››› Declining municipal investment backlog – a trend reversal or just a temporary breather?

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The economic policy debate in Germany has focused on the weakness of municipal investment activity for years. Irrespective of some achievements made in the past, a significant investment backlog remains. The municipal treasurers surveyed by the KfW Municipal Panel 2017 estimated it at EUR 126 billion. One reason for the high backlog is that municipal investment has fallen for a long time. Even though total expenditure has picked up in recent years, construction investment in municipalities was still below the 1997 level in 2016. This is likely due to a shift in the structure of municipal expenditure. An analysis of key municipal expenditure aggregates shows that the increased additional social services expenditure, as well as personnel and material expenditure, ties up the municipalities' financial resources. However, municipal infrastructure has hardly benefited from this additional expenditure. This means rising expenditure in non-investment areas makes it significantly more difficult to reduce the backlog. Although municipalities' total expenditure has risen, the share of investment has fallen in the past years. The lower investment levels and ratios, however, do not mean lower investment requirements. The various challenges which municipalities face will always go hand in hand with a need for investment. So their backlog is and remains substantial and cannot be reduced without increasing the municipalities' investment capacities in a sustainable manner.

For years, municipal investment backlog has been an important aspect in the debate on public capital expenditure. Municipalities' net investment expenditure has been negative since 2003.[1] In other words, their depreciation levels exceed investment levels. As a consequence, municipalities' backlog of investment has also grown continuously in the past years. Municipal treasurers reported an investment expenditure requirement that peaked at EUR 136 billion in 2015. This development is problematic because municipalities provide important infrastructure for citizens and businesses.

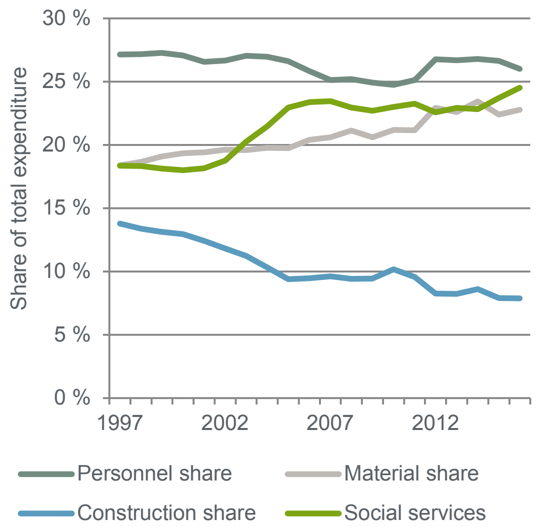
The positive economic situation, however, is currently putting municipalities in a position to significantly increase their investment expenditure. The federal and state support measures also provide leeway for municipalities to make higher investment expenditure. Fortunately, a decline in the municipal backlog of investment could be observed in the year 2016 for the first time since the financial crisis of 2008/2009. The municipal treasurers surveyed now estimate this backlog to be around EUR 126 billion, some EUR 10 billion less than in 2015.

As investment has been falling for a long time and the backlog is still high, the question is how this positive trend can now be consolidated. Are the measures adopted sufficient to reverse the trend? Or do the higher investment amounts only reflect today's friendly environment?

Spending priorities shift as construction expenditure falls, material expenditure and social services rise

In order to answer this question, the development of major areas of municipal expenditure merits a closer look. The main expenditure aggregates captured by the statistics usually distinguish between investment expenditure, personnel, interest, social and material expenditure.[2] Construction expenditure accounts for the highest portion of municipals' investment expenditure and can therefore be used as an approximation of municipal investment.[3] While the share of municipal construction expenditure has fallen since 1995, the share of social and material expenditure in particular has increased over the same period. Personnel expenditure also remains an important item in the municipal budget (Figure 1).

