, subject to the requirements of the management information system.</p>	<p>In General Ledger: 81–83. Based on transfer of costs 84. Other expenditures 85. Expenditures of financial operations</p> <p>Annex 6 of Ábsz.: P&L based on total cost method</p> <p>Annex 7 of Ábsz.: Statement of costs and recovered costs</p>	<p>In General Ledger: 9. Income on an accrual basis 91. Income from operating activities on an accrual basis 92. Other income on an accrual basis 93. Income from financial operations on an accrual basis</p>
05...(3)	003 + COFOG								
09...(3)	005 + COFOG								
COFOG (to change as of 1 January 2018)	In General Ledger with the breakdown of registration contra accounts 003 and 005.	Specialised task							
Controlling • mapping of organisational structure – organisation code, • definition of activities and cost centres – topic numbers.	Commitment – fulfilment of budget in line with the terms of strict budget allocation management	Controlling • mapping of organisational structure – organisation code, • definition of activities and cost centres topic numbers.	Controlling In relation to account group 7 , breakdown in accordance with activities Further breakdown of cost centres within account group 6 , in accordance with the organisational structure and the projection bases used upon the allocation of costs.	Controlling Breakdown of expenditures • trainings, researches, etc. • to cost centres • to organisation codes (in hierarchy of cost centres).	Controlling Breakdown of revenues • to trainings, researches, etc., • to cost centres • to organisation codes				

Source: own editing

in accordance with the requirements of their respective management information systems. As of 31 December 2016, a main section of the Annual Report entitled “Costs and recovered costs” governing for specialised tasks was discontinued.

Profit & loss reducing items other than costs, i.e. Expenditures and Income on an accrual basis are accounted in account groups 8 and 9, respectively. In accordance with this accounting logic, the institutions must prepare their P&L statements by the total cost method in their Annual Reports.

Fundamentally so far we have focused on the organisation as a whole in terms of meeting external information requirements during the review of the content of the accounting information system. However – looking into the “black box” – management does not take place at the level of the organisation as a whole in everyday operation, but under the governance of responsible leaders at various points of the organisation, wherever it is necessary to serve the decision-making of the managers with useful and relevant information. This means that economic processes should be at-

tached to the different organisational units of the organisation under both the cash and the accrual approach and to the activities pursued by them, which requires to monitor the aforementioned categories of expense/income, costs/expenditures/income on an accrual basis in further dimensions as well.⁴ Integrated information systems are able to map the diverse monitoring criteria with various parameters and codes, which can be, for example, organisational codes, functional areas, etc. applied for the institutional structure, or topic numbers, job numbers, etc. applied for the activities, depending on the IT solutions and names of the management system used. In this paper organisational units shall be hereinafter referred to by organisational codes, and activities and other areas of the organisation affected by expenses, costs, expenditures and incomes shall be referred to by topic numbers.

One of the key areas as far as the accounting information system of budgetary organisations is concerned is budget allocation management, which rests on a cash accounting basis, while another key area is the monitoring of the effectiveness of the activity performed, the basis of which is the adequate monitoring of incomes and costs on an accrual basis, and the related system of cost accounting. It should be emphasised in advance that although there is an interrelation between budget allocation management and cost accounting, in so far as each cost item shall sooner or later appear as an expense, one should approach the requirements put forth by budget allocation management and the subject-matter of cost accounting differently regarding both their logic and their content. This constitutes a serious challenge for practical experts as well, nevertheless the task can be solved by consistently applying the relevant principles in adequately designed integrated systems.

As regards decentralised management based on the principle of responsibility, one of the

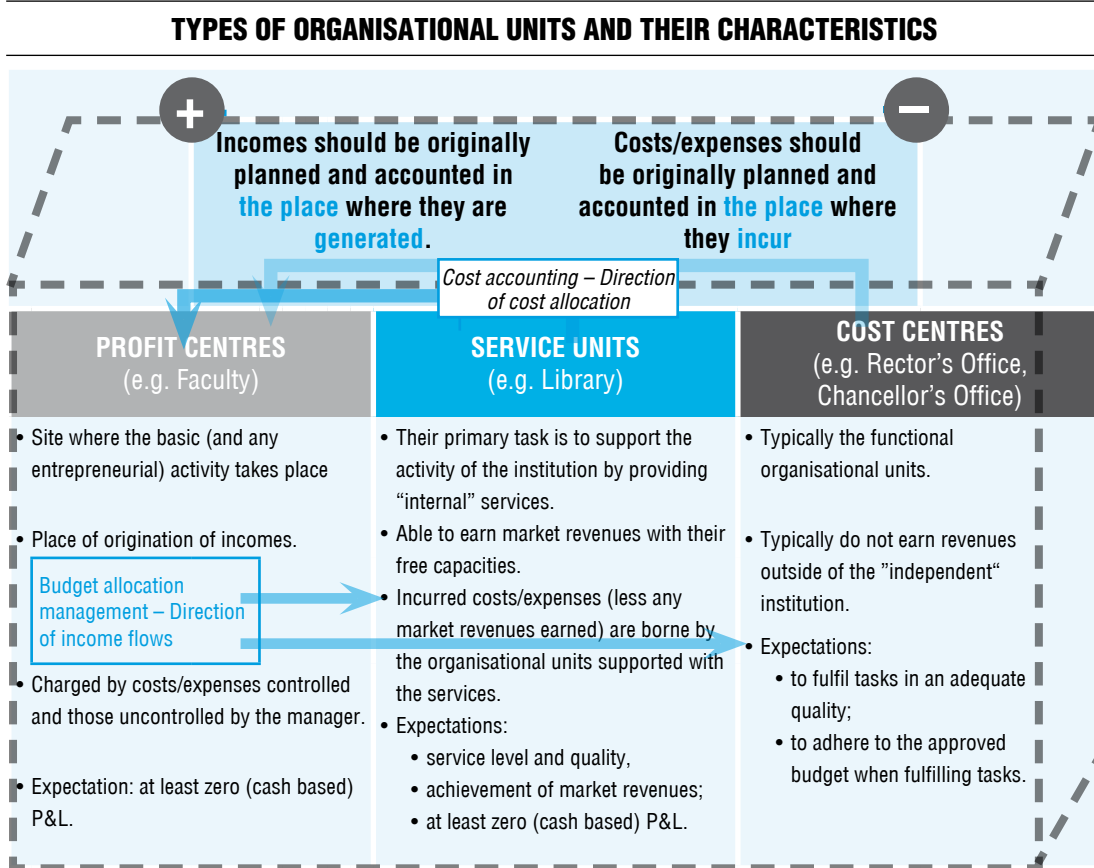
key fundamental principles is that the organisational units are established for different purposes and duties with a view to the competitive operation of the organisation as a whole, which should be handled adequately in the area of controlling. *Figure 5* includes the different types of organisational units and their main characteristics. (Anthony et al., 2009)

