Tax-Free Childcare: Updated assessment of market models

Final report

July 2014

Economic Insight

Document contents

1. Summary

1.1. Introduction

In August 2013 HM Treasury (HMT) and HM Revenue and Customers (HMRC) consulted on different market structures for private sector provision of Tax-Free Childcare (TFC) accounts. The government is now consulting on options to deliver TFC accounts itself, through NS&I and HMRC. HMT and HMRC has asked Economic Insight to evaluate the public and private sector account provision options including:

- ***Government provider*** – childcare accounts provided by government, either through National Savings and Investments (NS&I) using its existing banking infrastructure and service capabilities, or within HMRC.
- ***Single provider*** – a single private sector provider of childcare accounts selected through a government run competitive tender process, retendered periodically.
- ***Small, fixed number of contracts*** – a small, fixed number of private sector providers (say 2-5) of childcare accounts, again selected through a government run competitive tender process, retendered periodically.
- ***Open market*** – no direct limit on the number of providers that could offer childcare accounts. Account providers would enter into arrangements with HMRC through a framework procurement process. Account fees would be paid by Government, not parents.

The purpose of this report is to set out our independent economic analysis of the advantages and disadvantages of these different market models, from the perspectives of parents and taxpayers. Our economic analysis, alongside other evidence and views provided by stakeholders, will be used by government to help inform its decision regarding account provision for TFC.

Our first report compared one type of open market model to a closed market model. We concluded that, of the market models outlined in the August 2013 consultation, the open market model would likely deliver greater benefits than a closed market model. This report builds on the first report by reflecting the public sector options, in the further consultation, and the government's decision that parents would not pay fees for childcare accounts.

1.2. The key changes and the focus of our report

The four models outlined in the latest consultation contain two important changes from an economics perspective.

- ***First, the introduction of a public sector / government provider model.*** That is, accounts could be provided to parents either directly by HMRC, or through NS&I, an Executive Agency of HMT.

  This change matters because, compared to the models set out in the August 2013 consultation, the public sector models are more akin to 'in-house' models of supply, rather than 'outsourcing' models of supply. From an economics perspective, the distinction between the 'buyer' and the 'provider' in such models is at least blurred, and possibly eliminated.[1] And, as discussed further below, this blurring creates a new category of

[1] *We focus on the economic effects of the arrangements, not their legal form.*

advantages and disadvantages that we did not consider in our first report – those associated with managing the risks and consequences of performance failure.

» ***Second, the decision that parents should not pay for childcare accounts.*** Instead, government will pay the provider(s) directly and require them not to charge parents for the level of service covered by its payment.

This change matters because it reduces the 'openness' of the open market model. In particular, the decision changes or eliminates one dimension of competition that would exist in a purely open market model – price. As discussed further below, this change and the consequences connected to it, is likely to reduce the benefits we associated with the purely open market model assessed in our first report.

Given the importance of the above changes, we focus on them in this report, drawing on the evidence and analysis from our first report, where appropriate.

1.3. Our latest findings

As noted above, our previous report concluded that of the options as specified in the 2013 consultation the open market model would likely deliver greater benefits than a closed market model. We found that:

- the open market model had the greatest potential to deliver *consumer choice* and *dynamic benefits,* in the form of on-going cost savings and service innovation; and
- the main risks to the open market model working well were primarily on the demand-side of the market – that is, there is uncertainty surrounding how much competitive pressure parents and employers would put on providers by switching.

Focusing on the two important changes outlined above, our main findings are as follows.

1.3.1. The introduction of the public sector model

The main advantages of the public sector models over the private sector models are that: (a) it could ***reduce the transaction costs*** associated with childcare accounts; and (b) help ***mitigate the risks and consequences of performance failure***.

» The possible transaction costs we have identified are those associated with 'going to market'. For example, the costs associated with designing and running (and re-running) a competitive tender process. The costs also include the costs of designing, implementing, monitoring and enforcing commitments relating to provider performance management and consumer protection, as discussed below.

» The public sector model helps mitigate the risks and consequences of provider performance failure through a number of mechanisms. First, the interests of the buyer and the provider would be more closely aligned (at one end of the spectrum, they are the same) reducing the incentives for opportunistic behaviour. Second, the buyer would have greater visibility and control over the performance of the provider, improving provider performance management.[2]

The main disadvantages of the public sector model are the potential loss of consumer choice and dynamic benefits, which could be delivered by a market with more than one supplier. However, we note that there remains pressure within the public sector models to deliver efficiently and innovate. For example:

- the downward pressure on costs caused by budget controls;

[2] *For clarity, we are not suggesting that private sector suppliers would deliberately or inadvertently underperform. Rather, that there is a risk of this occurring, and that a prudent buyer would put in place safeguards to mitigate it.*

- the possibility that government could go to market in future;
- the competition that NS&I runs to appoint its infrastructure supplier; and
- the potential spill-overs from other NS&I activities into the supply of childcare accounts.

1.3.2. The decision that parents should not pay for childcare accounts

As noted above, the decision that parents should not pay for childcare accounts reduces the benefits we associated with the purely open market model assessed in our first report (although does not eliminate them). The decision could also raise costs and risks in an open market model that would be avoided in a closed market model.

» First, as set out in our first report, without facing a price for childcare accounts, parents and employers may put less competitive pressure on providers as there is not a financial incentive to do so. Relatedly, the decision eliminates one dimension of competition – the price of the childcare account.

» Second, the implication of the decision is that government will need to determine the price that it should pay providers for childcare accounts. It could do this by setting prices administratively (i.e. estimating prices using cost information) or by orchestrating a competition to reveal the market price (i.e. a competitive tender process).

"From an economics perspective, the choice between the four market models is a difficult and finely balanced one."

- The former approach creates a risk that does not exist under a pure open market model where providers could charge parents directly – that is, that government could inadvertently set the price too high or too low for the service, leading to costly over supply or harmful under supply. This is less likely to arise under a closed market model, where competition reveals the price.
- The latter approach (i.e. orchestrating a competition) is effectively equivalent to a closed market model, and so has the same advantages and disadvantages.
- Clearly, both models create transaction costs that would not exist under a pure open market model.

» Third, in determining the price it should pay providers for childcare accounts, government will also need to specify the level of service it wishes to pay for. This has a number of related consequences.

- The level of service chosen by the government could be higher or lower than determined in a pure open market (possibly appropriately so, given that the government has to consider taxpayers' interests as well as parents').
- It may be difficult to enforce the requirement that parents should not pay for childcare accounts and, at the same time, allowing providers to differentiate themselves by offering differing levels of service quality.
- Finally, there is a possibility that government involvement in relation to service standards could encourage providers to focus on delivering a 'vanilla low cost' service.

Of course, these changes are matters of degree, and we remain of the view that the open market model – even with the decision that parents should not pay for childcare accounts – has the greatest potential to deliver dynamic benefits.

1.4. Overall assessment of the four market models

From an economics perspective, the choice between the four market models is a difficult and finely balanced one.

- The trade-off at the heart of the choice between the ***public and private sector models*** is whether the potential advantages associated with lower transaction costs and risks of performance failure under the public sector models exceed the advantages associated with greater choice and dynamic benefits, such as innovation, under the private sector models.
- There is now less to call between the ***open and closed private sector models***. In fact, for the reasons set out above, depending on how government determines the price that it should pay providers, the open market model could – from an economics perspective – be identical to a closed market model.

The main practical challenge from a cost-benefit analysis perspective is an empirical one – that is, sizing the advantages and disadvantages in a way that they can meaningfully compared. Since the TFC market does not yet exist, this is far from straightforward.

- In relation to the public and private sector comparison, although it is possible to gauge the size of the transaction costs, it is very difficult to size the risks of performance failure (and their consequences for parents). Moreover, seeking to quantify the extent of dynamic benefits and the value that parents might attach to them is even harder. For example, one source of dynamic benefit is service-related innovations. An economically sound measure of this benefit would be how much extra in £ parents are willing to pay for a given innovation less the cost in £ of supplying it. But, at this stage, we do not know: what innovations would emerge; how much they would cost; or what parents would be willing to pay for them.
- In relation the open and closed market comparison, it is very difficult to gauge how big the mispricing risk would be if the government decided to set prices administratively. This turns on the potential size of the error and how responsive supply is to changes in price. Again, since the TFC market does not yet exist, we could not estimate either figure with any degree of accuracy. Equally, it is hard to know much bigger the dynamic benefits would be if parents could choose between more providers.

Given the trade-offs set out above, and the empirical challenges, it would be wrong to suggest that either 'in principle' or 'in practice', one account provider model is unambiguously better than another from an economics perspective. The granularity of evidence that would be needed to reach such strong conclusions in relation to such nuanced issues simply does not exist. Indeed, only a 'pilot' and/or ex-post evaluation of the chosen model would seem to be capable of delivering such evidence.

In short, from an economics perspective, our conclusion is that all of the models could represent sensible and legitimate ways to deliver childcare accounts.

Given the uncertainties here, our recommendations are as follows.