Figure 1: Development of relevant expenditure components



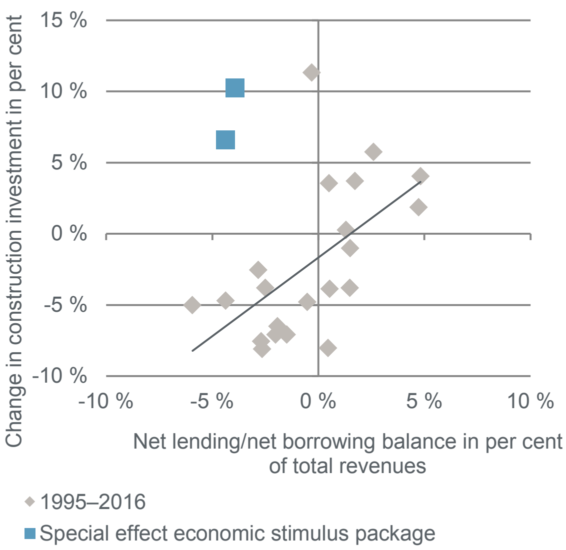
Source: Own calculation on the basis of data from the Federal Statistical Office.

With the exception of specific years and, in particular, the effect of the economic stimulus package around the year 2010, the past decades were characterised by a downward trend in the proportion of construction expenditure. Although expenditure is rising overall, municipal construction investment remained below the 1997 level in 2016 as well – despite a nominal increase of around 17 % or EUR 2.7 billion since 2012. Against the background of rising total municipal expenditure, the question arises how the decreasing share of construction expenditure can be explained.

Investment is based on the fiscal position and falls in times of budgetary constraints

The shifts in the structures of expenditure may themselves be a major cause of the problem. After all, municipalities' investment activity depends on their budgetary and fiscal situation.[4] Municipalities regularly invest less in construction when their net lending / net borrowing balance is negative (Figure 2).

Figure 2: Investment depends on fiscal situation



Source: Own calculation on the basis of data from the Federal Statistical Office.

Municipalities with a strained budget postpone or cancel investment projects. As investment measures are relatively disposable, they can be suspended on short notice without immediate consequences. Municipalities have other fixed obligations that are not as easy to shift. These include expenditure on social services and personnel which cannot be changed on short notice owing to legal obligations.

Insufficient financial resources are therefore a fundamental cause of municipal investment weakness. Municipalities in structurally weak regions that have high social expenditure are particularly affected. In financially and structurally weak municipalities in particular, social expenditure has crowded out investment expenditure, which explains some of the persistent disparities between structurally weak and prospering regions in Germany.[5]

The long-term decline in construction expenditure coupled with higher overall expenditure is therefore indicative of a structural shift within expenditure categories.[6] The question is how the observable development in the expenditure structure can be explained and what conclusions can be drawn for municipal investment and the related backlog.

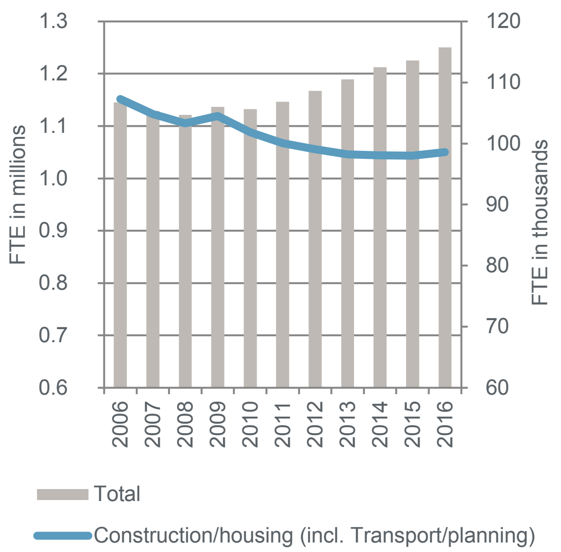
Rising personnel and social expenditure limits scope for investment

The most important expenditure aggregates of municipalities are personnel and social expenditure, as well as ongoing material expenditure. Together they account for nearly 75 % of municipal expenditure.

Social expenditure has risen for a wide range of reasons that have already been broadly discussed elsewhere.[7] What is undisputed is that higher social expenditure, which is usually in the form of transfer payments, does not flow into infrastructure. The growth of social expenditure does not therefore ease the backlog of investment.

The same applies to personnel expenditure. Funds that are committed to employees are no longer available for investment. Nevertheless, increasing staff at development offices could give municipalities greater planning capacities and lower the administrative barriers to reducing the investment backlog. But there are very few signs of this occurring. Although municipal workforces have been growing again noticeably for some years now, this does not apply to planning positions required for investment projects at development offices (Figure 3).[8]

Figure 3: Local government staff levels are rising but hardly in the planning and development offices



Source: Own calculation on the basis of data from the Federal Statistical Office.

