Long-Run Economics Ltd

Incentives to businesses to help reduce the extra costs faced by disabled people

A report to the Extra Costs Commission

April 2015

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About Long-Run Economics Ltd

Long-Run Economics Ltd is an economics consultancy based in London. Its Director, Karen Hancock, was, until 2013, Chief Economist at the Department of Education. She works – sometimes in association with other well-qualified economists – on economic appraisals, business cases and economic evaluation projects for the public and voluntary sectors across a wide range of policy areas, ranging from science, innovation and space, to health, agriculture and education. Karen is also a part-time economist with Pro Bono Economics, leading and managing economist volunteer effort on a wide range of projects.

On this project, Karen directed the work of Associate Economist Farooq Sabri. Farooq worked in the Cabinet Office's Behavioural Insight Team until 2014, and has worked with Long-Run Economics on a number of projects for the UK Space Agency. During this time, he provided economic analysis and supported the design and implementation of impact evaluations. He is also a Researcher at New Philanthropy Capital, supporting all aspects of their research and consulting work, and a volunteer Economist with Pro Bono Economics.

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Acknowledgements

We would like to acknowledge the useful guidance and feedback provided by the Extra Costs Commissioners, and the officials at Scope**,** particularly David Owen and Eilidh Cage. For their insightful comments during the drafting of this report, we would also like to thank Tris Dyson, Constance Agyeman, Jane Walsh and Dan Corry.

Responsibility for the contents of this report remains with Long-Run Economics Ltd.

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Executive summary

Existing evidence on markets for disability products suggests that there is room for new initiatives to develop those markets. These initiatives could influence businesses to address market demand and supply issues that are barriers to the provision of an increased range and quality of products and services and more competitive prices for disabled consumers.

On the demand side, it is possible to incentivise business to improve the range, quality and prices of goods and services for disabled customers by providing consumers with more information. On the supply side, the issues appear to be more related to structural issues inhibiting competition in the market. For these issues, there is potential in initiatives that encourage the pooling of resources or improve productive efficiency of businesses.

A search of the literature suggests that it is possible to group such initiatives into three types:

- Those that provide information to consumers by recognising business achievement
- Those that encourage innovation
- Those that encourage partnerships

While available evidence on the costs and benefits of these initiatives is limited, we believe that social labels, challenge funds and partnership schemes represent three promising kinds of initiatives.

Social labelling represents an elegant, market-based solution that uses information to influence the behaviour of firms. Challenge funds can be used to incentivise innovation, with the potential to generate a range of new ideas and interest in reducing costs, and/or improving the range and quality of goods and services available to disabled consumers. Effective partnerships could enhance the impact of these two initiatives and supplement them by facilitating the pooling of knowledge and resources.

The success of these initiatives in practice requires sufficient resources and careful design. We have provided a summary of these design considerations. However, the absence of research on their effectiveness and the as-yet untested application of these initiatives to the disability context make it difficult to recommend which might be most cost-effective and highlight the need for further research.

Summary of findings

Type of scheme	Success factors	Potential effectiveness	Likely cost and options for financing	Applicability to disability/ extra costs	Key limitations to assessment
Social Labels e.g. Fairtrade - label of product "worthiness" valued sufficiently to influence purchasing decisions, assessed on stable criteria	• Relevance - consumers care sufficiently • Simplicity • Trust • Impact	High - evidence of cases of willingness to pay premium of about 20%	Medium - independent scrutiny helps legitimacy/ trust Costs may be partially recovered from a user fee, but this may deter involvement. Precise level requires market testing	Uncertain - e.g. improving services to disabled customers may motivate less than avoiding exploitative practices re: environment, developing world	Do not know how responsive consumers would be
Recognition awards e.g. awards for good practice	• Branding (achieves wide recognition) • Engagement (wide participation) • Transparency (process rendering choice of winner credible)	Low - may target one-off result on specific issue not systematic/ permanent change	Low- no need to maintain and monitor against accreditation standards, but resources needed for admin & publicity Financing unclear; entry costs may deter involvement when brand is establishing	Many potential areas of good practice - some challenge in ensuring sufficient recognition to maximise incentive to win	