- First, in making its decision, government should consider the trade-offs in this report from the perspective of taxpayers and parents. For example, government should consider whether parents may be 'risk averse' with regards to the provision of childcare accounts. This would suggest that it would be appropriate to attach more weight to a downside risk of reducing access to a 'basic' level of service, than should be attached to a downside risk (of the same size) of reducing access to an 'enhanced' level of service.
- Second, whichever model the government chooses, it implements it in a manner that provides it with sufficient flexibility to change the model in future. It should be especially mindful of the ease with which different suppliers could access relevant childcare account data and interconnect with HMRC's systems. This would keep the barriers to entry and

expansion low in the event that government wished to contract with different providers in future.

1.5. Structure of report

The rest of this report is divided into four main sections and annex.

- **Background** summarises the government's plans for TFC and the relevant findings from our previous report.
- **Comparison of the public and private sector models** compares their advantages and disadvantages, based on economic analysis and evidence.
- **Comparison of different open market models** shows how government's decision that parents should not pay for childcare accounts affects competition and, in doing so, reconsiders the findings of our first report.
- **Conclusion and overall assessment of the market models** concludes, bringing together the findings of this report and our first report.
- **Annex** contains brief summarises of third party publications relating to performance management, transactions costs and price setting.

2. Background

2.1. The scheme

At Budget 2013 the government announced its intention to introduce Tax-Free Childcare (TFC). This new scheme will offer working families 20% support towards their childcare costs, and be introduced in autumn 2015.

Under TFC, parents will register with an account provider and open an online account. The government will then make 'top up' payments into the parents' account of 20% of the total value of childcare costs. That is, if a parent pays £8,000 into an account the government will contribute £2,000 – in effect paying 20% of the childcare costs.

A cap will be imposed on the total amount of support given and will be set at £2,000 per year for each child. TFC will be rolled out to all eligible families with children under 12 within the first year of the scheme's operation. Parents will not be charged a direct fee for their TFC account – regardless of the chosen account provider model.

A separate account will be created for each child and will be accessible via online accounts, with alternative options for those not able to access the internet (for example a telephone line). Multiple people will be able to pay into the accounts, enabling all parents as well as other family members or parents' employers to make contributions. Account balances will be allowed to build up to use, for example, over the summer holiday. Parents will be able to withdraw money from the account should they wish to do so, with their contribution being returned to them and the government top-up being returned to government.

The new TFC scheme will replace the existing ESC scheme, which will be phased out. Although existing members of ESC will be able to choose whether to remain on their current scheme, or move to TFC. The new scheme will offer support to more parents as the current scheme is only available to some employees.

2.2. The market model options

The government's previous consultation looked at a range of private sector market structures for childcare account provision. In addition to these options, the government is now consulting on providing childcare accounts, itself, through NS&I and HMRC.

There have been some important decisions associated with the open market model that have been made since we wrote our first report. Namely, the imposition of no account fees for parents. This makes it a somewhat different proposition to that considered in the first consultation.

Government provider

Under this option accounts will be provided to parents by the public sector. As described above, this will either be through NS&I or HMRC. NS&I will be able to use their existing banking infrastructure, which has been developed in conjunction with Atos. HMRC does not currently have the systems in place to deliver such an account platform, but could develop them.

Parents would have a single point of contact through GOV.UK and would not have to choose between account providers. Childcare providers would only have to register with one supplier – HMRC or NS&I.

Single provider

This option aligns with the most extreme version of 'closed market model' that we assessed in our original report. Private sector firms will be invited to tender to become the sole provider of TFC accounts. Competition will exist between firms to be the most appealing across a number of aspects such as price, service, reliability and security. There will either be a single point of contact through GOV.UK, or a two-stage customer journey through GOV.UK and the provider's website. Again, parents will have no choice of provider. The contract will be re-tendered periodically.

Small, fixed number of contracts

Under this option there will be a small number (e.g. 2-5) number of contracts for account providers. There will be competition for these contracts in the first instance, and there will also be continued competition between providers once the market has been established. Parents will have the ability to choose which provider they wish to use, and will be able to switch between them. The contracts will be re-tendered periodically.

Open market

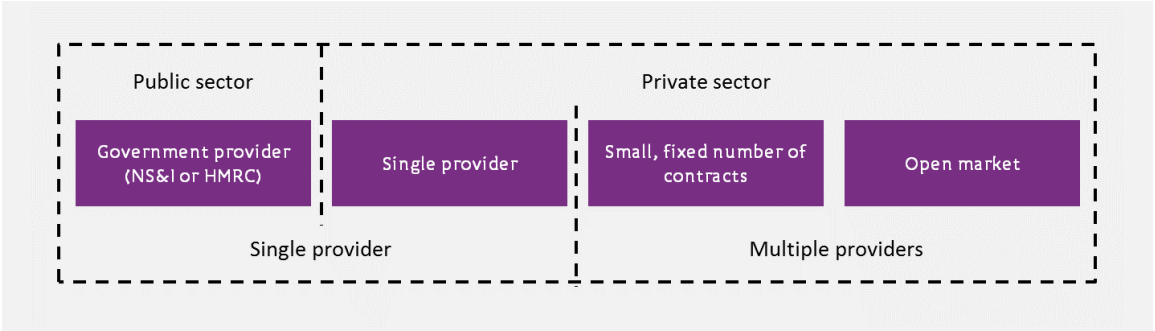
Here, account providers would enter into arrangements with HMRC through a framework procurement. As with all the market models being considered here, parents would not be charged a direct fee for their account. Instead, the government will pay the providers. The price paid by government and the quality of service received by parents will be subject to constraints set by government, but are as of yet unspecified. Parents will be free to choose a provider and switch between them.

Arguably, not charging end users of a product a visible price, and instead it being paid for by government, deviates from the standard notion of an 'open market'. In section 4 we discuss various degrees of 'open' markets.

There are two main dimensions across which the four proposed market models differ. Firstly, the in-house model involves the public sector provision of TFC accounts, rather than suppliers being from the private sector. This immediately raises questions regarding who is best placed to service consumers (parents) needs – either the state or private firms.

The second dimension across which the potential market models differ is the number of firms. For example, under the first two models there is a sole supplier. Parents will have no choice between providers and will not be able to switch if they are not receiving the service they want. Under the small, fixed number of contracts option there could be more providers (for example 2-5).

Figure 1. Options for assessment



2.3. Key changes from our first report

As noted above, the new options and decisions set out in the latest consultation, differ somewhat compared to those analysed in our previous report. We see two key changes between this most recent consultation and the previous one, which our original report was written in response to. These two key differences are discussed below.

The introduction of the public sector model

The government is now consulting on an additional option in which accounts are provided by the government in the public sector. Within this option, there are two potential mechanisms through which the service can be provided:

- ***NS&I***, an Executive Agency of HMT, would act as the body responsible for managing customer registration and the payments system (working in conjunction with its delivery partner Atos). It would use its existing infrastructure and service capabilities, and have a role in ensuring only valid payments are made from eligible families to qualifying childcare providers. NS&I's systems would sit behind the GOV.UK web portal to manage all parental interaction with TFC. This digital by default approach would be supplemented by telephone and SMS support. Parents would make payments into their account by direct credit and/or debit card payments. Childcare providers would have to register with this single source.
- Alternatively, ***HMRC*** would administer the entire scheme itself. The delivery aspects of this approach are the same as the NS&I approach. However HMRC does not have an existing 'account' type service on which to base the childcare account. As such, one would need to be built.

The introduction of this option represents a key change in relation to the original consultation. The provision of accounts by the public sector is distinct from the cases of a single private sector provider (as was previously considered). Under the new model there will not be initial competition for the contract, and accounts will be provided by a public sector body, instead of a private sector company.

The decision that parents should not pay for childcare accounts

The other key change we focus on in this report is the government's commitment to not charge a fee to parents for the TFC account – regardless of the chosen market model. That is, even if the accounts are provided by private sector companies in an 'open market', parents will not be charged a fee.

A concern was that the value of the government's 20% contribution would be eroded, or seen to be eroded, if parents faced a fee to use the service. Although they would receive support equivalent to basic rate tax relief, they would have to pay a charge to receive this support. As a consequence, the most recent consultation stipulates that parents will not pay an account fee, regardless of which market model is chosen. Rather, under the private sector models, the government will pay account fees to the suppliers for providing parents for the account services.

Our initial report considered that account providers would not charge parents only as a possibility. Our assessment of the pros and cons of an open versus closed market hinged on the likely extent of competition in the market. This will, in part, be determined by the ability and willingness of parents to choose and switch between providers. The fact that there will be no visible price may make this choice harder for the parent. Furthermore, the government would have to set a view as to what the 'correct' price (which it pays to providers) should be, and the associated level of service. The commitment to not charging parents a fee is a key change, which affects all the models previously considered, and as such forms one of the main focuses of this report.

Along with the two key changes outlined above, the response to the original consultation and the most recent consultation set out a number of other changes along with further details on how the scheme will operate, including eligibility, customer experience, and information and validation details. For example, the cap on support was increased from £1,200 (equivalent to basic rate tax relief on £6,000) to £2,000. Feedback received indicated that parents' childcare costs were higher than £6,000 and as such, would not receive 20% support – the cap was therefore lifted. Considering these changes is not in the scope of this report.

Upon reviewing the response to the original consultation and the most recent consultation document, we do not see the other changes materially changing our original analysis and conclusions. We therefore focus on the two key changes identified above in the main sections that follow.