While municipalities have increased their staff levels by around 100,000 full-time equivalent positions (FTEs) overall since 2006, almost 9,000 jobs (8 % of FTEs) have been cut at construction authorities (including transport and planning) over the same period. Although construction authorities hired more staff again for the first time last year, the increase on the previous year was only around 500 jobs in total (out of just under 100,000 additional FTEs). In construction administration in a narrower sense the personnel increase was even as little as 40 FTEs (out of currently just under 32,000 FTEs). That means the higher personnel expenditure so far has not benefited municipal infrastructure.

In other words, the additional social and personnel expenditure does not provide any relief for municipal infrastructure. On the contrary: Additional expenditure in this area might tie up funds needed for infrastructure. The structural shift towards these areas thus tends to reduce municipalities' investment capacities.

Rising material expenditure can have various reasons

The situation might be somewhat different for material expenditure. It would be conceivable that material expenditure also hides 'investment-related' expenditure, e.g. for the modernisation and maintenance of buildings. An increase in this type of expenditure could thus partly explain the decrease in investment expenditure on construction without having a direct adverse effect on municipal infrastructure as the funds go to infrastructure nonetheless in certain circumstances.

There can be various reasons for the growth in material expenditure, however:

- Inflationary effects: Despite low current inflation rates, price increases in specific areas that are of particular relevance to municipalities may entail significant increases in expenditure.[9] That would reduce municipalities' capacities to invest without altering the actual investment needs or backlogs.

- Saturation effects: Particularly after the high investment activity resulting from the economic stimulus package, the most urgent needs of that time might have been satisfied.[10] Now the fixed assets must rather be preserved through maintenance expenditure. This expenditure is captured under material expenditure. This would not actively contribute to reducing the backlog of investment but the increase would at least indicate that the existing infrastructure is being well maintained.

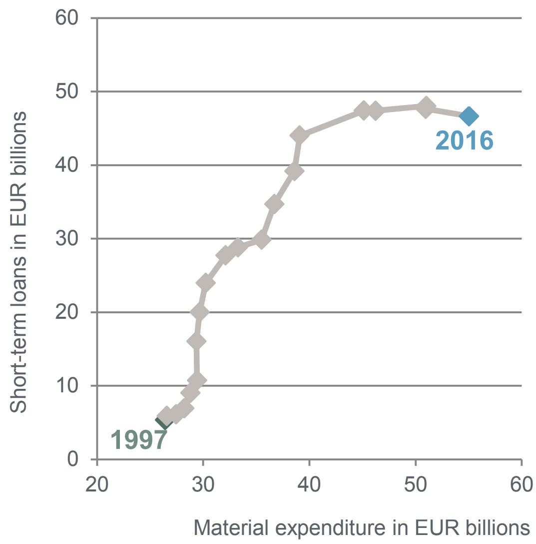
- Outsourcing effects: The outsourcing of functions to municipal enterprises and alternative forms of procurement (such as PPPs), where the construction and operation of buildings is completed by private enterprises, may no longer be recognisable as quasi-investments but may translate into higher rental and lease expenditure or subsidies for participations.[11] This would make it more difficult to make a statement about the development of investment.

- Deferment effects: Maintenance activities may delay complex investments over the short term. Appropriate maintenance is generally a sound idea. According to the KfW Municipal Panel, investment backlogs are higher in municipalities where current maintenance cannot be ensured. However, in the long term, necessary capital expenditure cannot be replaced by the mere maintenance of outdated infrastructure (which may be less costly in the short term than investment in new infrastructure), as this can lead to high follow-up costs later on.

- Accounting effects: The definition of investment and maintenance is not always unambiguous. Double-entry bookkeeping can also create incentives to account for investment expenditure differently (see info box). The extent of such accounting leeway also depends on how state law is designed in this context and how it is applied by the municipal supervisory authority (see next point).

- Budget supervision effects: In certain circumstances, investment expenditure may be shifted to material expenditure as financing is generally easier here. Local governments may finance them with short-term debt, which is often subject to less stringent budget supervision and not purpose-tied.[12] This makes financing easier and more flexible and may even allow more investment to be carried out than by way of classic investment loans that require approval. In fact, a similar trend can be seen in the development of material expenditure and short-term borrowings (Figure 4) that might result at least partly from this effect.