Type of scheme	Success factors	Potential effectiveness	Likely cost and options for financing	Applicability to disability/ extra costs	Key limitations to assessment
Challenge prizes - promote innovation by payment of reward to whoever first meets defined challenge, e.g. Food Preservation Prize	• Objective which is specific, measurable & achievable • Risk appetite from participants • Meeting challenge opens commercial opportunities • Prestige/non-monetary incentives	High - evidence of high potential if well-designed	High- costs of management and governance Financing – most budgets are directly provided by government, charitable foundations or other large organisations (they are targeted at innovations that cannot generate investment on their own) with little cost recovering during the scheme	May be possible to identify suitable challenge objective though direct extra costs link could be more of challenge - sufficiently exciting to justify risk?	Need to identify specific problem to target; uncertainty about precise design parameters; innovations are risky by nature
Multi-stakeholder schemes - schemes that offer incentives e.g. access to opportunities where organisations work in partnership	• Common goal • Effective dialogue acknowledging constraints • Good governance	Medium (but potentially key to effectiveness of other schemes)	Low- but enough to support effective dialogue/feedback loops Financing – most budgets are directly provided by government, charitable foundations or other large organisations with little cost recovery during the scheme (costs for involvement may act as a barrier for the involvement of smaller stakeholders)	Appear many opportunities where better collaboration could help achieve efficiencies - question as to nature of incentive to be offered	Uncertainty about value of interdependency with other initiatives; effective on paper but little available empirical evidence

Introduction

In July 2014, Scope set up the Extra Costs Commission to investigate ways in which the extra costs faced by disabled people and families with disabled children could be reduced.

The Commission believes that many groups have a role in reducing extra costs. Businesses which do – or could – supply goods and services to disabled people as customers are one important group. The Commission anticipates making recommendations to such businesses. It is also considering recommendations to local and national government and to third sector organisations who have an interest in influencing businesses, with the aim of ensuring disabled consumers – who purchase goods and services from these businesses – have the same opportunities as non-disabled people.

The aim of this project was to find evidence on the effectiveness of past initiatives to influence businesses to meet public policy objectives, especially initiatives targeted at improving the market for goods and services for disabled people.

In the context of this project, the kinds of initiative the Commission is considering include award schemes, challenge funding and kite-mark schemes. The potential for government to use regulatory or legislative tools is being considered separately and is not within the scope of this report.

To support the Commission's recommendations, we intended to quantify the cost and benefits of different initiatives. The lack of impact evaluations and data, however, meant that this was not possible. It also proved difficult to find applications of these initiatives that were relevant to the disability context. For these reasons, we had to adopt a more qualitative approach which enabled us to suggest which initiatives might in theory work best and identified the characteristics of these initiatives which appear to raise their effectiveness.

This work complements our other report for the Extra Costs Commission on the intangible benefits to businesses of meeting the needs of disabled customers (Walsh and Hancock, 2015). This other report summarises the evidence on the reasons why businesses should want to meet the needs of disabled customers, while this report focuses on how businesses could be incentivised to address those needs.

Research method

We addressed the project's aims by undertaking the following research process:

- We developed a high-level theory of change to understand the ways in which businesses could be influenced to reduce costs and/or improve the range and quality of goods and services on offer for disabled consumers