3. Comparison of the public and private sector models

In this section we compare the public sector models to the private sector models of childcare account provision. In particular, we consider the two options outlined by the government in its latest consultation: the first option is for childcare accounts to be provided to parents directly by HMRC; and the second is for NS&I to provide them.

We start by setting out the key economic issues raised by the government's consideration of public sector models and then evaluate the extent to which the various advantages and disadvantages might arise with respect to the two options in the consultation.

In summary, we conclude that the main advantages of the public sector models are that they could: (a) reduce the transaction costs associated with childcare accounts; and (b) help mitigate the risks and consequences of performance failure – potentially reducing the costs of designing, implementing, monitoring and enforcing measures to protect consumers. The main disadvantage is the potential loss of consumer choice and dynamic benefits, such as innovation.

Within the public sector models, we think that the NS&I model would go further to deliver dynamic benefits than the HMRC model, but at the same time, could deliver less than the HMRC model in terms of mitigating the risks and consequences of performance failure.

3.1. Key economic issues

From an economics perspective, there are two main differences between the public and private sector models.

- ***Ownership.*** The first difference relates to the ownership of the underlying assets that would be used to deliver the accounts. That is, the taxpayer owns the assets in the public sector models, and shareholders own the assets in the private sectors models. In principle, the different owners could have different incentives or motivations, which may influence how they use the assets and therefore the benefits they deliver to parents and taxpayers.
- ***In-house supply versus out-sourcing.*** The second difference is that the distinction between the 'buyer' and the 'provider' in the public sector models is at least blurred, and possibly eliminated. The consequence is that the public sector models are more akin to 'in-house' models of supply, rather than 'outsourcing' models of supply. The implication, as noted above and discussed further below, is that such models can reduce ***transaction costs*** and mitigate the risks and consequences of ***performance failure***, relative to outsourcing models.

For the purpose of this analysis, we focus on the second difference above. Although we think the first difference is a relevant consideration, our view is that there is not a straightforward connection between the identity of the asset owners and their incentives and motivations, and so any analysis would be speculative.

3.1.1. The scope for performance failure

3.1.1.1. Main considerations

All market transactions involve some performance related risk. Providers may fail to deliver on their commitments. Buyers may fail to pay on time. Sometimes these risks are caused by

opportunistic behaviour, and sometimes they are caused by unexpected and uncontrollable events.[3]

Parties have various options to help mitigate the risks and consequences of performance failure associated with market transaction, including:

- insuring against the risks; and
- writing contracts that anticipate risk and share it efficiently between the parties (e.g. by means of financial penalties for underperformance).

In some cases, it may be too difficult or costly to mitigate the risks and consequences, and for this reason and others, it may be more efficient to avoid a market transaction altogether, and bring it in-house. Both the risk and the consequence matters – that is, even in services where the *risk* of performance failure is limited, if its *consequences* are severe, actions to mitigate those risks may make sense.

An in-house option is most likely to make sense when buyers and potential providers do not share the same interests as one another and, importantly, where it is difficult or costly for one to monitor and so detect performance failure caused by the other. The consequence is that any insurance or contractual protection would be incomplete.

A potential advantage of the public sector models outlined by the government in its latest consultation is that it could help reduce the risks and consequence of performance failure. The extent of this advantage is partly dependent on the specifics of the public sector models set out in the consultation, which we discuss later in this section.

In the economics literature the above issues are known as 'principle-agent problems'. An example of where principal-agent problems have arisen in the past is outlined in the box below.

OFT investigation into the supply of IT to the public sector

In 2013 the OFT launched an investigation into the supply of IT to the public sector[4]. Concerns were raised due to: high concentration in some sectors; high barriers to entry; and difficulty switching providers. A number of issues were raised relating to the principal-agent problem:

- Public sector organisations may not have access to the requisite commercial and technical expertise when procuring IT. This information asymmetry can lead to an inefficient allocation of resources.
- Supplier conduct can limit the ability of customers to shop around by using complex pricing that is not always transparent.
- Incumbent suppliers may behave in such a way as to create or increase obstacles to public sector organisations switching to other suppliers when contracts end.

The scope for the principal-agent problem increases with the degree of information asymmetry between the buyer and provider, and also the extent of one-sided dependency that each party has on the other, which is linked to the extent of asset specificity.[5] We briefly outline these issues below.

---

[3] *Performance failure can happen within an organisation as well as between organisations. We focus on the latter, because the former can occur irrespective of the market model, and so does not form part of our analysis.*

[4] *http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.oft.gov.uk/OFTwork/markets-work/government-ict/;jsessionid=C4B0858979A314666A1C5A29D6B837C0#named1*

[5] *Of course, the principal-agent problem is one of the reasons why firms exist and why the amount of out-sourcing can vary considerably between and within industries.*

Information asymmetry

Clearly, if the performance of one party was always highly visible to the other, it would be straightforward to detect performance failure and insure against it or contract for it. However, in most transaction, one party enjoys access to more (or different) information to the other – i.e. there is an information asymmetry. For example:

- if the government saw longer call centre waiting times, it may not be able to tell if it was a result of unusually high demand relative to the capacity it has paid for, or the inefficient handling of calls; or
- similarly, an increase in customer complaints could be caused by the deterioration in customer service relative to what the government paid for, or an increase in the number of customers willing to complain.

The scope for information asymmetry is likely to increase with: (a) the complexity of the product or service in question; and (b) the variability of those market conditions which have a bearing on performance. It is likely to fall with the availability of relevant comparator situations.

» ***The complexity of the product or service in question.*** There are at least two dimensions of complexity – both can make it difficult to define and measure performance and so detect when there has been performance failure.
  - First, some products and services can be complex in the sense that there are many possible dimensions of performance, and there may be trade-offs between them. For example, if a provider over-performs on one dimension e.g. 'opening accounts within x days of receiving an application' by diverting resources from another e.g. 'handling customer complaints within x hours', has the supplier under- or over-performed?
  - Second, other products and services can be complex in the sense that it may not be clear cut what represents 'good' or 'bad' performance – e.g. one customer may hold a different view to another – and so how best to measure it.

» ***The variability of market conditions.*** As illustrated by the longer call centre waiting times example above, variability in market conditions that have a bearing on performance can make it difficult to distinguish between opportunistic behaviour and circumstances outside of the control of the parties.

» ***The availability of relevant comparator situations.*** The performance levels observed in relevant 'comparator situations' can help provide a useful benchmark against which performance can be compared and therefore help address an information asymmetry problem. A relevant comparator situation could be the same product or service in the past, or a sufficiently 'similar' (but nevertheless different) product or service. In contrast, where there is no track record for a product or service or nothing similar elsewhere, such information may not be available.

Of course, parties in a transaction can take steps to increase the information they have ('mystery shopping' is an example of this). But these steps are costly and the size of the costs is likely to rise with the degree of information asymmetry.

One-sided dependency

One-sided dependency can expose either the buyer or provider to opportunistic behaviour by the other.

A one-sided dependency can arise if one of the parties involved in a transaction makes (relatively) large sunk investments, and which have little value outside of the transaction (known as 'asset specificity' in the economic literature). The party with the sunk investments could be 'held-up' by the other in future negotiations as, without the transaction, its

investment would be rendered worthless. Anticipating this, the party may not make the investment in the first place, and the market would fail.

3.1.1.2. Application to childcare accounts

For the reasons set out below, we consider that both ***information asymmetry*** and ***one-sided dependency*** risks could arise in the context of childcare accounts, but that the materiality of the risks cannot be specified.

- In terms of information asymmetry, on the one hand, the complexity of the service is, to some extent, in the government's control since it will need to specify the service it would like to buy. But the market conditions – for example the rapid increase in parent take-up of the benefit – could make it difficult to distinguish performance failure from sensible management of demand. Also, the service will be new – which means that there is not a relevant temporal comparator that could be used to benchmark performance against.
- In terms of one-side dependency, we note that both providers and government would have to make transaction specific sunk investments and so there is a risk of hold-up. For example, there would be costs to a provider of marketing its childcare account service and costs to the government of selecting a provider or providers. However, the size of the risk is unclear:
  - Our first report indicated that the overall level of investments incurred by providers is likely to be low relative to other markets, suggesting that the risk of 'hold-up' to providers is low.
  - On the other hand, it is very likely that at least some of those investments would have little value outside of the supply of childcare accounts, pointing in the other direction. Also, the section below suggests that government would need to make material investments in selecting supplier(s) and these investments would, by definition, be sunk.
- Most likely, only a 'pilot' or ex-post evaluation of the chosen model would be capable of delivering the evidence capable of sizing these risks.

3.1.2. The presence of transaction costs

3.1.2.1. Main considerations

Transaction costs[6] are the unavoidable expenses that arise when enabling a desired economic activity. They include the costs associated with: designing the market and selecting providers; the costs of monitoring performance (see the discussion above); and consumer search and switching costs. Of course, as in all procurement exercises, these costs would be considered in the context of the potential savings that may be delivered by going to market.

Designing the market and selecting providers

Both the government and providers would incur one-off and on-going transaction costs under the private sector models.

- ***Government.*** A one-off cost would be incurred, as an initial framework procurement process would need to be undertaken to assess each potential provider and allowed government to choose the most suitable ones. The on-going transaction costs would arise as the government has stated that, in line with best practice, the contract for providing childcare accounts would be reopened to competition at set intervals (say, every 5 years).
- ***Providers.*** Providers would also incur transaction costs relating to the time and cost associated with participating in the competition.