Figure 4: Short-term loans and material expenditure have risen noticeably



Source: Own calculation on the basis of data from the Federal Statistical Office.

Info box: Entering investments in double-entry bookkeeping

With the introduction of double-entry accounting from 2009, many things changed in local governments' accounting, with repercussions on investment activity.[13] Now, for example, write-downs have to be generated in the profit and loss account in order to achieve a 'genuine' budget balance.[14] But if investment is avoided there is no growth in fixed assets which consequently do not need to be written down. Besides, double-entry bookkeeping actually requires investments to be financed from the surplus in payments for ongoing administrative activity (comparable to the freely disposable funds in cameralism or cash flow in enterprises), which is hardly possible particularly in financially weak municipalities.[15]

Both restrictions can be circumvented when investment expenditure is booked as material expenditure. If investment expenditure cannot be mapped in the budget, for example because the current capacity does not permit the municipality to take up additional investment loans, ongoing maintenance can nevertheless be booked in the financial accounts. Deficits here must then be balanced with short-term loans, which have grown noticeably in many municipalities in the past years. It must therefore be assumed that a shift in material expenditure is also due to the inadequate financial capacity to invest.

However, avoiding investment expenditure in favour of material expenditure is not a long-term solution. What incentives act upon municipal treasurers and what accounting leeway they actually have varies from one municipality to another and from one state to another. The net effect can hardly be quantified.

Higher material expenditure cannot offset drop in investment

Some of the possible explanations suggest that at least parts of the increased material expenditure benefit public infrastructure indirectly, for example by way of increased maintenance. In this way, the municipalities' 'pure' investment expenditure would underrepresent their actual infrastructure activity because a portion of the material expenditure would have to be added.

What is also likely, however, is that an increase in the remaining expenditure has simply restricted the scope for investment expenditure for many municipalities. The long-term shifts within the expenditure categories associated with the decline in the share of investment expenditure therefore do not indicate that investments are no longer required or fully covered by other expenditure categories. This is also illustrated regularly by the investment backlogs perceived under the KfW Municipal Panel. One methodological advantage of capturing the backlogs of investment in the KfW Municipal Panel is that they depict the overall needs perceived by the municipal treasurers, irrespective of accounting and collection problems. It therefore continues to demonstrate a substantial need for municipal infrastructure investment without being influenced by possible statistical effects.

Excursus: Material expenditure on schools

The problem of growing material expenditure can be explained particularly vividly using school buildings as an example. On the one hand, the school sector is a suitable object for discussing material expenditure given the high backlog of investment in schools and their very high importance for the whole of society as a pillar of the education system.[16] The topic is therefore highly relevant. On the other hand, material expenditure is of great importance in the municipal school system in particular.

Thus, personnel account for only around 20 % of expenditure on school authorities' functions (in the municipalities' core budget). Social transfer expenditure hardly plays a role for schools. By contrast, material expenditure on building maintenance, for example, takes a high and growing share in both total expenditure and school authorities' expenditure. Around half of school authorities' expenditure now goes to material expenditure.[17] This is a significantly higher share than in other municipal task areas.

A portion of the increase can be explained by the transformation of the school landscape, e.g. increased school transport and all-day schools (including canteen). However, only part of the expenditure actually appears to flow directly into school buildings. Maintenance expenditure in 2015 was nearly unchanged from 2010. The increase in rents and leases and in the cost of building operation is moderate (each below 5 % between 2010 and 2015). By far the strongest increase, however, can be identified in the item 'other general material expenditure', which thus cannot be attributed to infrastructure. Therefore, in the school sector at least, the increase in material expenditure can hardly be interpreted as reducing pressure on municipal infrastructure.

Higher investment requires higher investment capacity – durably and sustainably

The shift in municipal expenditure is indicative of a structural (financing) problem. So in order for investment to increase, municipal investment capacities need to improve on a sustained basis. The positive signals which suggest that investment in municipal infrastructure will also continue to rise in the coming years are therefore encouraging. Besides the good economic environment, it is above all a variety of promotional programmes that support the municipalities. The municipal investment promotion fund of the federal republic alone explicitly provides EUR 3.5 billion for investment in schools in financially weak municipalities. In addition, various federal states have programmes of their own that are aimed at bolstering municipalities' investment capacity.