Figure 5 includes one of the key fundamental principles of decentralised management based on the principle of responsibility, the application of which is indispensable for one to be able to determine the real performance of the different organisational units. In accordance with this fundamental principle, incomes should be originally planned and actually accounted within the organisation at the organisational unit performing the activity the income is associated with, that is at the place of origination of the income. And expenses and cost should be planned and accounted at the place where they incur, which means that in each organisational unit, resource requirements of the activities actually performed there should be taken into account. This enables the organisation to distinguish from the point of view of the managers of the organisational units between expenses/incomes, as well as costs/expenditures/incomes on an accrual basis that are controlled by the managers and those uncontrolled by them, i.e. between those that are their responsibility and those that are not (but which are nevertheless borne by them).

INCOME ALLOCATION IN BUDGET ALLOCATION MANAGEMENT, COST ALLOCATION IN COST ACCOUNTING

It follows from the settlement of incomes at their place of origination that in the interest of a strict budget allocation management, it is necessary to allocate incomes from the or-

Figure 5



Source: own editing

organisational units where, due to the operation of the organisation as a whole, these incomes appear, to be used for the operation of functional organisational units that in principle do not have incomes, and service organisational units that have some revenues that nevertheless do not fully cover their expenses. The latter are called profit centres. In the majority of higher education institutions these are organisational units responsible for education, which typically appear in the organisational form of faculties (hereinafter “faculties”). Higher education institutions are required to set out in their management policies the calculation method and size of the contribution, allocated from the incomes of the faculties to the operating expenses of the service and functional organisational units. An accepted

solution that fits the cost accounting method the most is when the required contribution to the expenses of the service and functional organisational units are divided among the organisational units benefiting from the activities executed by them by means of different projection bases.⁵ Figure 6 shows the direction of income allocation, using the simplified organigram of Corvinus University of Budapest as an illustration.

Figure 7 already shows the direction of cost allocation to be implemented in the course of cost accounting, where the indirect costs incurred at other points of the organisation are added to the direct costs of the performances delivered at the faculties (educational programmes, research activities). It in fact means the allocation of costs. Therefore with a view

