



URBAN TRANSPORT GROUP

Consultation response

Updating Wider Economic Impacts Guidance

Department for Transport

January 2017

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1. Introduction

- 1.1. The Urban Transport Group (UTG) represents the seven largest city region strategic transport bodies in England, which, between them, serve over twenty million people in Greater Manchester, the Liverpool City Region, London, the North East Combined Authority area, the West Midlands conurbation, South and West Yorkshire. Nottingham City Council, the West of England Partnership and Strathclyde Partnership for Transport (SPT) are associate members of the UTG, though this response does not necessarily represent their views.
- 1.2. Our members plan, procure, provide and promote public transport in some of Britain's largest city regions, with the aim of delivering integrated public transport networks accessible to all.
- 1.3. We understand that some of our members are submitting individual responses to this consultation. This joint response focusses on common views across our members and on areas of shared interest.
- 1.4. UTG and our members are keen to work with DfT in a pragmatic way to test the application of the new guidance in the context of specific schemes and to help shape the DfT's future research programme. We would be happy to host DfT colleagues at one of the next meetings of our Modelling and Appraisal group.

2. The approach

Trade-off between consistency and context specificity (Q1)

- 2.1. The proposed guidance is an improvement on previous versions in terms of structure, clarity, internal consistency and the potential to employ more context specific approaches. Overall, we agree that it strikes a good balance between ensuring consistent appraisal of different schemes and the ability to include unique or second order effects that may be material in some circumstances.
- 2.2. However, the potential uncertainty and inconsistency in the short term will need careful management by both scheme promoters and DfT, in particular in the review of on-going business cases.

Trade-off between uncertainty and more detailed understanding of impacts - "levels of analysis" (Q2)

- 2.3. At a high level, the proposed use of "levels of analysis" seems sensible and probably represents a reasonable balance between capturing the most material impacts of a scheme and the increasing level of complexity and, potentially, diminishing levels of confidence, as more impacts are included. The notion of "levels of analysis" is likely to be particularly useful to scheme promoters' where it is clear, either from the decision making context or the nature of the scheme, that additional analytical effort is unlikely to generate evidence material to the business case.
- 2.4. However, we feel that there needs to be clearer guidance covering those areas that require subjective judgement, in particular the degree to which a scheme is expected to "produce structural economic impacts and change land uses". There is a risk that there will be



significant variation in the application of the guidance as it stands, especially considering that this will be a new area of analysis to many.

- 2.5. At a more detailed level, we have three main comments.
- 2.6. Firstly, it's important to note that the role of appraisal is not just about ranking a set of transport schemes and providing a minimum degree of assurance on value for money. Increasingly, it is being used by local government, and presumably some levels of central government, to compare transport with other types of intervention¹. Given that context, the absolute level of benefits and appraisal should aim to be comprehensive (bearing in mind proportionality constraints). As Chris Riley (former DfT Chief Economist) stated in evidence to the Transport Select Committee, "failure to invest in worthwhile projects reduces future economic growth – it reduces debt, but also reduces GDP"². There is a risk that by excluding from appraisal certain impacts that are known to result from the scheme, we are distorting public choices in a way that hurts the economy.
- 2.7. Following on from the first point, we would query whether "level 2" effects (static clustering, labour supply impacts and output change in imperfectly competitive markets) shouldn't really be part of standard appraisal practice (i.e. "level 1" analysis and used in the Initial BCR). Their estimation is largely formulaic and it is increasingly straightforward to obtain the required outputs from transport models³. We appreciate that some of the underlying parameters are based on fairly rough estimates that ignore, for example, variations across the country. But additional research using more localised data could quickly improve our confidence in these methods.
- 2.8. Finally, "level 3" seems to include a wide range of very different types of analysis: dependent development, dynamic clustering and move to more/less productive jobs, full variable land use and supplementary modelling. In turn, supplementary modelling comprises a wide range of very different types of analysis. It would perhaps make sense, for categorisation purposes, to acknowledge these differences more explicitly, e.g., by using levels 3a, 3b, 3c and 4.