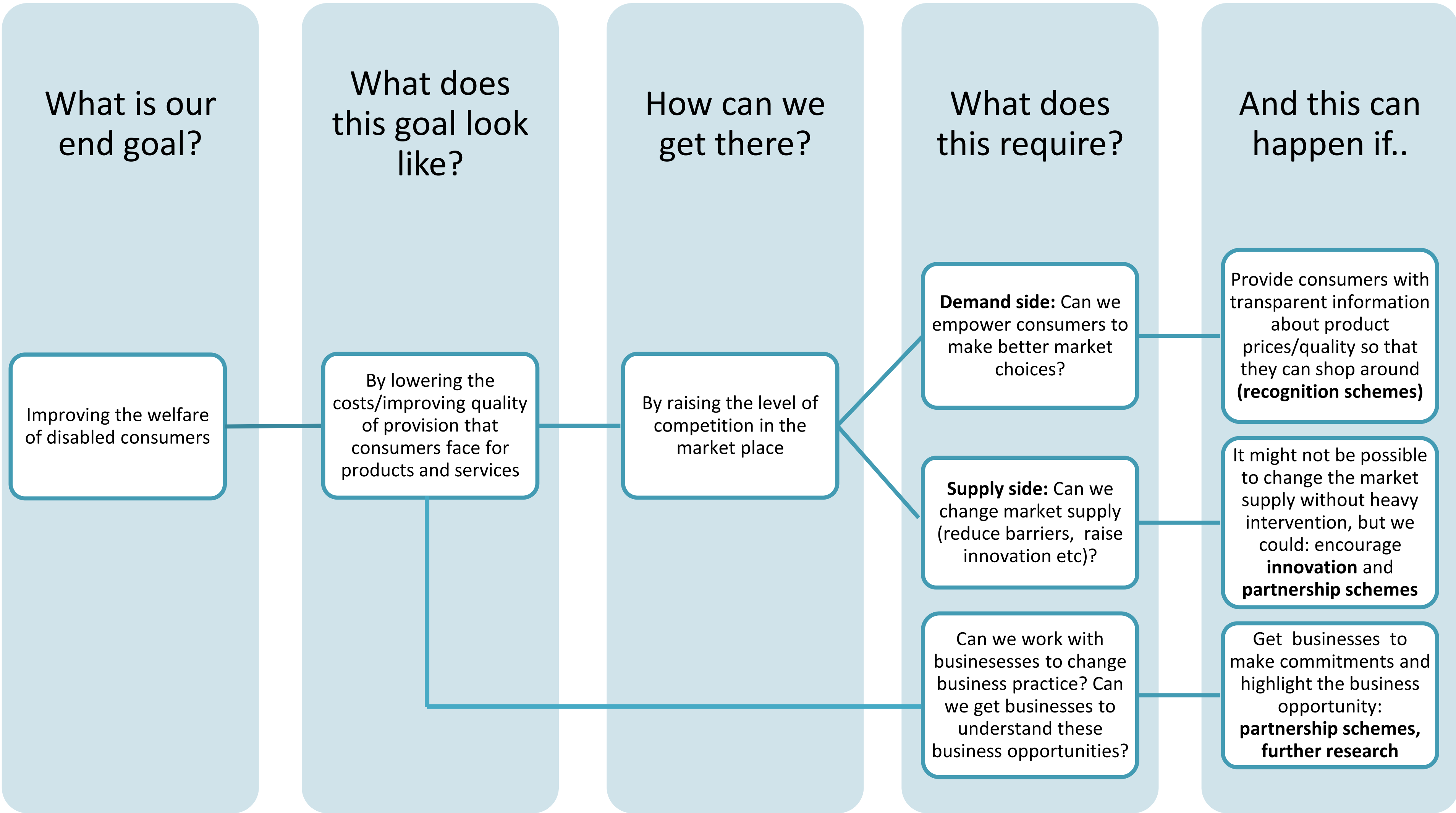
- We conducted a literature search to identify the range of literature on the impact of financial and non-financial incentives that influence businesses behaviour, including the costs and benefits of these
- We identified evidence that might be most applicable to disabled people
- We evaluated the evidence for relevance and robustness
- We summarised the evidence-based interventions that have been shown to influence business to help further public policy objectives, and their costs (particularly to business) and benefits.
- We also highlighted the theory and limited evidence on critical factors that are likely to improve or undermine the effectiveness of the intervention.