Figure 7

INCOME ALLOCATION FOR BUDGET ALLOCATION MANAGEMENT

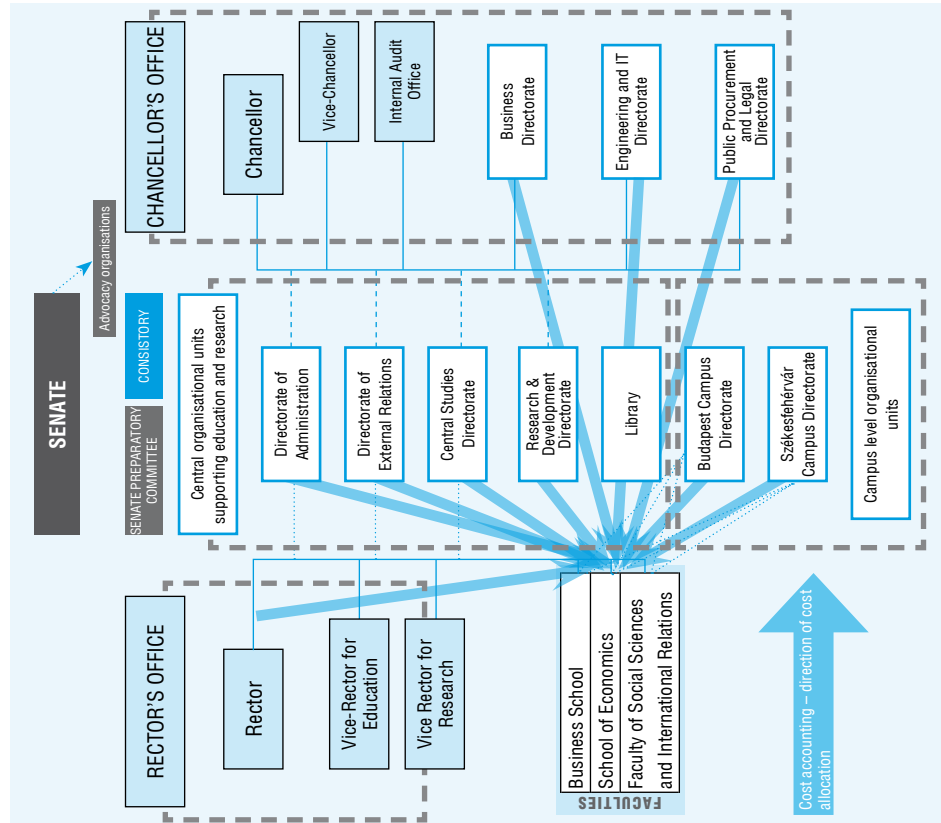
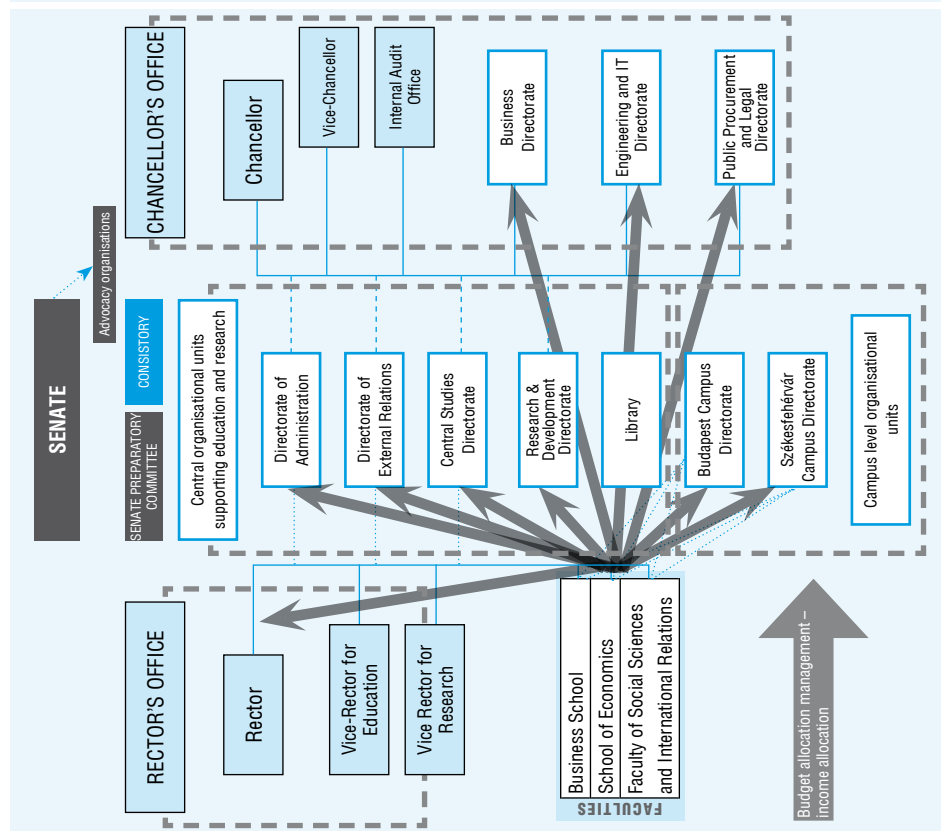


Figure 6

INCOME ALLOCATION FOR COST ACCOUNTING



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Source: own editing

to budget allocation management, incomes should be circulated within the organisation, hence in the integrated management system (in this case in account group zero within budgetary accounting, among the relevant organisational units and within those among the topic numbers), whereas during cost accounting indirect costs will flow towards the activities (to be more specific, the costs of the indirect cost centres are allocated to the cost bearers as indirect costs).

All these internal allocations should be solved in the integrated system so that all other considerations are also kept in mind. For example in the course of the internal flow of incomes the assignment of the income to the relevant government function must not change, since upon its origination the income is accounted in accordance with the relevant COFOG, therefore in the course of its internal allocation under budget allocation management the COFOG may not change.

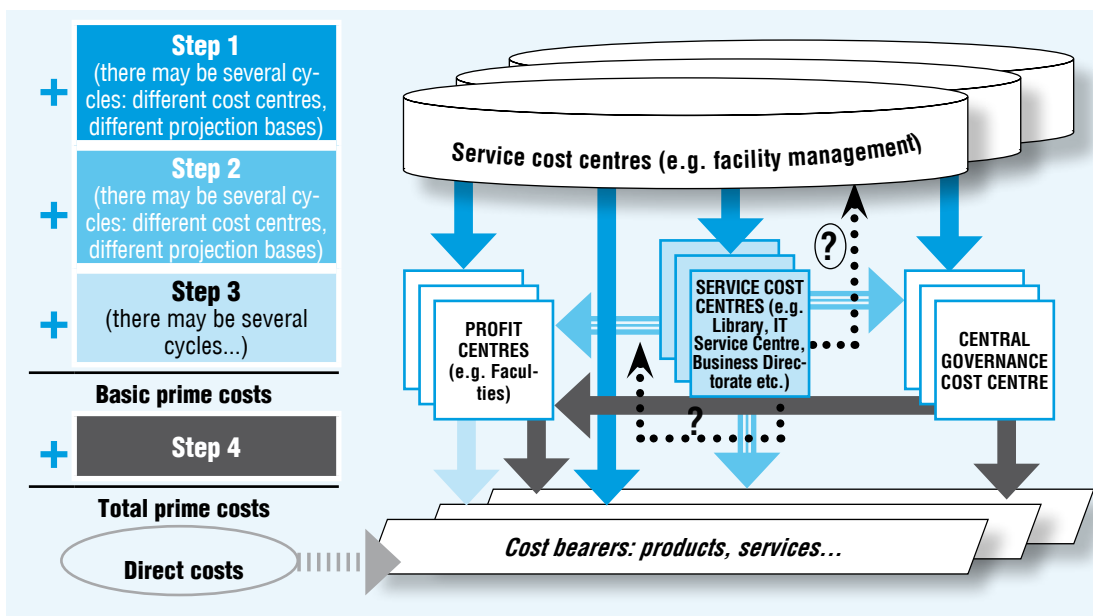
Figure 8 shows the allocation of indirect costs in accordance with the cost contents that may be established in the course of cost accounting.