3. Applying the new approach

Further advice on whether to assess wider economic impacts and the most proportionate approach (Q3)

- 3.1. Given the high level of abstraction at which the guidance is written, the wide range of possible analytical approaches, and the limited level of use that some of these have benefitted from, we feel that additional guidance with an emphasis on concrete practical applications would be of great value. This could take the form of worked examples and case studies, and could be accompanied by practical workshops and training sessions. Indeed, it

¹ We note that DCLG's recently published Appraisal Guidance puts significant emphasis on land value uplift. This seems to create an uneven playing field given that transport appraisal guidance suggests land value uplift be used only as a sensitivity scenario rather than as part of the central case.

² Written evidence to the Transport Select Committee enquiry into Transport and the Economy (Reference TE108), available at:

<http://www.publications.parliament.uk/ca/cm201011/cmselect/cmtrans/473/473we40.htm>.

³ We take the point that transport models are not always employed in scheme appraisal. This is a good argument for the proposed three level approach on proportionality grounds. However, our point in the previous paragraph stands: appraisal should aim to capture the full scale of benefits, in particular where the scale of benefits matters to the decision of whether or not to commit public funding.



could be expanded to form a series of practical courses/seminars on appraisal using WebTAG. Whilst existing training providers will eventually step up to fill some of this gap, there will initially be an important role for the DfT to play, both because there may be a response lag from the market and because the guidance will require a great degree of interpretation to begin with.

- 3.2. This type of approach was followed, with some degree of success, when the DfT published new guidance on concessionary reimbursement in 2010, which represented a significant departure from previous methods. This collaborative approach continued for an extended period of time until the new guidance had been sufficiently tested in practice.
- 3.3. Another idea would be to split the case studies in the guidance and engagement with the wider transport community on how to approach issues of growth, jobs and regeneration according to scheme size, for example:
 - a) Minor works funding bids (e.g.: pinch points, LSTF, small cycling interventions);
 - b) Growth deals, including prioritisation of local majors in a devolved world;
 - c) Mega-projects over £1bn, such as Crossrail2 or Northern Powerhouse Rail.
- 3.4. We feel this approach would support the effort towards more proportionate and effective appraisal.
- 3.5. The consultation documents suggest that the DfT will retain a panel of economic modelling experts. We feel that the panel should be set up as soon as possible. The panel might be able to provide written case study-based guidance in relation to point (a) above and some training/workshops for LEPs and Local Transport Authorities in relation to point (b). Mega projects would probably require their own advice panels and additional guidance on a case by case basis.

Guidance on the robustness of supplementary economic modelling – ‘does the guidance provide clear, proportionate and relevant criteria with which to inform the assessment of supplementary economic modelling?’ (Q4)

- 3.6. We feel that this is one of the areas most lacking in the revised guidance.
- 3.7. The new unit M5.3 is written at a conceptual rather than practical level. Whilst this makes it useful in mapping out the field (we would praise in particular table 2, which would be worth expanding on) it provides very little practical guidance apart from a relatively comprehensive list of references. The idea of an expert panel is helpful but it gives scheme promoters very little certainty as panel members may well disagree between themselves on the appropriateness of different approaches.
- 3.8. The methods covered in M5.3 are largely outside the transport planner’s, or even the transport economist’s, toolkit. For example, reduced form models and CGE models are highly specialised areas, even within economics, which are much more often used for macroeconomic purposes than to model the behaviour of individual economic agents. The passing reference to the Lucas critique in paragraph 6.8.1 is another example of a concept from macroeconomics and macroeconometrics that is unlikely to mean anything to transport professionals⁴.

⁴ The Lucas critique essentially claims that the relationship between a given set of variables (for example, GDP, inflation, interest rates and unemployment), estimated at one point in time based on



- 3.9. There is also very little reference to practical issues such as the input data that will need to feed these models, whether such data exists, whether it can be created and at what cost. Model parameters, and the underlying evidence on which they are based, are another likely source of conflict and expense.
- 3.10. As two of the peer reviewers point out, there is a fairly narrow field of experts who are familiar with each of the methods covered, and very few who are familiar with more than one. Together with the lack of detailed guidance, we anticipate that this will make it difficult for local authorities to develop their own expertise or procure it from external advisers effectively, and in a way which meets DfT's assurance requirements (which are themselves stated only at a very high level).
- 3.11. We therefore feel that there is a clear need for the DfT to expand on unit M5.3 with a new Part B, alongside our suggestions in question 3. Several of our members mentioned that they would see great value, in particular, in concrete case studies being added in.
- 3.12. The publication of the guidance should also go hand in hand with a plan, potentially led by the DfT in partnership with industry, academia and other parts of government, to develop the skills of the transport modelling and appraisal community in these new areas.