[6] *See, for example, Commons (1931) who defined them as the costs incurred before "labour can produce, or consumers can consume, or commodities be physically exchanged".*

The costs associated with designing the market and selecting providers can vary considerably. A recent study by the Centre for Economics and Business Research (CEBR) assessed the costs of competitive public sector procurement processes.[7] They found that on average a competitive procurement process cost £45,200, but only £8,000 of this was faced by the public authority. However, this figure takes account of both central and local government procurement and is therefore likely to significantly underestimate the costs associated with the provision of childcare accounts. By way of contrast, DCMS estimate the costs of Ofcom running auctions for allocating spectrum at £0.93m per annum.[8]

Monitoring performance

The risk of performance failure, irrespective of whether it will actually arise, suggests that the government would wish to put in place safeguards to protect taxpayers and parents. The safeguards could be of various forms:

- contractual terms and conditions; and/or
- consumer protection-type rules and regulations; and/or
- consumer advice and guidance (e.g. on how to seek redress in the event of performance failure).

Here, the government would need to design, implement, monitor and enforce compliance with the safeguards. Also, providers would incur compliance-related costs.

The size of these costs, as well as depending on the size of the risk of performance failure, will turn on: (a) the extent to which new safeguards need to be developed over and above existing ones (e.g. general consumer rights) and (b) the extent to which providers would need to undertake additional compliance activities (i.e. over and above 'standard business practice').

Search and switching costs

To the extent that the private sector model involves more than one provider, further transactions costs would also be incurred by parents. As discussed in our first report, parents would need to spend time accessing, assessing and acting on the information available to them – searching and switching between providers. Arguably, switching costs may be less relevant to the consideration of transaction costs than search costs because, by definition, they are only incurred if the parent expects switching to be in his/her interests.

3.1.2.2. Application to childcare accounts

We asked HMRC for its initial view on both what would be involved in running a framework procurement process of this type to help gauge the costs associated with designing the market and selecting providers. Clearly, the specific activities and costs involved will depend on the final design on the service.

We were told that:

- at least 3 procurement specialists would be involved;
- around 10 project managers would be involved for a period of 6 months;
- the cost of employing the individuals involved could be around £70,000 per annum;
- an unknown number of subject specialists would also be required to help design the specification – although this resource would needed irrespective of whether the public sector or private sector model was chosen; and
- finally, we were told that, under an open competition under Cabinet Office rules, the award of a contract would take place 120 days after the invitation to tender.

To provide a ballpark indication of the costs involved, based on the above information we assume that around 15 people at a cost of £70,000 would be needed for half a year. This would

[7] *CEBR (2013), 'UK E-Procurement Trends'.*

[8] *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225787/Spectrum_IA.pdf*

be a cost of £525,000. We infer from the above that the costs of designing the market and selecting providers would easily exceed the average figure of £45,200 found by CEBR – perhaps by a factor of 10, but would be significantly less than some of the other, and more complex procurement exercises the Government has run.

We also asked HMRC its initial view on what would be involved in monitoring performance. In line with the discussion set out above, it confirmed that the intensity of performance management would depend on the market model. It said that a private sector model was chosen, service levels and key performance indicators would be required and appropriate contract management regimes would be needed. It also said that an increase in the number of providers would involve more points of contact and, probably, a higher intensity of contract and performance management. However, HMRC also noted that the NS&I model would also involve some performance management.

3.1.3. Conclusion

In summary, we believe that there are good reasons for government to actively consider 'in-house' models of supply.

- Although it is difficult to gauge their size, there are risks of ***performance failure*** associated with the private sector models of provision. Further, we note that even if the risks are small, the consequences for parents could be significant given that the accounts are used to pay for childcare. In principle, these risks could be mitigated by pursuing an 'in-house' model.
- Also, the government could avoid ***transaction costs*** by pursuing an in-house model.

Set against these potential benefits, we would expect some a reduction in choice and competition.

The scale of these benefits – and the offsetting reduction in choice and competition – turns on where the public sector models envisaged by government will sit on the 'in-house' and 'outsourcing' spectrum. At one end of the spectrum, government could train its existing staff to provide the account service. At the other end, government could procure the skills and capabilities from the private sector. With this in mind, we consider the differences between the two public sector models below: the HMRC only model and the HMRC with NS&I model.

3.2. Analysis of the public sector models

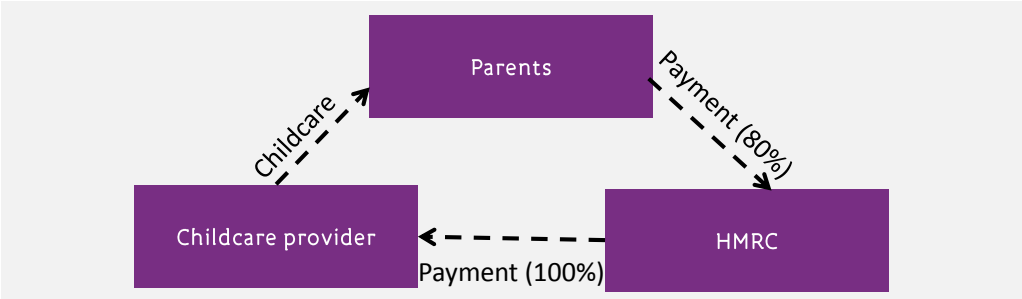
As noted above, government has suggested that childcare accounts could be provided 'in-house' either exclusively by HMRC or by HMRC working with NS&I using its existing banking infrastructure and service capabilities, through Atos. In this section we start by describing these models and then compare and contrast them to provide a qualitative evaluation of how they could perform against the criteria introduced above: the scope for performance failure; the scale of transactions costs; and the scope for competition and so dynamic benefits.

3.2.1. Descriptions of the public sector models

HMRC alone

In this model, HMRC would work alone and develop its own account service. According to the consultation: "*HMRC would administer the entire scheme itself, including acting as a single provider of childcare accounts for parents, accessed through GOV.UK*". The arrangements are illustrated by the figure below.

Figure 2: HMRC alone



In order to be develop its own account service, HMRC could:

- redeploy its existing staff (potentially with further training); or
- recruit new staff that have the skills and capabilities to create an account service; or
- go to market and buy an account service.

We do not consider this final option here, as this would seem to be the same as the closed market model.

The nature of the costs involved differ between the first and second options.

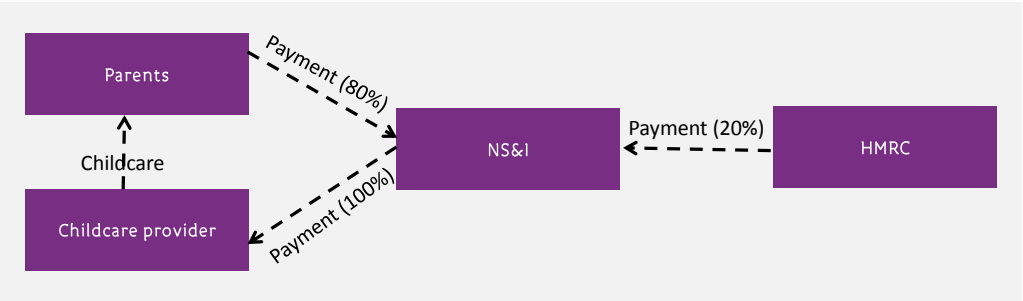
» In relation to the first option, HMRC would face the opportunity costs of diverting the staff that have those capabilities from their current positions to creating and administering the voucher accounts. Eventually, HMRC would need to recruit new staff to fill the positions of the ones they have diverted, so there will also be transaction costs associated with this option (i.e. recruiting new staff, buying necessary software to set up account service, etc.).

» In relation to the second option, HMRC would face the costs of recruiting and retaining the staff that have the necessary skills and capabilities to create an account service. This could potentially be costly, yet HMRC would not be facing the opportunity costs of diverting its present staff from its current positions.

HMRC with NS&I

In this model, HMRC would work with NS&I to deliver childcare accounts, as illustrated by the figure below.

Figure 3: HMRC with NS&I



NS&I would be responsible for managing customer registration and the payments system (using its existing infrastructure and service capabilities), and it would have a role in ensuring only valid payments are made from eligible families to qualifying childcare providers. In effect, HMRC would handover aspects of the in-house provision of childcare accounts to NS&I.

NS&I are one of the largest savings organisations in the UK, fully backed by HM Treasury with more than £100 billion invested and over 25 million customers. It is a non-ministerial department and an Executive Agency of the Chancellor of the Exchequer. While remaining

accountable to HMT, Agency status has given NS&I greater autonomy in day-to-day management. We provide an overview of NS&I in the box below.

Overview of NS&I

NS&I offers a wide range of savings and investment products, such as premium bonds, individual savings accounts (ISAs), income bonds, children's bonds, direct saver accounts, and investment accounts.