Currently, the main bottlenecks include long planning processes, a shortage of building land and exhausted capacities in local governments and the construction sector. However, the different planning and implementation capacities of the municipalities also result from the very significant differences in their financial position in the past decades.

For this reason, (one-time) promotional programmes are not a substitute for fundamentally healthy municipal finances. All federal levels still have much work to do in improving municipalities' revenues and expenditure to ensure the construction and maintenance of municipal infrastructure in the long term.

This requires first and foremost continuity and planning certainty for the municipalities. Both are key prerequisites for a sustainable human resources, investment and financing strategy. The municipalities' financial resources must therefore be critically assessed, particularly with a view to the apportionment of expenditures in the transfer of tasks from higher levels (e.g. in social services) and the design of the fiscal equalisation systems. The federal government and, above all, the federal states should therefore continue to work on this.

But the municipalities must also do their part to improve their investment capacities. Particularly because other tasks are increasingly tying up financial resources, municipalities should use their scope and make their expenditure structure as efficient as possible. There are always good role models at municipal level that show how a task can be organised economically and effectively. Every euro saved wisely is available for other expenditures such as investment. What is important is to focus on particularly sound investments when financial scope is limited. And with a view to demographic dynamics, it is also important to consider the long-term viability of investments.

All this will require great efforts. At the moment, most of the investment growth is due to the favourable economic environment. But the positive conditions open up political scope for a sustainable trend reversal that should be used to strengthen and prepare municipalities' investment capacities for more turbulent times ■

More publications and information from KfW Research on the thematic area 'Municipalities and Infrastructure' can be found here.

[1] Net fixed capital formation is the result of gross fixed capital formation minus depreciation as determined by the Federal Statistical Office in the European System of Accounts. The decline in investment expenditure in the past years also saw a falling share of municipalities in total public investment as well as a steady decrease in the ratio of investment to GDP or to municipal revenues. Cf. e.g. Burth, A. (2017): Entwicklung der Investitionen von Bund, Ländern und Kommunen in Deutschland (*'Development of public, state and municipal investment in Germany'* – our title translation, in German only).

[2] Double-entry bookkeeping distinguishes between the concepts expense, expenditure and disbursement but for a better understanding we usually follow general language usage here and refer to expenditure even if expenses are actually meant.

[3] In the financial statistics, (physical) investment includes construction measures as well as expenditure for the acquisition of participations and capital investments as well as movable and immovable assets (such as land). However, construction measures usually represent the largest portion of physical investment (around 74 % in the year 2016 vs. 77 % in 2006);

[4] Cf. e.g. Arnold, F. et al. (2015): Große regionale Disparitäten bei den kommunalen Investitionen (*'Wide regional disparities in municipal investment' – our title translation, in German only*) DIW Wochenbericht 43/2015.

[5] Cf. e.g. Bundesvereinigung der kommunalen Spitzenverbände (2017): Aktuelle Finanzlage der Kommunen. For an overview of social benefits paid by municipalities see also Boettcher, F. and Geißler, R. (2017): Die Nettobelastung der Kommunen aus Sozialausgaben (*'Municipalities' net social benefit payouts'* – our title translation, in German only) LebensWerte Kommune Ausg. 2/2017, Bertelsmann Foundation (ed.).

[6] Since 1995, municipalities' material expenditure alone increased from EUR 32.8 billion to more than EUR 55 billion in 2016. A similar trend also took place in social expenditure, which grew from EUR 30.4 billion to EUR 59.3 billion net. Personnel expenditure also rose from EUR 54 billion to EUR 62.8 billion.

[7] See e.g. Boettcher, F. and Geißler, R. (2017) - Die Nettobelastung der Kommunen aus Sozialausgaben(*'Municipalities' net social benefit payouts'* – our title translation, in German only), loc cit.

[8] Cf. Brand, S. and Steinbrecher, J. (2016): Erst mehr Geld und jetzt mehr Personal – was benötigen Kommunen für Investitionen? *(First, more money and now, more staff – what do municipalities need in order to invest?* – our title translation, in German only), Focus on Economics No. 151, KfW Research.