Further advice, and evidence, on displacement effects (Q5)

- 3.13. Given where the DfT and HMT are starting from (i.e., the assumption of 100% displacement), the guidance puts a huge onus on scheme promoters without giving them virtually any means by which to tackle the problem or even to know whether they have met the DfT's burden of proof (see, for example, paragraphs 2.2.6(1), 2.2.8 or 2.2.10 and 2.2.11 in unit A2.3; paragraphs 2.2.10 in unit A2.2; paragraph 6.9.3 in unit M5.3).
- 3.14. Some of our members take issue with the very assumption of 100% displacement and have noted that this is based on theoretical constructs that require fairly strong assumptions about the behaviour of economic agents and the functioning of markets⁵ rather than strong empirical evidence. There are simple examples from the real world that can be used to bring into question this assumption. For example, a multi-national company choosing between a UK city and an alternative location abroad with different levels of transport provision will take this factor into account and may be swayed by a significant investment in the UK city. Foreign tourists visiting a UK city on a short break may decide to go further afield and explore other parts of the country depending on the quality and cost of local transport beyond their main destination.
- 3.15. Even where 100% displacement holds in the short term, this may lead to genuine net benefits at national level in the medium to long term (which tend to be of greater importance in transport appraisal because of the length of appraisal periods in the range of 30 to 60 years). Take the example of a transport scheme that improves access to a secondary port with under-utilised capacity (and hence cheaper than the leading national port). While this may take freight traffic away from the leading national port, which is more likely to be

past data, may not necessarily hold at later points in time. While this is an important argument that those who study travel demand should be mindful of, mitigating against it is arguably more complex than simply "using recent UK data", as suggested in the draft guidance. The current debates about 'peak car' or the future role of shared mobility models or the take-up of electric and connected/autonomous vehicles are cases in point.

⁵ For example, perfect competition, perfect information, economic operating permanently at full capacity.



operating close to capacity, it seems reasonable to expect that much of that traffic would be quickly replaced by latent demand. A similar argument would apply in many other sectors of the economy including services⁶.

- 3.16. Turning to the draft guidance's requirements to demonstrate additionality, it first emphasises that "whilst transport investment may increase investment at the local level, only changes at the national level are considered additional"⁷. It then goes on to say that "there is a lack of evidence on the extent to which displacement occurs"⁸. And then states that "the default position of all transport appraisals is 100% displacement, unless context specific evidence can be provided, which demonstrates that increases in investment will lead to increase in economic activity at the national level". Unit M5.3 then concludes that "greater confidence will be placed in analysis which can demonstrate that displacement effects have been robustly modelled", but without clearly defining how robustness is measured.
- 3.17. So the evidence must show net additionality at the national level but it will be based on context specific (presumably meaning local) evidence⁹. It seems likely that scheme developers, in trying to follow the guidance, will focus on impacts in the direct geography covered by their scheme, for example by relying on local or regional transport models.
- 3.18. This appears to be a fool's errand and the perfect context for moving goal posts, and wasted time and effort. We suggest that the guidance text is amended to explain that demonstrating additionality may well require an analysis of impacts beyond the geography of the scheme. That doesn't necessarily help resolve the problem of how to quantify these impacts, but it should help prevent misdirected efforts. We believe that more work is clearly needed in this area and that if DfT and HMT are setting the burden of proof then they must be instrumental in shaping both guidance and developing the evidence.

Changes to reporting requirements (Q6)

- 3.19. The clearer distinction between GDP and economic welfare is welcome, as is the new analysis of the relationship between the two metrics. However, this improvement is undone somewhat by the requirement that GDP impacts are reported only in the strategic case, and not in the economic case. We understand the need to avoid double-counting and the DfT's decision to endorse welfare economics as the most appropriate and comprehensive metric to inform public spending decisions. But we feel that there could be some unintended negative consequences from this approach.
- 3.20. We believe there are two main arguments against this strict distinction.
- 3.21. Firstly, it may be found that there are genuine additional GDP impacts which the existing welfare economics frameworks is found not to be able to satisfactorily deal with.

⁶ To try to put it in more general terms, we would suggest that this applies to any sector of the economy whose location decisions are sensitive to the attributes of alternative locations (e.g. property cost, wage level, access to different types of staff, quality of life) and to any location for which there is latent demand from outside the UK.