In the course of the allocation of indirect costs, there are several options to choose from, which may be defined partly in accordance with the internal service relationships existing between the different organisational units, and partly with the activities executed by these. (Pavlik, 2015)

One possibility among the different options may be – in case the service units provide services to each other as well – that a predefined order is followed in the course of the allocation of indirect (general) costs. During the allocation of cost centre costs, there is no re-allocation of costs from cost centres whose costs are allocated earlier according to the predefined order to cost centres where costs are allocated later. The black polka dots arrows in Figure 8 refer to this issue.

Figure 8

MULTI-STEP COST ALLOCATION PROCESS



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COST VALUE OF EDUCATION AS THE BASIS FOR THE INSTITUTION'S FINANCING

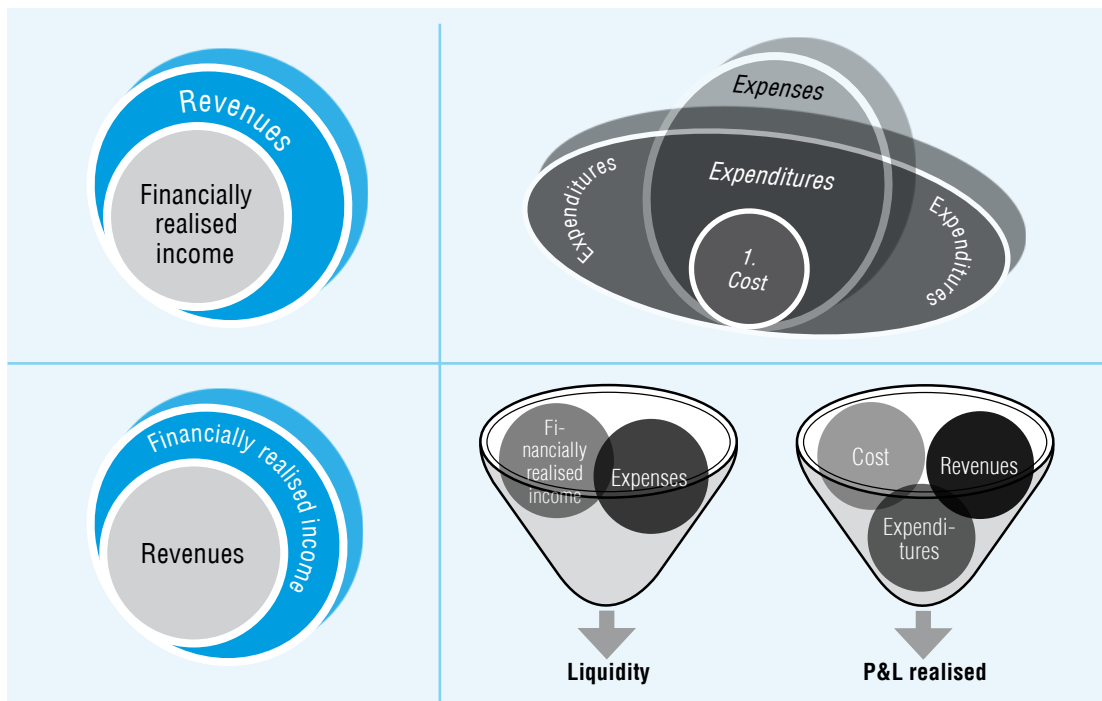
At this point let us make a brief detour and refer to the existing financing system of higher education, according to which the financing of the institutions takes place at the cost of the given educational programme, based on the headcount of students studying under the given programme.^{6,7} If the regulation was taken “at face value”, and the concept of cost was approached from the generally accepted theoretical bases (which are also incorporated into the accounting regulations), then cost-based financing would be unable to cover the operation of the institutions, because apart from costs other expenditures that are not accounted as costs, but still constitute expenses,

also arise in the course of operation. *Figure 9* shows the interrelations of the concepts used so far, demonstrating that expenses arise in an order of magnitude exceeding that of costs.

It can be clearly seen from the above that total cost cannot be an adequate cost content for financing, since items arising as expenditures also need to be settled financially. As a typical example for the latter, the amount of non-reclaimable VAT can be mentioned, which represents a significant order of magnitude for higher education institutions that characteristically pursue VAT-exempt activities. The amount of financing should be determined on the basis of the “cost” of education, which is to be understood as a category exceeding total cost, as illustrated in *Figure 10*. This means that cost-based financing is not the correct term used in the regulation,