The barriers to lower cost

We began by mapping a theory of change (Figure 1). This enabled us to understand how businesses might –in theory – be influenced to reduce costs and/or improve other the range of goods and services on offer to disabled consumers.

Economic theory suggests that the only non-regulatory means of improving these outcomes is through improving the level of competition in the market place by altering supply and/or demand factors. Our initial search was therefore focused on understanding whether high prices for consumers in specialist and general product markets for disabled consumers are a result of insufficient competition, and the extent to which this could be corrected with demand or supply interventions.

Figure 1. Theory of Change



Demand side

On the demand side, one approach could be to empower consumers to shop around by providing information about market prices and the quality of products on offer. The evidence suggests that there may be room for information-based interventions: we found evidence that consumers face limited information on which to base their purchasing decisions, and are therefore not sufficiently aware of the prices of alternative goods (AKTIVE, 2013; OFT, 2011; RICA, 2014)[1] [2]. In the mobility aids market, for example, this is corroborated by evidence that the significant variation in prices in this sector is not accounted for by differences in the quality or functionality of the goods on offer (OFT, 2011). A more competitive market would have more uniform prices for individual goods and services.

A report by Frontier Economics (2010) assessed a number of options for price controls, including lighter-touch information mechanisms such as disclosure agreements and informational remedies. These solutions may lead to consumers making better-informed choices and keep regulators more informed of anti-competitive business practices by making consumers more aware of how they can exercise choice, address issues with suppliers and generally improving the transparency of price and quality information available. Positive evidence of the effectiveness of this approach has been seen in the markets for gas and electricity, where an initiative by the market regulator Ofgem to publish fact-sheets and tariff comparisons for all suppliers has been adopted and developed by accredited price-comparison websites. As a result, the suppliers in this market have been under much higher competitive pressure, which benefits customers in general.

Supply side

The above evidence provides some support for the view that the accessible provision of information on the full range of market prices may help increase competitive pressures on businesses to reduce price. However, in product markets that are specific to disabled people, there appear to be barriers on the supply side that prevent market development and the entrance of new competitor suppliers. In the market for Assisted Living Technologies, for example, there are indications that providers are unable to achieve the economies of scale needed to produce their goods at a lower price (AKTIVE, 2013). While there are very few light-touch interventions that can influence these structural supply side issues, there may be room for schemes that can influence the development of cost-saving innovations or encourage approaches to raise operational efficiency.

[1] Evidence from the ONS (2014) suggests that part of this may be explained by disabled people's access to the internet: 30% of disabled people have never used the internet, compared to 7% of non-disabled people.
[2] Furthermore, evidence from the Extra Costs Commission's Extra Costs survey (Cage, 2015) suggests that over half of disabled people and parents or carers of disabled people had only some of the information they needed or wished they had when making purchasing decisions online.

What can be done?

From the theory of change set out above, and the literature on the demand and supply side issues, we can see the important role that businesses have in improving the price, range and quality of goods and services available to disabled people.

On the demand side, it is possible to empower consumers more to shop around and make better market choices. This could be achieved by providing consumers with more information about the products or services on offer, or by providing consumers with signals that reveal the businesses' commitment to improving the price, range and quality of goods and services for disabled consumers.

On the supply side, it is not possible to directly influence the entry of new suppliers to the market without regulation or other heavy-handed interventions. But it may be possible to influence the costs faced by suppliers by supporting cost-saving innovations and promoting partnerships that create economies of scale and optimise resource use.