⁷ Paragraph 2.27, Unit A2.2

⁸ Paragraph 2.2.10, Unit A2.2

⁹ This seems to suggest that the guidance has very specific types of scheme in mind, for example, a piece of transport infrastructure that enables a given company to build a new facility hosting production that was previously located abroad. While the proposed approach may well be robust enough in this case, it would struggle with anything of greater complexity such as the port example mentioned above.



- 3.22. Secondly, and more importantly, the proposed approach seems to overlook the fact that many decision makers (both within and outside transport) now pay more regard to economic impact metrics described, or measured, in GDP terms than in welfare economics terms. By moving GDP impacts into the strategic case, this risks, on the one hand, downplaying the economic case and, on the other, encouraging double-counting by creating the illusion that the strategic and economic case measure different types of things. The first of these risks is reinforced by the fact that GDP measures can often arrive at larger numbers than cost-benefit analysis (for example, by excluding some costs or ignoring displacement effects). This (again, in a layman's eyes) would seem to fly in the face of the claim in the guidance that welfare economics impacts are more comprehensive than GDP impacts. This could result in transport appraisal losing credibility and becoming a mere pro forma.
- 3.23. Some of our members have also pointed out that this creates un-necessary complication which will make it more difficult to non-experts to interpret appraisal outputs, a point which build on the credibility argument above.
- 3.24. Something worth further consideration would be to present both (net) GDP and welfare economics impacts side by side in the economic case, and clearly explaining at that point how they relate to each other and why they might differ. Table 4, in unit A2.1, already seems to be starting down this path and figure 1, in the same unit, is also helpful (though it would benefit from a more detailed explanation¹⁰). Seeing the same types of impact side by side would help reinforce the fact that they are (in simplistic terms) different ways to measure the same types of thing. It would also help decision makers better understand why welfare economics is, in general, a more appropriate metric of net impacts. And it would help practitioners explain why it may be justified to depart from default assumptions in the guidance.

4. Priorities for future research

Additional evidence to inform supplementary economic modelling benchmarks (Q7)

- 4.1. This is a broad question that requires in-depth knowledge of the different methods covered, and which we feel we are not well qualified to answer.
- 4.2. In general terms, the new M5.3 unit is helpful at a conceptual level but much more detailed and practical guidance is required in order to inform future work in this area. Some of our members said they would see benefits in establishing direct lines of communication with DfT, in some cases through their consultants, to identify priority areas for future research based on on-going model and business case development work.

Additional areas for further research (Q8)

- 4.3. There are four main areas that we feel require further work:
- 4.4. *Incorporating foreign direct investment, and growth-inducing trade more generally, into the transport appraisal framework.* This should include both the inter-regional and international dimension; trade in goods and services; and benefits in terms of quantity/price and quality/product variety. At present, this is a glaring omission from transport appraisal. We take the point that there are virtually no economic modelling frameworks capable of handling

¹⁰ We would also query whether the use of 'GDP' (rather than something like 'net GDP') in the employment effects row is entirely accurate.



either inter-regional or international trade that operate at the scale of transport models or are compatible with transport models¹¹ (i.e., which can translate the impact of individual transport schemes into changes in trade in general equilibrium). But given that this is key to the issue of additionality, it is something that the transport community needs to at least begin to think about.

- 4.5. Alongside enhancements to the modelling framework, it is important to invest in empirical research, which could help populate such models or which might provide a direct link between transport infrastructure and FDI/trade. Ex-post evaluation of transport schemes is one useful source of empirical evidence and the DfT has been stepping up its evaluation requirements in recent years. But given the challenges involved in producing robust research this area, it would seem more sensible to focus available resources on a concerted evaluation programme covering a smaller number of schemes rather than to spread resources thinly by requiring basic evaluation of every DfT-funded scheme.
- 4.6. *Incorporating the effect of land use change directly in the calculation of welfare impacts through user benefits.* We are in agreement with the peer reviewers that the guidance on induced investment is the weakest part of the new release. Some of these impacts could be appraised more effectively by calculating changes in user benefits whilst allowing land use change. The guidance dismisses this type of approach as potentially spurious but we feel it deserves further consideration and research, especially considering the dearth of evidence and level of uncertainty implied in the analysis of induced investments based on the DfT's proposed approach.
- 4.7. *Translating welfare economics into GDP impacts and vice-versa.* This guidance is an important step forward in this respect but still leaves plenty of gaps which scheme promoters will struggle to fill. These will begin to emerge as scheme promoters attempt to produce an economic narrative that bridges the gap between strategic and economic case.
- 4.8. *Understanding the growth effect of transport investment.* A fundamental underlying problem with transport appraisal is its foundation in partial equilibrium and the assumption that transport investment is marginal and cannot change the macroeconomic trajectory of a country or region¹². When we conclude that a transport project has a much greater BCR than another and a considerable net present value then it must be the case that choosing the better project over the alternative will change the growth trajectory¹³. Whilst this may not typically be material to transport decision making process in isolation, it is becoming