[9] On current inflation see Wanke, S. (2017): **Inflation in Germany rises only briefly above two per cent**, Focus on Economics No. 160, KfW Research. The effects of price increases in personnel and material expenditure are currently compounded by higher prices in construction as a result of that sector's high capacity utilisation levels. This should translate into higher levels of investment expenditure without achieving higher levels of construction. Cf. for example Bardt, H. et al. (2017): Investieren Staat und Unternehmen in Deutschland zu wenig? (*Are the state and companies in Germany investing too little?* – our title translation, in German only) IW-Analysen No. 118.

[10] For more on the hoped-for effect of the economic stimulus package on municipalities see e.g. Beckmann, K. and Grabow, B. (2009): Standpunkt: Vom Konjunkturpaket II zum Abbau des Investitionsrückstands (*Standpoint: From economic stimulus package II to the reduction of the investment backlog* – our title translation, in German only), Difu-Bericht 1/2009.

[11] Cf. Hesse, M. et al. (2017): Investitionen der öffentlichen Hand - Die Rolle der öffentlichen Fonds, Einrichtungen und Unternehmen (*Public-sector investment – the role of public funds, establishments and enterprises* – our title translation, in German only). Bertelsmann Foundation (ed.).

[12] Short-term borrowings should actually be used only to secure short-term liquidity and should be paid back as soon as possible. In reality, however, for many years there has been an observable increase in short-term debt and a prolongation of maturities. In certain municipalities, this trend indicates a structural financing and thus investment weakness; see also e.g. Brand, S. (2016): Kommunale Kassenkredite – trotz niedriger Zinsen keine Entwarnung (*Municipal short-term loans – no turnaround despite low interest rates* – our title translation, in German only) Focus on Economics No. 114, KfW Research.

[13] Cf. e.g. Wolff, S. et al. (2014): Kommunale Investitionstätigkeit ausgebremst? Auswirkungen von Schuldenbremse, Fiskalpakt und Doppik-Umstellung (*Has municipal investment been stifled? Effects of the debt brake, fiscal pact and conversion two double-entry accounting* – our title translation, in German only), Focus on Economics No. 64, KfW Research.

[14] For more on the challenges for a balanced budget see e.g.: (2016): Abschreibungen bei doppischer Haushaltsführung bereiten Kommunen Probleme (*Write-downs in double-entry bookkeeping pose problems for local governments* – our title translation, in German only).

[15] Cf. Jänchen, I. (2015): Wie viele Investitionen können sich Kommunen leisten? – Eine empirische Untersuchung sächsischer Kommunen mit doppischer Haushaltssatzung 2014 (*How much investment can municipalities afford? – An empirical study of Saxon municipalities using double-entry accounting in 2014* – our title translation, in German only). In: Jahrbuch für öffentliche Finanzen 2015 Schriften zur öffentlichen Verwaltung und öffentlichen Wirtschaft, Vol. 232.

[16] See Brand, S. and Steinbrecher, J. (2017): Kommunale Investitionen in Schulen – erste Erfolge sichtbar, aber noch viel zu tun (*Municipal investment in schools – first successes are visible, but much remains to be done* – our title translation, in German only), Economics in Brief No. 154, KfW Research, or Brand, S. and Steinbrecher, J. (2016): **Investment backlog in schools hampers educational performance**, Focus on Economics No. 143, KfW Research. Particularly in the school sector, the increase in material expenditure highlights the drop in the proportion of investment in municipalities' total education expenditure.

[17] According to invoice statistics, material expenditure as part of the expenditure on school authorities' tasks accounts for around 59 %, a significantly higher share than in other task areas, and thus represents 27 % of net expenditure in the total budget. As part of the material expenditure on schools, the proportion of rents and leases (which should also include expenditure on outsourced forms of procurement and financing such as PPPs) and building maintenance is a mere 6 to 8 %. Expenditure on the management of the buildings and other administrative and operating expenditure is higher at 13 to 17 %. These are likely to include the significant school transport costs as well. Cf. e.g. Wohltmann, M. (2017): Kreisfinanzen 2016/2017: Konjunktur und Bundeshilfen führen zu erneutem Überschuss – für Entspannung ist es aber zu früh (*Economic boom and federal assistance generate another surplus – but it is too early for a normalisation* – our title translation, in German only), p. 481f. Der Landkreis 10/2017. (It can be assumed that the expansion of all-day schools will also translate into higher material expenditure in the future, e.g. for canteen food, although the net financial burden must take into account possible reimbursements and contributions).