NS&I currently employs around 130 staff, mainly in its West London Office. It has a long history of outsourcing its back office operations. In 1999 it transferred 4000 staff employed in NS&I's operations activities to Siemens Business Services (later Siemens IT Solutions and Services) under a 10- to 15-year PPP contract. In 2011 Atos acquired Siemens IT Solutions and Services, hence becoming responsible for delivering the NS&I contract. In 2013 the outsourcing contract got awarded to Atos, for the next seven years, with the option of three one-year extensions. Atos has been given flexibility to design and manage its operations to best achieve the following targets:

- increase the proportion of customer 'interactions' that take place via digital channels to more than 80%;
- grow NS&I's business-to-business and other value creating operations to achieve a contribution of at least 20% of NS&I's total costs by 2020;
- maintain customer service standards as measured by increasingly demanding SDMs; and
- deliver savings to the taxpayer of more than £400 million over the seven-year term, when compared with the equivalent cost of the existing contract.
- This means that NS&I staff are required to shift their focus from management to assurance. NS&I transferred a number of operational risks to Atos, but continues to look at the operational plans and proposals to deliver its strategy.

For our analysis below, the two most important features of HMRC with NS&I model are:

- first, the governance arrangements that exist between the two in-house delivery partners HMRC and NS&I; and
- second, that NS&I has outsourced some of its function to a private sector firm, currently, Atos.

3.2.2. Comparison of the public sector models

Here we compare the HMRC alone model to the HMRC with NS&I model.

Dynamic efficiency

Our view is that the model involving HMRC with NS&I has greatest potential to deliver dynamic efficiencies, such as on-going cost savings and innovation. Our reasons for this are as follows.

- First, the arrangement creates an opportunity for each of the players to 'play to their strengths' and so deliver the benefits of specialisation. We would expect this to generate cost savings relative to a single party (HMRC) seeking to do everything. Namely:
  - ***HMRC*** would be responsible for the policy design and ensuring that that only eligible parents receive the accounts.
  - ***NS&I*** would be the entity providing the accounts to the parents, handling customer service, and paying the childcare providers. In order to achieve this, their skills and

capabilities lie in contracting out and managing the whole IT account provision mechanisms.

- ***Atos*** would focus on IT know-how and operational skills.

» Second, the fact that Atos has to compete for the contract with NS&I, could go some way to help replicate the competitive pressures and dynamic benefits found in the private sector models. NS&I is able to choose who provides their back office services, and as such if Atos do not provide a satisfactory service a new provider may be found. This instils a degree of competitive pressure on Atos, similar to that present in private sector models. NS&I itself will also face competitive pressure in a similar way. That is, the option could be out-sourced later.

» Third, the NS&I model could also deliver benefits from 'spill-overs'. As NS&I supplies a wide variety of services, lessons learnt from other areas of their business could be applied to the provision of childcare accounts.

We note that these differences are matters of degree. For example, there would be pressures within the HMRC model to keep costs low – such as those from budget control.

Performance management

Our view is that the model involving HMRC alone is closer to a text-book economic definition of a pure 'in-house' provision and so is likely to mitigate the risks and consequences of performance failure to a greater extent that the HMRC with NS&I model.

However, we note that, particularly compared to the private sector models, the scope for information asymmetries and one-sided dependencies within the HMRC with NS&I appears to be limited by the governance arrangements which afford visibility and control.

» The ***Chancellor of the Exchequer*** determines the policy and financial framework within which NS&I operates. This allows HMT to keep visibility over where the funding goes and how it is used.

» ***NS&I's Chief Executive*** manages NS&I and is accountable for its performance in accordance with the framework document and the Corporate Plan. She is accountable for NS&I's annual and product accounts and for the proper, effective and efficient use of public funds, and may be required to appear before the Public Accounts Committee.

» The ***NS&I Board*** has only an advisory and not a statutory function. The board is formed by the Chief Executive (who, as 'Director of Savings', has a statutory function), Executive Directors, at least two non-Executive Directors, one of whom acts as Chairman, and HMT officials. It develops corporate policy, ensures good governance and monitors performance with the Chief Executive. So, with NS&I being accountable to HMT, it is reasonable to assume that it will act in HMT's and the public's best interests.

Transaction costs

Our view is that the model involving HMRC with NS&I is likely to offer somewhat lower transactions costs than the model involving HMRC alone. This is because, as set out above, the model allows for specialisation in buying inputs.

3.3. Conclusion

The main advantages that the public sector models have over the private sector models is the potential for lower risks and consequence of performance failure and lower transactions costs. Set against this, is the potential loss of choice and competition. The scale of these advantages and disadvantages turns on the public model, as set out above.

4. Comparison of the different open market models

In this section we evaluate how government's commitment that parents should not pay for childcare accounts affects competition and, in doing so, reconsiders the findings of our first report. As in the previous section, we start by setting out the key economic issues associated with the decision and then consider those issues in the context of childcare accounts.

In summary, we conclude that there is now less to call between the open and closed private sector models than we found in our first report. In particular, depending on how the government determines the price that it should pay providers, the open market model could – from an economics perspective – be identical to a closed market model, or could even be inferior to it.

4.1. Key economic issues

In our first report, we argued that the likely performance of an open market would be determined by how well the demand and supply sides of the market would function. Specifically, we argued that:

- the ***demand-side*** of the market would work well if parents (and also employers, depending on the extent of their involvement) would drive competition by searching out and switching to the provider that would best meet their needs; and
- the ***supply-side*** of the market would work well if the barriers to entry and expansion were low.

Conversely, if parents were unable or unwilling to search and switch, the demand-side of the market may not work well. Also, if the costs of entry and expansion were high, suppliers may not be willing to serve unmet demand. Both problems could stunt the competitive process and could therefore significantly reduce the dynamic benefits that one would normally expect from an open market: on-going cost reductions and innovative products and services.

Therefore, the key economic question raised by the government's decision that parents should not pay for childcare accounts is: how could it affect how the demand and supply sides of the market would function? We answer this question in the section below. Perhaps the best shorthand way to describe the decision is that it eliminates a 'pure open market model' in which outcomes are purely dictated by market forces, and this is why some of the advantages of a 'pure open market model' are reduced.

4.2. Analysis of the open market models

In this section, we evaluate the impact of the government's decision on the supply-side and the demand-side of the market.

4.2.1. Supply-side analysis

Here we consider two issues raised by the government decision: the effect of the decision on entry and expansion; and the effect of the decision on innovation.

4.2.1.1. The effect of government determined prices on entry and expansion

The decision that parents should not pay for childcare accounts means that providers will need to find other ways to recover their costs. As noted in our first report, there are various options for this – from the sale of add-ons, to the sale of advertising, to charging childcare providers, such as nurseries. The main option currently under consideration is for the government to pay childcare account providers directly.

The implication of this option is that the government will have to determine an appropriate price to pay providers. In doing so, it will need to be mindful of two risks.

- The first risk is that the ***price is set too high***, effectively resulting in the government over-subsidising childcare account provision – the effect could be to encourage too much entry and expansion; and so an overspending of taxpayer funds (potentially encouraging unduly high quality or the sale of 'add-ons' which are not central to achieving the government's policy objectives).
- The second risk is that the ***price is set too low***, effectively resulting in too little supply and potentially pockets of under-provision. Under-provision could manifest itself in a number of ways, including unduly low service quality, delays in opening accounts and so on.

The more sensitive supply is to price (i.e. the more elastic it is) the greater an impact 'mispricing' would have on provision. Our first report found that the barriers to entry and expansion were relatively low, suggesting that the supply of childcare accounts could be relatively elastic.

To mitigate these risks, the government has two main options: (a) it could set prices 'administratively' or (b) through a competitive tender process. Before discussing these options further below, the following box provides an example of how they options are used in practice in context of NHS funded healthcare.

Price setting in the supply of NHS funded healthcare

In 2013, the Health & Social Care Act 2012 moved responsibility for pricing from the Department of Health, to become a shared responsibility for NHS England and Monitor. NHS England has to specify the services for which it thinks a national price should be used, and Monitor (the sector regulator for health services) has to define those prices. There are also rules and provisions for local price-setting.

Administratively set prices

Monitor set out how it will set 2015/16 national prices[9] to ***reflect efficient costs*** and to ***provide appropriate signals***. It wants to set prices that encourage better patient care within the budget available.

Fundamentally, prices should reflect resource costs of providing the product or service (in the healthcare sector's case reflect efficient costs of provision), and they should signal that cost to buyers. Monitor also recognises the risks associated with setting prices too high – reducing incentives for suppliers to save costs – or too low - potentially insufficient suppliers in the market or compromising quality.

It identifies two ways of setting prices: rollover last year's prices or use a model that uses updated cost data to set new prices. In both approaches it would adjust the level of prices using cost uplifts and an efficiency factor.

In the ***rollover approach*** Monitor would simply use last year's prices as a base and apply the

[9] *'2015/16 National Tariff Payment System: national prices methodology discussion paper', Monitor, 2014.*

cost uplift and efficiency factor. There would be no need for new cost data, or for a cost model.

Monitor's preferred way of setting national prices is a ***price model*** based on updated input data (i.e. cost data). This approach is more transparent than the rollover approach, as the path from input data to final price becomes clearer. Yet, this approach is more complex and time consuming and could compromise tight price-setting deadlines. Besides, the most recent cost data might not be available to Monitor, and it would have to use older cost data to set prices, which could compromise the accuracy of the model.

Competitively set prices

For certain services that do not have a national price, Monitor allows prices to be set locally by commissioners. Here prices are not set administratively, but there is a procurement process[10].