¹¹ The few exceptions tend to be bespoke two-country or two-region models that deal with cross-border mega-schemes. Other even less spatially detailed models exist that have some features worth borrowing from. Notable examples include NIESR's Global Econometric Model (NIGEM), bespoke models focusing on specific sectors or geographies based on NIGEM, and Scotland SCGE model, which we understand is being developed to include trade between Scotland and the rest of the UK (where the rest of the UK is treated as a single zone).

¹² In this sense, we dispute the claim in paragraph 3.32 that "evidence on the role of transport investments on economic growth is strong and well established in the Department". Yes, we do compute user benefits that are assumed to contribute to economic growth but then assume no change in economic growth as a result (our population, employment and GDP growth scenarios remain unchanged and are determined exogenously). Whilst this may be a reasonable approximation for small, marginal schemes, it begins to tie us into knots for larger schemes, which will only go ahead if they change the growth trajectory and which are assumed to be paid for by proceeds from that growth. In such cases, it is also reasonable to assume that excluding the added growth (as well as any related land use effects) will bias the benefits of the scheme downwards, potentially in a material way.

¹³ See www.transportworks.org (structural effects) for additional supporting evidence.



increasingly important for the choice between transport and other policy interventions or for the justification of very large schemes that go beyond the existing fiscal envelope.

- 4.9. Another way to look at this problem would be to test the robustness of the economic case against alternative growth scenarios. Let's assume that the rate of growth in regional GDP or in city centre employment turned out to be double that in the central case. Would this lead to a marginal increase in the value for money of a project or rather to a step change? The latter scenario would suggest that this project was more important in supporting high growth than an alternative project whose value for money was less sensitive to the change in growth assumptions. There may be some merit in exploring this idea further, for example, by analysing how it would might have changed past decisions.

Highest priorities for further research into wider economic impacts (Q9)

- 4.10. We would start by filling the gaps identified in the existing framework, including:
- The estimation of mode, time and location-specific agglomeration elasticities and decay parameters (building on paragraphs 4.17 and 5.2-5.3 in the consultation document). We understand there is some work currently under way in this area and UTG members are keen to work with TASM on pilot applications of the new parameters.
 - Developing an evidence base on additionality (identified in paragraphs 5.6-5.7 of the consultation document), which should be addressed in tandem with our earlier points on FDI and economic growth. One initial strand of work could be to focus on better understanding the impacts of specific types of scheme at the micro level (firms and households). This might include, for example, schemes that have a particular impact on tourist flows or on the external perception of a place (e.g.: urban realm improvements, light rail schemes); schemes that have a material impact on the supply of land and property (for example, by enabling large increases in the supply of land, housing, commercial property); schemes that change or have the potential to change the economic mass of a given location. We feel that a research programme in this area would be best developed in dialogue with scheme promoters.
 - Incorporating user benefits calculated under land use change directly into conventional welfare economics framework

We are also very interested in the DfT's reference to the value of attractiveness of an area (linked to the second bullet point above) and note some of the past work by TfL, DfT and others on the value of urban realm or the value of place. We feel that there has been the need for clearer appraisal guidance in this area for years¹⁴ and would be keen to be involved in any future work.

¹⁴ Unit A2.2 makes reference to DCLG's estimates of the value of changes in amenity, which assumes that developed land has no amenity value. Given that some transport interventions aim explicitly to divert or remove traffic from developed areas in order to create higher value places (take the Elephant and Castle gyratory project in London as a case in point) it seems clear that new research and appraisal focussing on these types of places is needed.