With this is mind, we have developed the following typology of incentive schemes:

Scheme category	Description	Examples
Recognition schemes	Schemes that influence businesses by providing signals to customers about brand commitment/standards regarding disabled people	• Recognition awards • Social labels
Innovation schemes	Schemes that support innovation by businesses to meet the demand from disabled people	• Challenge prizes
Partnership schemes	Schemes that promote collaboration, such as between businesses and disability organisations	• Multi-stakeholder schemes

Recognition schemes

Recognition schemes are those that encourage businesses to change their behaviour by recognising good practice on specific social outcomes (often social, ethical or environmental performance). These can include awards, social labels (e.g. Fair Trade marks) and league tables.

They work by providing businesses with signals that they can use to distinguish their brand from others if they meet key standards, often verified by an external body. If consumers respond to these signals – by favouring awarded or labelled products – businesses have a market incentive to meet these standards.

Although there is considerable variety in the types and objectives of recognition schemes, a number of key characteristics can be highlighted as features (EASHW, 2002):

- They are based on a voluntary initiative from stakeholders
- They are based on transparent, well-documented and stable procedures/criteria
- They aim to obtain changes that go beyond legal minimum requirements
- Recognition can be in the form of being allowed to use a logo/label

Social labels

What is a social label?

Social labels are defined as words and symbols that influence the purchasing decisions of consumers by describing the impact of a business process on outcomes which consumers value (Zadek et al.,1998).

By providing consumers with information on the social impact of a business the purchase price ceases to be the only influence on consumer’s purchasing decisions. A new type of competition between businesses can take place, but one that is now based on both price and the social impact of their business (EASHW, 2002; Blengini and Shields, 2010). They differ from other information-based initiatives by being voluntary systems which award seals of approval to products that meet certain criteria that are often judged by third-party verification (Zadek et al., 1998).

How do they work?

Products carrying social labels are a common sight in retail settings. There is little evidence of social labels being used to directly improve price, quality or product range for a specific group of consumers, but there are many examples of their use to achieve other goals.

Most have been used to draw consumer attention to aspects of how the product has been made (e.g. labour and environmental practices) and some to causes that will benefit if the product is purchased (e.g. clean water in developing countries; medical research) (Hiscox et al., 2011).

The “Fair Trade” mark is probably the best-known example of social labelling. Its aim is to improve the labour standards in developing countries by providing consumers with a means to differentiate products by the degree to which the producers involved have been fairly compensated. The idea is that consumers – in valuing fair compensation for producers in developing countries – will pay more for Fair Trade products. If these higher prices compensate the firms for the higher labour costs associated with raised labour standards, it would be possible for businesses to improve working conditions without adversely affecting investment and growth in developing countries (Hiscox et al., 2011).

Do they work?

The effectiveness of Fair Trade relies on consumers' willingness to respond to these social labels by paying more for them.

On this issue, evidence from Hiscox and Smyth (2007) suggests that social labelling can be effective. In their experimental study, sales for products that were marked as being made under 'good' labour standards rose markedly, and sales did not change for price increases of up to 20%, compared with unlabelled versions of the same product. On this evidence, firms that switch to labelled goods could charge up to 20% extra and expect sales to rise.

In a similar experiment, this time testing the responsiveness of eBay shoppers to Fair Trade certification, Hiscox et al. (2011) found that shoppers' demand for Fair Trade was such that they were willing to pay a 23% premium for labelled coffees compared to unlabelled coffees. This premium was not markedly affected by the recent recession and was apparent among a group of shoppers that are likely to be particularly price sensitive.

This evidence certainly supports the view that: i) social labels are a visible and an effective means of differentiating products; and ii) that shoppers are responsive to this type of product differentiation, thus providing businesses with an incentive to meet the conditions of Fair Trade certification.

When attempting to extrapolate the above evidence to the disability context we could conclude that point i) above would probably still apply for most businesses' practices that the Extra Costs Commission would want to highlight with a social label, but point ii) may not – more evidence would be required relating specifically to disabled consumers. The effectiveness of social labels is therefore dependent on the extent to which consumers value improvements in the business practice highlighted by the social label, to the extent that the demand for labelled goods is higher (Hiscox and Smyth, 2007).