Monitor has identified a range of issues faced by local commissioners in agreeing contracts, including:

- Pressure to balance annual budgets may act as a barrier to improving patient care. Sometimes the need to balance the budget in any one year can detract attention from efforts to look at improving the quality of care achieved from the budget available.
- Commissioners and providers lack consistently good quality information, and often one party is in possession of more information than the other.
- Some commissioners do not have substantial contracting expertise, which limits their ability to get the best value from their local providers through the contracting process.
- Providers often have advantages over commissioners in terms of contracting expertise and capacity as well as data. This imbalance can make it difficult for commissioners to negotiate and agree contract terms that deliver the best outcomes for patients.
- Transaction costs can be high due to the time and resources needed to negotiate.
- Contract enforcement is not always credible as commissioners are sometimes unwilling to use financial sanctions.

Prices set administratively

Here, the government could try to estimate the appropriate price. It could do this by developing an understanding of the costs of supplying childcare accounts. For example, it could build a 'bottom-up' cost model of childcare account provision. Or it could infer a price from services with a similar cost structure 'top-down'.

- The ***bottom-up*** costing process is used in heavily price regulated sectors, such as the utilities and healthcare services, where without price regulation there would be market power problems. Because of the consequences of pricing error (outlined above), a very significant amount of time and cost is invested in understanding the costs of supply before prices are determined. For example, a typical price review process in the water sector can last for around 2 years. It will involve gathering vast quantities of evidence on capital costs used in the delivery of water and waste water services, benchmarking analyses to understand the efficient level of capital and operating expenditure and so on.
- A ***top-down*** costing process could be used. For example, one could look to the cost structure of the current ESC providers to infer what a reasonable price for TFC might be. The standard risk here is that the comparison suffers from imperfections. Our first report identified limitations of the comparison e.g. the fact that business models under ESC were primarily business-to-business, whereas under TFC, they will primarily be business-to-

[10] *'Local price setting and contracting practices for NHS services without a nationally mandated price', Monitor, 2013.*

consumer. Also, various issues can complicate the measurement exercise. For example, some ESC providers also sell other products and services, and so one would need to be careful to exclude those costs from the analysis. These costs may be difficult to identify from statutory accounts and annual reports. Fundamentally, these are different schemes.

Therefore, although possible, setting prices administratively could be a very time consuming and costly exercise, and would not entirely mitigate the mispricing risk.

Prices set through a competitive tender process

The other option is for the government to run a competitive tender process, so that providers are encouraged to reveal the prices at which they would be willing to supply childcare account services. Clearly, this option goes a long way to addressing the mispricing risk outlined above.

Plainly, however, this option is effectively the same as the closed market model we considered in our first report, with broadly the same advantages and disadvantages identified therein. That is, to run a competitive tender process the government would likely need to:

- specify the service(s) that it is seeking to procure;
- determine the frequency with which the competitive tender process would be run (and hence how long providers would be able to supply for); and
- indicate the potential number of winners, such that providers understand the 'size of the prize'.

It would not be efficient to run an effective competitive tender process *and* allow free entry and exit after the event – it would be difficult for providers to submit meaningful bids, because there would be considerable uncertainty over what they are bidding for.

Accordingly, as we found in our first report, the scope for dynamic efficiency and innovation – relative to a 'pure open market model' – would be reduced as the competition would primarily take place when the contracts are tendered and would focus on offering a lower price for the specified service.

4.2.1.2. The effect of government determined prices on innovation

As indicated by the discussion above, a consequence of the decision that parents should not pay for childcare accounts is that the government will have to define, in some detail, what it is seeking to buy. This contrasts with a 'pure open market model' whereby market forces dictate services are offered. There are two implications of this.

» First, the type and level of service that government chooses to pay for, may be different from what parents would ideally like to receive. This is not of itself a problem and, indeed, is probably necessary as government has to consider the interests of taxpayers generally, as well as parents.

» Second, government involvement could change the ability and willingness of suppliers to innovate around the type and level of service that government chooses to pay for. We focus on this implication here.

Stylized scenarios

To illustrate the potential effect of government involvement on innovation, we compare and contrast three stylized market scenarios.

» ***Scenario 1: A pure open market.*** This aligns most closely with the open market we considered in our first report. We define it as: '*An open market where parents pay the voucher providers a market price for their services. Government ensures a minimum level of service'.*

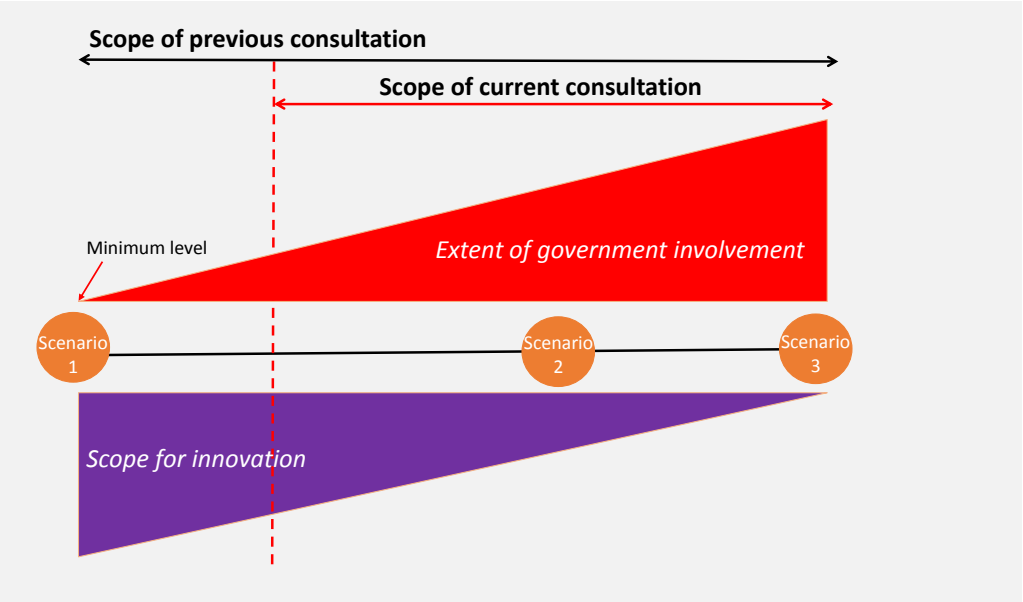
» ***Scenario 2: An open market with moderate government involvement.*** This scenario probably aligns most closely with the open market set out in the latest consultation. We

define it as: '*Open market where the government pays the suppliers a price for their services. The government defines the level of service it expects for that price and the minimum quality standards. It also allows the suppliers to provide any other services they might want to offer, such as add-on services, as long as the price of these add-on services is clear, and the basic level of service is still provided to the end customer (parents) at no cost'.*

» ***Scenario 3: An open market with significant government involvement.*** We define this scenario as: *'Open market where the government pays the voucher providers a fee for their services. The government defines the level of service it requires for that price and the minimum quality standards. It does not allow the suppliers to provide any other services, apart from the basic core TFC childcare accounts'.*

These scenarios are illustrated by the figure below.

Figure 4: Spectrum of government involvement



Analysis of stylized scenarios

As indicated by the figure above, there are reasons to think that the scope for innovation would be highest in the market with the least government involvement i.e. scenario 1, as considered in our first report.

» ***In scenario 1***, voucher providers would not face any direct or indirect restrictions on the services they could offer, or what they could charge for them. They would have a clear profit motive to lower their prices by cutting their costs, and also to outperform their competitors, for example by providing services of lower/higher quality and charging less/more for them (vertical differentiation) or offering different add-on services (horizontal differentiation). Our first report identified that there was scope for such innovation to occur – e.g. account access and management options; the quality of customer service etc.

» ***In scenario 2,*** the providers would be obliged to supply the service government has paid for without a charge to parents. Beyond that, providers could offer parents higher quality services and/or different add-on services.

  – The challenge in scenario 2, which could restrict innovation relative to scenario 1, is that the line between the service paid for by government and a 'higher quality' service may not be clear cut. The implication is that it could be difficult for providers to charge for higher quality services, without breaching their commitment not to charge parents

for the service paid for by government. If they cannot charge for the service, they may not offer it, and this would reduce innovation. The scope for vertical differentiation could fall relative to the first scenario.

- Scenario 2 would still permit horizontal differentiation. Effectively, a 'pure open market' would exist in the supply of add-ons, rather than the supply of the childcare account service. We note that it is possible that the childcare account service could benefit from 'spillovers' from competition in the supply of add-ons.

» ***Scenario 3*** clearly places the most restrictions on innovation. In particular, it eliminates the possibility of providers selling add-ons.

There are two additional subtle effects under scenarios 2 and 3 is that could change the scope for innovation:

- first, government's specification of the service level it is paying for could cause providers to adopt particular business models – i.e. model designed around delivering that service level at lowest cost, rather than models designed to offer innovative services; and
- second, providers may view themselves as suppliers of a 'vanilla commodity service' to government, rather than a B2C business – but this effect is speculative and turns on the culture and motivations of the businesses involved.

4.2.1.3. Conclusion

On the basis of the analysis set out above, we consider that the supply-side of the market is likely to function less well than the 'pure open market' we considered in our first report. As a consequence, we think that there is less scope for dynamic benefits to emerge, and the possibility of risks associated with mispricing the service.