Figure 9

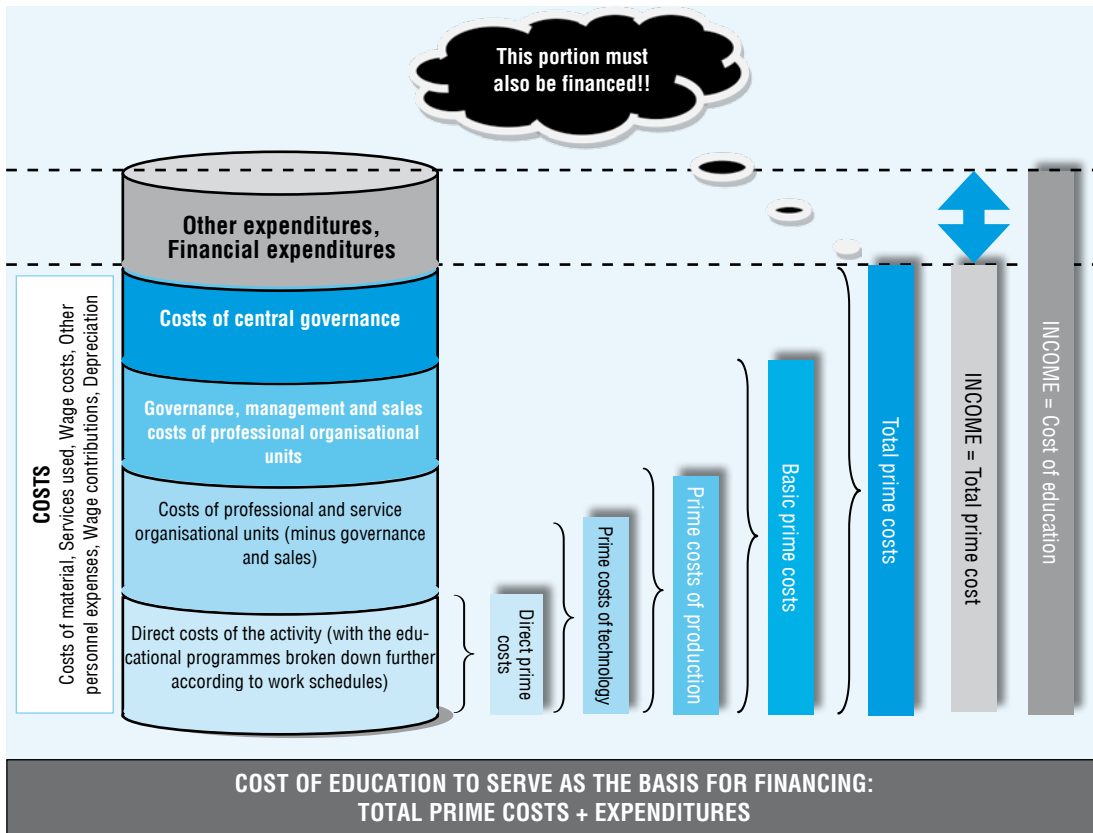
RELATIONSHIP BETWEEN INCOME ON AN ACCRUAL BASIS / CASH BASIS, AND EXPENSES/COSTS/EXPENDITURES



Source: own editing

Figure 10

COST OF EDUCATION TO SERVE AS THE BASIS FOR FINANCING



Source: own editing

because it this was true, any and all items incurred as expenses in the course of operation that are not to be accounted as costs would be left unfinanced. In practice cost accounting constitutes a serious challenge for the industry, not only because the regulation is inconsistent as far as the use of terminologies is concerned, which legitimately raises open questions on the law enforcer's side, but also because in many cases "tied products" appear as output, in which case cost accounting in itself is a serious professional challenge. One of the best examples for this is medical education, where there is an integral link between the activity of treating patients and education itself during the performance of the activity,

therefore it is difficult to separate the costs connected to education from those connected to treatment.

EXAMPLE FOR PLANNING AND THE ACCOUNTING OF ACTUAL PROCESSES AT A DECENTRALISED MANAGEMENT IMPLEMENTING BUDGET ALLOCATION MANAGEMENT AND BASED ON THE PRINCIPLE OF RESPONSIBILITY

Let us assume that the planned data of a higher education institution are as follows. Planning is done on a cash basis, and follows the fundamental principle of a decentralised man-

agement based on the principle of responsibility, i.e. that incomes must be planned and accounted at their place of origination, and expenses at the place where incur. (See Table 1)

Compared with the planned data, actual economic processes will be realised with more or less difference of course. Actual settlements must be recorded in an adequately designed management system so that the reports concerning the different periods can be obtained easily from the systems in a pre-defined structure corresponding to planning, in accordance with the true content of the economic

events, and should provide clear information for management decisions. Budgetary organisations keep their books in accordance with the criteria detailed above, under the budgetary accounting and accrual-based accounting approaches. (See Figure 11)

Incomes are accounted at their place of origin, for example in connection with the education or research activities of Faculty “A”, under both accrual and budgetary accounting, as well as in the area of controlling, which provides details at sub-ledger level with a view to the measurement of the profitability