Practicalities of design and set-up

Social labels can succeed if they meet the needs of consumers, businesses and intended beneficiaries. Research by the New Economics Foundation (Zadek et al., 1998) identified a number of key criteria which appear to offer some predictive power of the likely impact of a social label.

A summary of these criteria is shown in the table below:

Relevance	The issue is important to consumers and intended beneficiaries
Clarity	Consumers understand what the label is trying to convey
Trust	Consumers, business and beneficiaries believe in the legitimacy of the label. This could be achieved if the label was administered by a well-respected or independent body that can monitor standards and verify that they are met

Accessibility	Consumers are able to buy labelled products and businesses are willing to participate in the initiative
Accuracy	Businesses that participate in the initiative can be assured that the label's claims are verified
Financial viability	The label is consistent with the financial goals of participating businesses
Legal viability	Participating businesses are acting within national and international regulations
Impact	The labelling initiative has a positive effect on the business process that it is trying to address

For social and environmental labels, they find that consumers do not want a detailed break-down of what the label means. They need clarity and simplicity, but enough information that assures them of the label's legitimacy.

Setting up formal arrangements to monitor and verify businesses' compliance with the standards of the social label costs money but increases effectiveness. Businesses are therefore usually charged to participate (Zadek et al.,1998). The sustainability of these independent schemes depends usually on having a large number of participating organisations; therefore self-regulated schemes represent a cheaper alternative. However, their lower cost needs to be weighed against the probable reduction in effectiveness.

In general terms, the success of social labelling schemes depends on whether the conditions demanded by the social label cost less for businesses to meet than the extra revenue which the business would gain from using the social label. This in turn depends on the extent to which consumers value the outcome that the social label is seeking to improve (Hiscox and Smyth, 2007).

The priorities of consumers and businesses will not always match, but the process of communication and negotiation can go some way towards building common ground. Partnership schemes can support this process and may therefore be a necessary precursor to any successful social labelling initiative.

Application to disability context

A social label applied to the disability context would aim to recognise organisations that could either demonstrate or make a commitment to improving the range, price and/or quality of goods and services for disabled customers.

Most existing social labelling schemes do not target benefits for consumers. Like those that target labour and environmental standards, they are focused on improving businesses' processes that have an impact on third parties. The improvements that businesses need to make to gain accreditation for the social labelling for these schemes normally increase their costs. For example, firms may need to pay higher wages for developing-world producers or use cleaner production methods.

Encouraging businesses to lower costs for disabled consumers may be asking them to make a very different commitment to permanently reduce their revenues, unless consumer demand increases because of the social labels. For a disability-specific social label, this means that its success would depend on the extent to which all consumers value improved price, quality and range of goods and services for disabled consumers (Hiscox et al., 2007; Hiscox et al., 2011).

By comparison, a scheme to improve disabled consumers' accessibility to shops, or to adapt products or services, could represent a one-off cost that might be easier for firms to meet.

The sensitivity of consumers in general to these issues is likely to depend on their awareness of the consumer issues which disabled consumers face. Public awareness initiatives may therefore be a key precursor to the success of a disability-specific social labelling scheme. However, disabled people may prefer not to be identified as a specific group, and so careful attention will need to be paid to its focus. For example, a scheme that focuses on fair prices and access for all consumers may have more appeal both for disabled and non-disabled consumers.

Award recognition schemes

What are award recognition schemes?

Award recognition schemes are tools which recognise or reward organisations for their performance on a particular social outcome. In doing so, they contribute to the performance of best practice and allow organisations to illustrate their interest in a particular social issue (EASHW, 2002).

How do they work?

Award recognition schemes aim to incentivise improvements, often within an industry, by highlighting the achievements of organisations in meeting particular goals. While award recognition schemes can have similar effects to social labels (i.e. businesses are incentivised to improve so that they can market their achievement to customers who differentiate products on the basis of awards), they differ in a number of respects.