4.2.2. Demand-side analysis

In our first report, we argued that if parents were not charged for the childcare accounts, they may put less time and effort into shopping around and switching, as there would not be a financial benefit of doing so.

The extent to which the government decision reduces competition depends on the extent to which charging a price would have contributed to parent and employer search and switching behaviour. This in turn depends on:

- whether providers would have charged parents for childcare account (as opposed to charging, say, advertisers or nurseries);
- if they would have charged, how much they would have charged;
- how important price would have been to parents, relative to other account features; and
- the extent to which parents would have been able and willing to access, assess and act on price and other account feature information.

We considered most of these factors in our first report and concluded that we could not rule out the possibility that competition could occur over price. The implication is that eliminating it could reduce competition.

The one factor that we did not consider fully is how big the price might have been and so how important it could have been in a parents' selection of account provider. As the market for TFC childcare accounts does not yet exist, we are cautious about drawing strong conclusions about market prices. The one source of information we have is from the ESC scheme

» Here we know that voucher providers tend to charge a percentage of the vouchers they supply. In our previous report, we estimated that the breakeven percentage fee rate could be between 1% and 7%, based on the accounting data of a sample of ESC providers. At the

maximum support limit of £10,000, this would imply a charge between £100 and £700 per annum – a midpoint of £400 per annum or £33 per month.

- Taken at face value, this figure would appear to be relatively high – equivalent to a high-end mobile phone monthly subscription. One possible explanation for this is that the value of the payments under TFC will be higher than under ESC, and assuming that the costs of providing childcare accounts do not rise with the value of payments handled, one might expect percentage charges to fall.
- Another proxy would be to divide the total (administrative) costs of the ESC account providers by the number of children expected to receive TFC in 2015/16. This gives a value of around £230 per annum or £19 per month. We note that accounting data was not available for every ESC provider, which would lead to too low a figure. We also note that providers supply other services in addition to childcare accounts, which would lead to too high a figure.

Of course, there are differences between the TFC and ESC schemes, and so there remains a high degree of uncertainty over what prices might have emerged for childcare accounts. However, we cannot rule out the possibility that price would have been an important factor in a parent's choice of childcare accounts. Therefore, we consider that government's decision that parents should not pay, could, as indicated in our first report, reduce competition.

4.3. Conclusion

For the reasons set out in this section, we consider that the decision that parents should not pay for childcare accounts is likely to reduce the dynamic benefits we associated with the pure open market in our first report (although it does not eliminate them). The decision could also raise costs and risks in an open market model that would be avoided in a closed market model (and in the public sector models).

5. Conclusion and overall assessment of the market models

The purpose of this section is to bring together the findings of our first report and the findings of this report to arrive at an overall conclusion regarding the four account provider models set out by the government in its latest May 2014 consultation.

Recapping, the four model models being consulted on are as follows:

- ***Government provider*** – childcare accounts provided by government, either through NS&I using its existing banking infrastructure and service capabilities, or within HMRC.
- ***Single provider*** – a single private sector provider of childcare accounts won through a government run competitive tender process, retendered periodically.
- ***Small, fixed number of contracts*** – a small, fixed number of private sector providers (say 2-5) of childcare accounts, again won through a government run competitive tender process, retendered periodically.
- ***Open market*** – no direct limit on the number of providers that could offer childcare accounts. Account providers would enter into arrangements with HMRC through a framework procurement process. Account fees would be paid by Government, not parents.

The two main changes from an economics perspective compared to the options set out in the August 2013 consultation are: (a) the introduction of a public sector / government provider model; and (b) the decision that parents should not pay for childcare accounts.

The advantages and disadvantages of different models can be classified into three broad factors.

- The first factor ***dynamic efficiency*** captures the extent to which the model would be expected to deliver benefits associated with on-going cost savings and innovation. This issue was at the heart of our analysis in our first report.
- The second factor ***performance management*** captures the extent to which the model would be expected to mitigate the potential risks and consequences of performance failure, arising from the principal-agent problem.
- The third factor ***transactions costs*** captures the extent to which the model avoids the costs of going to market.

Our overall conclusion is that the choice between the four models is a difficult and finely balanced one. All of the models could represent sensible and legitimate ways to deliver childcare accounts.

This is because each model has different strengths and weaknesses. Furthermore, the sources of these strengths and weaknesses are not independent of each other.

- The ***public sector models*** perform better than the private sector models in terms of performance management, because they can help address potential principal-agent problems. This is because they are text-book economic definitions of a pure 'in-house' model of supply. This improves the alignment between the interests of the buyer and the provider, as well as helping to mitigate potential asymmetric information and one-sided dependency problems. The HMRC model perhaps scores somewhat higher than the NS&I model in this regard, recognising that it is even closer to an 'in-house' model.

- The ***public sector models*** may also perform better than the private sector models in terms of transactions costs, since they help avoid some of the costs of going to market, such as designing and running a competition. The NS&I model perhaps score somewhat higher than the HMRC model, recognising that HMRC would likely have to 'go to market' to recruit staff with the relevant skills and capabilities to implement an account service, and recognising that the NS&I model allows for efficiencies given its expertise in procuring IT services. Of course, these costs need to be considered in the context of the overall project.
- However, we consider that the ***private sector models*** offer greater scope for dynamic efficiencies through cost savings and innovation. Within these models, there is scope for competitive pressures which are less pronounced in the public sector models. Within this, there are important points of detail:
  - first, the 'new' open market model has less scope to deliver dynamic efficiencies than the 'old' open market model we considered in our first report due to the restrictions implied by parents not being charged for accounts; and
  - second, within the public sector models, we think that the NS&I model has somewhat greater potential for delivering dynamic efficiencies than the HMRC model. This is because there are competitive pressures arising from the appointment of NS&I's IT supplier and also the potential for spill-overs from other NS&I activities.

We have not been able to arrive a definitive view as to which model is 'best'. This is because the evidence needed to (a) size the differences between the market models for each factors and (b) weight each of the factors (and so differences between the models), does not exist. Our view is that only a 'pilot' or ex-post evaluation of the chosen model could deliver the necessary evidence.

Therefore, our recommendations is that: (a) government should consider the trade-offs in this report from the perspective of taxpayers and parents (particularly as to whether they are 'risk averse'); and (b) whichever model the government chooses, it should implement it in a manner that provides it with sufficient flexibility to change the model in future.

Annex

This annex provides further details of evidence we have used in drawing our conclusions. The evidence relates to three topics: performance management, transaction costs and price setting options.

Performance management

This section provides evidence relating to the degree to which the principal agent problem (discussed in section 3) could result in costs if a private sector model was chosen. That is, how the principal agent problem can result in relative benefits of a public sector model.

We consider, in turn, evidence from:

- competition economics;
- academic papers; and
- our previous report.

Evidence from competition economics

OFT and Competition Commission investigations

There have been a number of OFT and competition Commission (CC) investigations in which a principal agent problem has been at the heart of the issue under concern. In 2013 the CC criticised the Big Four accountancy firms of satisfying management rather than focusing on shareholders' needs[11]. Accountancy firms (the agent) have the incentive to present a company's accounts in manner than is favourable to the management, as they choose who conducts the audit. The shareholders of the company (the principal) however, may not wish the accounts to be presented in this way. There is also a principal agent problem between the shareholders and management.

A further two examples from OFT investigations include door-step selling of services (such as drive resurfacing), and estate agents. In both cases the seller knows a lot more information about the product they are selling and there was concern that customers were not getting the service they were paying for.

Assessment of non-horizontal mergers

The European Commission (EC) has released guidelines on the assessment of non-horizontal mergers[12]. Two broad types of non-horizontal mergers can be distinguished: vertical mergers; and conglomerate mergers. Vertical mergers involve companies operating at different levels of the supply chain. For example, when a manufacturer of a certain product (the 'upstream firm') merges with one of its distributors (the 'downstream firm'), this is called a vertical merger. Conglomerate mergers are mergers between firms that are in a relationship, which is neither purely horizontal (as competitors in the same relevant market) nor vertical (as suppliers or customers).

Such non-vertical mergers can provide substantial scope for efficiencies. Due to the companies engaging in complimentary activities, vertical mergers can create efficiencies. For example, efforts to increase sales at one level (e.g. by lowering price, or by stepping up innovation) will benefit sales at the other level. Depending on the market conditions, integration may increase the incentive to carry out such efforts. In particular, after the vertical integration, lowering the mark-up downstream may lead to increased sales not only downstream but also upstream and vice versa. This is often referred to as the 'internalisation of double mark-ups'.

---

11 *http://webarchive.nationalarchives.gov.uk/20140402141250/http://www.competition-commission.org.uk/media-centre/latest-news/2013/Feb/audit-market-not-serving-shareholders*

12 *http://ec.europa.eu/competition/mergers/legislation/draft_nonhorizontal_mergers.pdf*

Integration may also decrease transaction costs and allow for a better co-ordination in terms of product design, the organisation of the production process, and the way in which the products are sold.