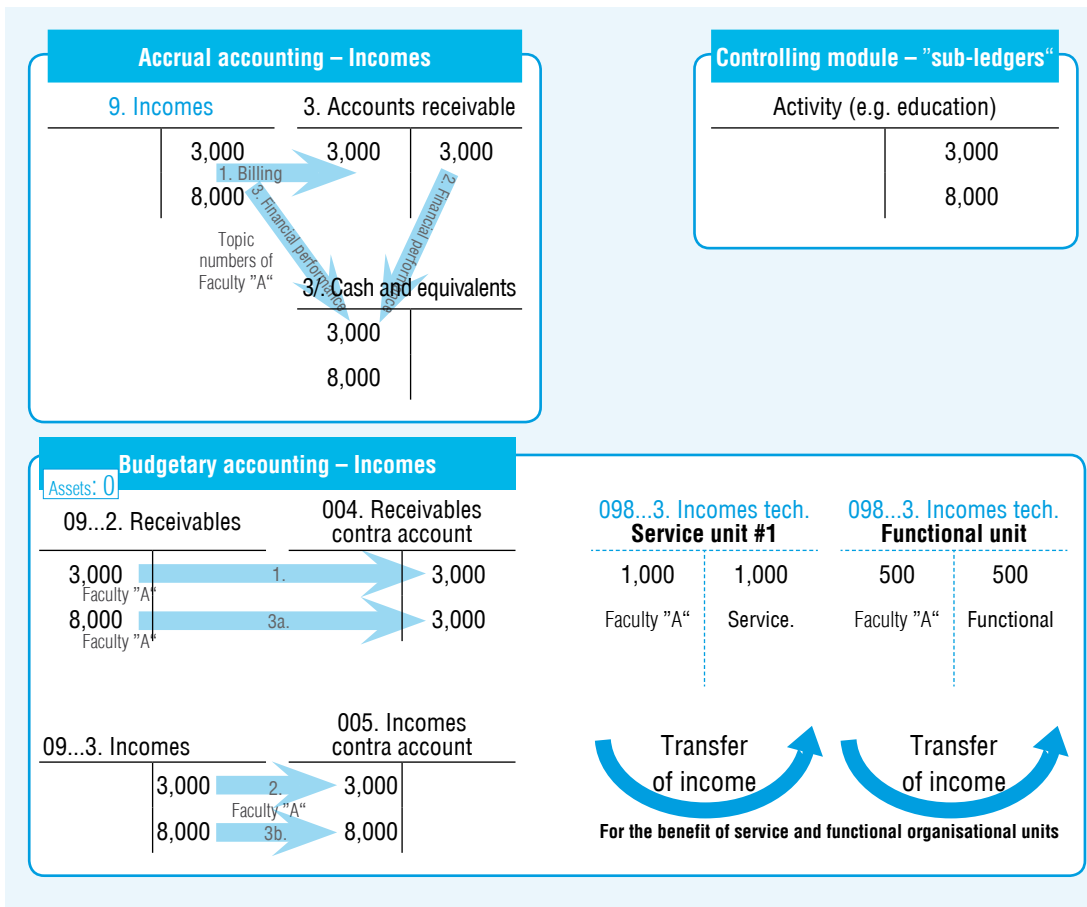
Table 1

BUDGET PLAN UNDER DECENTRALISED MANAGEMENT					
	<div style="display: flex; justify-content: space-between; align-items: center;"> + <div style="text-align: center;"> <p>Incomes should be originally planned and accounted in the place where they are generated.</p> </div> </div>		<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>Expenses should be originally planned and accounted in the place where they incur.</p> </div> - </div>		
	PLANNING – UNDER THE CASH APPROACH				
Description	Faculty "A"	Faculty "B"	Service unit #1 (there may be more)	Functional unit #1 (there may be more)	Plan total
Revenues	10,000	10,000	500	–	20,500
Expenses	8,000	8,000	2,500	1,000	19,500
Allocation mechanisms	<div style="border: 1px solid black; padding: 2px;">250</div> <small>Service provider</small>	<div style="border: 1px solid black; padding: 2px;">–250</div> <small>Service user</small>	–	–	0
„Level of responsibility”	2,250	1,750	–2,000	–1,000	1,000
Allocation mechanisms – Service unit #1	–1,000	–1,000	+2,000		0
Allocation mechanisms – Functional unit #1	–500	–500		+1,000	0
P&L	750	250	0	0	1,000

Source: own editing

Figure 11

ACCOUNTING AND ALLOCATION OF INCOMES



Source: own editing

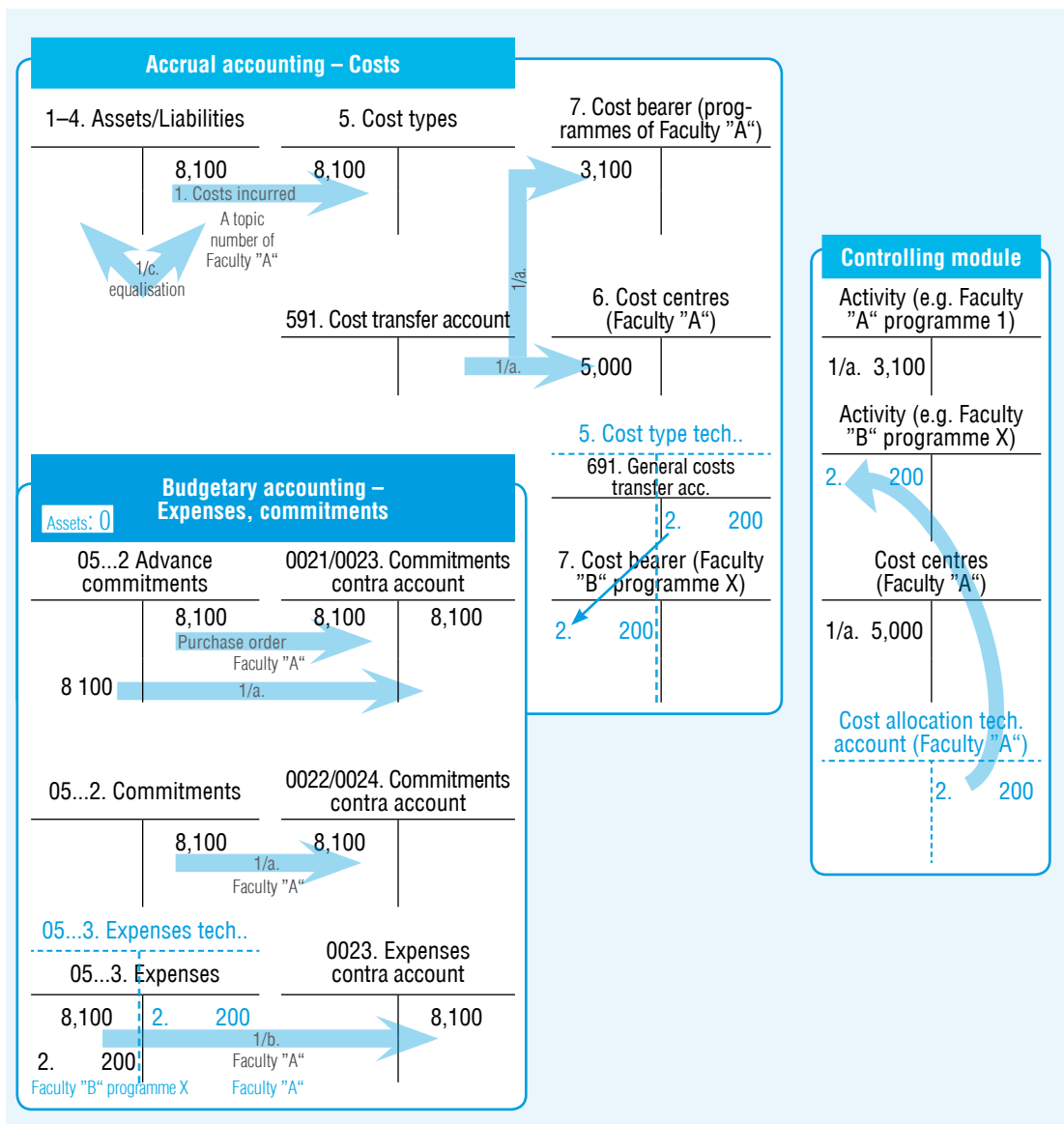
of the activities. For the purposes of budget allocation management, the faculties should ensure contributions to service and functional organisational units to the degree approved in their budget plans. These organisational units will get the contributions in a scheduled manner in order to finance their activities. Such schedule may mean debits and credits of identical amounts effected on a monthly basis during the rearrangement of incomes, showing the actual implementation of the time-proportional plan in cash reports to be completed from time to time.⁸ The rearrangement of incomes in fact takes place in accordance with the plans between the topic numbers of