Vertical integration may also facilitate coordination by increasing the level of market transparency. As two firms merge into one, sensitive information can be shared between them

In relation to the provision of TFC accounts, a non-horizontal merger would be comparable to the government providing TFC accounts itself, and illustrates that certain principal agent problems would be solved. Efficiencies could be realised due to activities between the government and providers no longer being required i.e. transaction costs. The potential mark-up that the private sector provider would charge would also disappear, akin to the 'internalisation of double mark-ups'. Furthermore, asymmetric information would not be an issue as the government would have all the information available to them.

Evidence from academic papers

Bajari and Tadelis (2001)[13]

Economic theory suggests that if the seller has information about production costs that the buyer does not have (asymmetric information), the buyer can screen sellers by offering a menu of contracts from which the seller will select a particular contract, thus revealing his private information. Theoretically, designing such a menu of contracts for private sector TFC account providers would be possible, however, in practice, all aspects of private information is unlikely to be attainable. For example, contracts may be written to discover suppliers' true costs, but their level of effort would still be unobtainable.

In contrast to theory, the authors recognise that in the construction industry, where the builder could have more information than the buyer, menus of contracts are not used. Instead, the vast majority of contracts are variants of simple fixed-price and cost-plus contracts. In fixed-price contracts, the buyer offers the seller a pre-specified price for completing the project. A cost-plus contract does not specify a price, but rather reimburses the contractor for costs plus a stipulated fee.

The authors construct a model in which the buyer incurs a cost of providing a comprehensive contract and is faced with a trade-off between providing incentives and reducing ex post transaction costs due to costly renegotiation. They show that cost-plus contracts are preferred to fixed-price contracts when a project is more complex.

Chick et al. (2012)[14]

This paper explores the acquisition of a public good (such as influenza vaccines) by a government whose objective is to minimise social cost when the private sector supplier has both production yield uncertainty and private information about its uncertainty.

They construct a mathematical model and show that, as expected, when the manufacturer has more information than the purchaser about their productivity (information asymmetry), information rents can be extracted. They go on to show that if the firm's level of effort can be observed, a menu of contracts can be presented that ensure a first-best solution.

This paper illustrates that the degree of information asymmetry can influence the adverse effects to parents arising through the principal agent problem. The less able the government is to monitor firms, and write contracts based on inputs and outcomes, the larger the potential harm is.

---

[13] *'Incentives versus transaction costs: a theory of procurement contracts', Bajari and Tadelis, RAND Journal of Economics, 2001*

[14] *'Incentive alignment and information elicitation from manufacturers for public goods procurement', Chick et al., Insead, 2012*

Evidence from our previous report

Complexity of ESC scheme

To give an indication of the complexity of the TFC account market, we consider the existing ESC scheme. As it predecessor, it shares a common purpose of providing financial support to parents through tax relief. We note however that the two schemes are considerably different.

Most noticeably, providers manage ESC accounts on behalf of employers, who offer childcare schemes to their employees, often as part of a wider package of employee benefits. The voucher providers earn fees in return for their service, which are negotiated directly with employers and are typically paid for out of the national insurance contribution (NICs) saving that employers benefit from as a result of offering the scheme. For parents who sign up to the ESC, the cost of their voucher is automatically deducted out of their salary.

Voucher providers then administrate the employer schemes, managing the voucher accounts on behalf of employers and parents. They manage both the flows of payments into the accounts from employers, and the payments out to the childcare providers – who ultimately provide childcare to parents.

Importance of outcomes to parents

As described in the main body of the report, the degree to which the principal agent problem can create issues in the TFC market will depend on how important the different outcomes are to parents. As part of our previous work we spoke to ESC voucher providers and one put forward the view that because of the closeness of the service to their children's wellbeing, the scheme was very important.

> ***'This [the payment of childcare] is a very sensitive subject for people – you need to be spot on – things cannot go wrong.' –***
>
> ***Existing supplier***

Our discussions also highlighted what was likely to matter to patents, based on their experience so far:

- Being able to pay their childcare provider via the account.
- Being able to sign up to the account easily and quickly.
- Having access to a wide range of methods to make payments into and out of the account (e.g. BACS, direct debits and standing orders).
- Easily being able to increase or reduce payments into their accounts – and increase or reduce payments out of their accounts.
- Ways of reducing the risk of the incorrect sum or timing of payments to their childcare providers.
- Ways of reducing the risk of payments going missing altogether.
- A reassuring point of contact to diagnose and rectify problems swiftly.
- Ways of managing the payments / optimising the accounts of multiple children.
- Potentially, integration with other child related services, such as emergency child care.

Transaction costs

This section of the annex provides evidence relating to the transaction costs that could be faced as a result of designing and monitoring a private sector market and procurement process.

Total government procurement costs

In 2011/12 central government spent £45bn on procurement and an estimated £3bn through central contracts[15]. The National Audit Office has endorsed the current government's

[15] *'Improving government procurement', National Audit Office, 2013*

procurement strategy, saying that it is the most coherent approach to reform yet and has resulted in savings.

Consumer transaction costs in the personal current account market

The OFT has undertaken several studies into the provision of personal current accounts (PCAs). One concern is that customers are not imposing on banks the competitive pressures necessary to make them offer a competitive service.

Switching rates were deemed particularly low and this was in part due to the transaction costs of changing providers. The 2008[16] study found that over a quarter of people who had switched accounts had experienced some problem with the process. There were also concerns about the search costs involved. Relatively few customers were actively monitoring the competitiveness of their current account and some aspects of pricing were not transparent.

Since the original OFT study there have been improvements in the PCA market. The costs of switching have been greatly reduced, partly through the Current Account Switch Service[17] which imposes minimum standards on banks. There have also been improvements in the transparency of pricing.

Price setting options

This section provides evidence relating to the role of government intervention in markets (discussed in section 4). More specifically, it provides evidence of how government sets prices in the health sector and draws comparisons to the TFC voucher provision market.

We consider, in turn, evidence from:

- the healthcare sector; and
- our previous report.

Evidence from the healthcare sector

As discussed in the main body of the report, Monitor sees a number of issues that local commissioners face when awarding contracts. The table overleaf explores these issues and how they could relate to the TFC account market.

Table 1. Challenges faced by local commissioners in agreeing local contracts that deliver the best outcomes for patients

Monitor findings	Monitor explanations	TFC voucher provision
The pressure on local commissioners to balance annual budgets may act as a barrier to improving patient care	Commissioners are primarily responsible for identifying how to buy better quality services from the budget available to them. They face particularly strong pressures to meet annual budget targets because their funding is allocated on a yearly basis and the allocation system discourages both deficits and surpluses. Sometimes the need to balance the budget in any one year can detract attention from efforts to look at improving the quality of care achieved from the budget available.	It is very likely that government would face the same pressure, as it will have to balance HMT's budget for TFC vouchers.
Commissioners and providers lack consistently good quality information	To agree and enforce sound contracts, good quality data is essential. But providers have far better data than commissioners about the work they do and the costs of doing it, which they may be unwilling to share. Even where providers do share information, commissioners are not always able to have confidence in it because the quality of the information is sometimes poor and commissioners lack benchmark data with which to compare provider performance. Although several	In essence, this asymmetric information problem will always be present, regardless of who is contracting out.

16 *http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.oft.gov.uk/shared_oft/reports/financial_products/OFT1005.pdf*

17 *http://www.paymentscouncil.org.uk/switch_service/*

	providers are adopting more sophisticated cost recording approaches, many providers themselves still do not fully understand the costs they incur at the patient or even at the individual service level. Providers need to collect and to share far better data on both quality and costs. This will help enable informed discussions between providers and commissioners about what services are needed for local patients and how they can best be delivered.	
Some commissioners do not have strong contracting skills	Some commissioners do not have substantial contracting expertise, which limits their ability to get the best value from their local providers through the contracting process.	We assume that government has the right contracting skills.
Commissioners are not always able to negotiate with providers on equal terms	Providers often have advantages over commissioners in terms of contracting expertise and capacity as well as data. This imbalance can make it difficult for commissioners to negotiate and agree contract terms that deliver the best outcomes for patients.	Again, the problem of asymmetric information will persist regardless.
Transaction costs can be high	Managing local contracts can be costly for both commissioners and providers in terms of the time, information and other resources they require. Poor quality information and weak contracting skills inflate these inherent costs	We assume that government has the right contracting skills, and hence transaction costs will be low.
Contract enforcement is not always credible as commissioners are sometimes unwilling to use financial sanctions	Commissioners are sometimes reluctant to enforce contracts, particularly by imposing financial penalties, for fear of exacerbating providers' existing problems. While holding back from enforcement may be in patients' best interest in the short term, as it ensures their continued access to services, it may be against patient interests in the longer term to withhold from providers this potentially powerful incentive to improve quality and efficiency.	We assume that government is credible and will impose financial sanctions.
Commissioners often rely on good relationships with providers to overcome these challenges	In health care, good relations with providers can be crucial to overcoming some of the challenges commissioners face when using contracts to deliver better quality and better value services for patients. For example, they can help commissioners and providers to work together (in a way that is consistent with the statutory framework on procurement, choice and competition), when redesigning services for patients. However, good relationships are not always easy to establish and maintain and continual disruption to those relationships makes effective contracting that benefits patients very difficult	We assume that this is equally true for TFC vouchers.

Source: Monitor (2013) and Economic Insight analysis

Further information

Economic Insight Limited
88 Wood Street
London
EC2V 7RS

www.economic-insight.com