the profit centres to be debited and the topic numbers of the service and functional organisational units to be credited so that categorisation as per government functions (COFOG) does not change during the process as compared with the original title of the generated income. (See Fig. 12)

In the course of the accounting of costs and expenses as well, statutory requirements should be followed under both accrual and budgetary accounting. As regards expenses and costs, one typical event that requires allocation between organisational units – and which has been unmentioned so far – is the settlement of education services between fac-

Figure 12

THE ACCOUNTING AND ALLOCATION OF EXPENSES AND COSTS



Source: own editing

ulties. As in this case we are talking about the accounting of costs incurred with a view to an educational programme by a faculty other than the faculty in charge of the given education programme⁹, this internal service – transfer – should be administered in the area of costs/expenses. The place where the cost/expense arises in this example is Faculty "A",

but the cost/expense is incurred in the interest of an educational programme of Faculty "B". The real cost of the educational programme of Faculty "B", as well as budget allocation management requires that internal allocation is carried out in terms of costs as well as expenses. As regards costs, cost reduction (cost re-debiting) is effected at the relevant cost

centre of Faculty “A”, while in respect of the direct costs of the educational programme of Faculty “B” cost increase should be accounted. All this takes place via the controlling area in accrual accounting, while in budgetary accounting the decrease in expenditures is to be accounted at the organisational unit corresponding to the relevant cost centre of Faculty “A”, along with the expenditure increase of the topic number corresponding to the educational programme of Faculty “B”. Please note that neither costs nor expenses change at the level of the organisation as a whole, whereas due to the internal allocation an opportunity offers itself for reporting actual performance at the level of both Faculty “A” and Faculty “B” and at the same time at the level of concrete activities as well.

For the purposes of cost accounting, the allocation of indirect costs as outlined above is implemented with a similar logic, but here no booking takes place in budgetary accounting, because budget allocation management is realised for the benefit of the service and functional organisational units via the contributions of the faculty, i.e. on the income side. Cost accounting only and exclusively means the allocation of indirect costs, in the scope of which these costs are allocated for the cost bearers, appearing in accrual accounting only.

By following this logic, i.e. the principles of decentralised management based on the principle of responsibility, several accounting principles are also observed. They include for example the principle of gross settlement, according to which the total income of each organisational unit should be shown even if a specific part of this must be handed over to service and functional organisational units with a view to budget allocation management. The principle of truthfulness also prevails, as incomes and expenses/costs are moved within the organisation so that they will be represented in the reports based on these settlements at

their real order of magnitude at the level of the organisation as a whole as well as the level of the organisational units.

As a result of the planning logic described above and the accounting of actual processes it becomes possible to compile reports of the following structure. The budget plan to be prepared in the scope of the EVSZA reporting prescribed by the operator and the quarterly EVSZA reports are based on the same principles. (*See Table 2*)

As regards incomes generating and expenses incurred up to the level of responsibility, the head of the given organisational unit shall be liable, and up to this point incomes and expenses that the organisational unit under his management is able to control will be generated.¹⁰ In accordance with decisions within the organisation allocation mechanisms will form – in many cases in a way influenced by internal bargain processes as well – the P&L of the activities of the individual organisational units.

It should be seen nevertheless that in the case of institutions maintained by the state, besides the influencing role of the market, the operator (the Hungarian state) acting in its capacity as owner also exercises serious influence over the performance of the organisations and their different organisational units through the decisions made in its own competence based on statutory mandates. Highlighting only a few examples from these, one could mention determining quotas for students that the institutions are allowed to enrol, establishing minimum scores necessary for eligibility for grants, or limiting the counter-value of educational programmes, all of which confine the relationship between the “university as a service provider and the customer” in a rather peculiar framework. One could go on listing the bureaucratic elements, which make the responsibilities of institutional leaders and those of the internal organisational unit leaders ambiguous and unclear, which is a significant difference as com-

Table 2

BUDGET PLAN AND ACTUAL DATA UNDER DECENTRALISED MANAGEMENT										
Description	CASH APPROACH								Plan total	
	Faculty "A"		Faculty "B"		Service unit #1 (there may be more)		Functional unit #1 (there may be more)			
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Revenues	10,000	11,000	10,000	10,000	500	400	-	-	20,500	21,400
Expenses	8,000	8,100	8,000	8,000	2,500	2,200	1,000	900	19,500	19,200
"Cross-teaching"	250	+200	-250	-200	-	-	-	-	0	0
"Level of responsibility"	2,250	3,100	1,750	1,800	-2,000	-1,800	-1,000	-900	1,000	2,200
Allocation mechanisms – Service unit #1	-1,000	-1,000	-1,000	-1,000	+2,000	2,000			0	0
Allocation mechanisms – Functional unit #1	-500	-500	-500	-500			1,000	1,000		0
P&L	750	1,600	250	300	0	+200	0	+100	1,000	2,200

To be settled at the year-end or taken into account in next year's financing.

Source: own editing

pared with the decentralised operating model of private sector enterprises which is based on the principle of responsibility.

By way of summary one may conclude that the proper and well-regulated fulfilment of duties should not get in conflict with the management approach – i.e. efficient and economic operation – and that well-regulated processes are in fact supposed to create efficient operation. (Pályi, 2015) It is the task of operative controlling to provide a stable foundation for the decision-making of management bodies by adequately adjusting its tools to the structure of the given organisation, and the centralised/ decentralised system of rights and obligations within the organisation. However, overregulation and a perpetually changing legal environ-

ment are able to simultaneously undermine compliant operation and an efficient governance based on the management approach, thus significantly reducing the competitiveness of the system of institutions maintained by the state as compared with their peers in the private sector as well as with their international counterparts. In other words, although there is an ever-increasing number of institutions within the industry that use the tools of operative controlling, supporting institution governance models that operate in a competitive environment, the overregulated and constantly changing legal environment surrounding the industry significantly impairs the results that could be achieved with efficient operation.

NOTES

- ¹ Art. 14 (1) of the National Higher Education Act: Organisational units providing computer, social, sports, library, archival, museum and healthcare services, as well as hostel services defined in the government decree and other services, with special regard to training centres, training hotels, training farms, art workshops, botanical gardens, as well units in which production activities are performed may be set up in higher education institutions. Only one educational organisational unit may be responsible for education activities provided at one faculty, even if the higher education institution operates at several sites. The competent unit shall be specified in the education programme.
- ² Act C of 2000, Government Decree 4/2013, and Ministry for National Economy Decree 38/2013.
- ³ In accordance with an expected amendment of Government Decree 68/2013, as of 1 January 2018 government functions will be modified.
- ⁴ In the course of all this, changes in the wealth of the organisation, i.e. changes in its assets and liabilities, are also mapped of course in accordance with the logic of double-entry bookkeeping; however, now the emphasis is laid on the factors that are relevant for financial and cost and P&L controlling.
- ⁵ Other solutions are also well known to higher education institutions; one could mention as an example the calculation method whereby the expenses of the service and functional units are planned, then compared with the amount of the joint, expected, planned incomes of the faculties. The resulting percentage value is then used to determine the measure and size of the contribution from the incomes of the different faculties to the expenses of the service and functional organisational units. In our opinion, the solution where the allocation of the required contribution to the planned expenses is calculated using various projection bases is more sophisticated. It is paramount, however, not to go to extremes when determining the principles of allocation. Activity Based Costing is a solution well-known in literature, and is in fact used by enterprises operating in strongly competitive environments and characterised by high general cost rates, but its implementation and operation is rather resource-intensive. (Atkinson et al., 2012) Taking into account the market situation of Hungarian higher education, the traditional cost/expense allocation methods are also suitable to process information of adequate quality in the course of budget allocation management as well as cost accounting (to be discussed later).
- ⁶ Art. 48/C (2) of the National Higher Education Act¹⁹¹: The amount of the state grant shall be equivalent to the tuition fees as determined by the higher education institution in accordance with the relevant legal regulations for the active semesters when the student is (partially) financed through state grant. In the context of student grant contracts, an active semester is a semester for which the student (partially) financed through state grant signed up.
- ⁷ Art. 4 (1) of Government Decree 389/2016: The amount of the (partial) grant awarded by the Hungarian state shall be the costs of the educational programme as established by the higher education institution subject to the framework outlined in Annex 1 in accordance with Art. 48/C (2) of the National Higher Education Act, projected onto the given student.
- ⁸ The opening of the financial facilities necessary for the operation of the service and functional organisational units, i.e. providing the coverage necessary for the commitments, is implemented with the booking of the budget allocations, which may follow a different schedule than the rearrangement of incomes recorded on “cash” basis. (Please note that the above settlements are administered in general ledger ac-

counts ending with “-3” of budgetary accounting, i.e. in accounts implying delivery.)

erates at several sites. The competent unit shall be specified in the education programme.

⁹ Art. 14 (1) of the National Higher Education Act: ... Only one educational organisational unit may be responsible for education activities provided at one faculty, even if the higher education institution op-

¹⁰ Education transfers between faculties constitute a special item in this respect; however, we cannot go into greater detail of this arrangement in the scope of this paper.

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