Award schemes are often cheaper to organise than formal accreditation schemes (Bovaird and Löffler, 2011) because they are normally organised around one-off events, and therefore do not require the continuous monitoring and verification that accreditation schemes may require. For this reason, awards which become calendar events are also likely to be less effective than social labels. This is because awarding bodies may be obliged to award one of the nominated organisations, even if this award for 'relative' best practice turns out to be lower than the 'absolute' best practice which would be recognised by an accredited social label. The degree to which organisations would have to raise the performance for an award would consequently be lower.

Are they effective?

While there are a number of award recognition schemes, there is very little evidence on their effectiveness.

Of the few studies that do exist, one review study by Bovaird and Löffler (2011) finds some evidence that competitive quality awards can have benefits in terms of organisational learning, innovation and reputational promotion. This positive view is supported by findings from the ‘Start Right - Eat Right Award Scheme’ in Western Australia (Pollard et al., 2001), which aimed to improve the quality of nutrition in child care centres. Following the introduction of the scheme, 80% of centres were found to have made changes to their menus as a result of participating and a total of 40% of all centres registered to participate within two years of the scheme’s launch.

While these studies are promising, Bovaird and Löffler (2011) suggest that the benefits of competitive award schemes depend on the degree to which organisations actively engage and respond to the process, and on the level of publicity associated with the scheme.

Since these schemes do not have the level of monitoring and verification which accreditation schemes have, the onus to engage depends very much on the organisation. This is supported by the Pollard et al. (2001) study which found that the success of the Start Right – Eat Right Award scheme was based on several factors that would appear to support the active engagement of organisations, including collaboration between the child care industry and government, supporting resources, and incentives. Measures that support the active engagement of organisations, and those that publicise the scheme entail costs. Successful recognition schemes may therefore require significant investment, potentially eroding the cost difference between these and accredited social labelling schemes.

Practicalities of design and set-up

Award schemes share many of the practical design considerations of social labels. However, there is evidence that they may carry the danger of focusing on the giving of ‘gongs’ rather than on supporting the good practice which the award was originally intended to instil (Hopkinson and Gervais, 2006).Characteristics of successful schemes identified in the literature comprise (Hopkinson and Gervais, 2006; Parr, 2004):

Brand	The award scheme is viewed as a brand by many companies
Evaluation	The scheme would be evaluated at set times to verify that it is meeting the objectives of the organisers
Good practice	The scheme should have strong focus on good practice
Transparency	The scheme should be transparent, with clear award criteria built into the scheme so that all participants can perceive the process as being fair
Improvement	There is a commitment by organisers to move the scheme forward, such as involving more organisations and improving the

	scheme
Employee involvement	Organisers ensure that there is worker involvement at all levels to ensure that the scheme represents the whole organisation rather than the CSR part of the organisation
Clear purpose	The organiser establishes a clear purpose for the scheme
Engagement of all	The organiser tries to engage many types of organisations, large and small
Resource	The scheme has sufficient resources to administer, promote and develop itself

Application to disability context

Like social labels, award schemes could incentivise businesses to improve the provision for disabled consumers by recognising businesses for best practice. Since these schemes are retrospective however, they are unlikely to be useful to recognise commitments to improve the provision for disabled people.

Innovation schemes

Innovation schemes are those schemes that create value by supporting innovation to meet market demand.

In a market characterised by the structural supply-side issues (i.e. high production costs, low economies of scale, expensive distribution networks), innovation – the term that describes the creation of more effective processes, products or ideas –may offer a route to mitigate these problems and to place downward pressure on price.

Since innovation implies the discovery of something new or a new way of doing things, it may require the kind of novel approaches that experts in unrelated sectors might be particularly suited for (Kay, 2011a). Schemes which can attract these participants – such as formal incentive mechanisms or concerted efforts to engage ‘outsiders’ – may therefore be particularly well suited for the generation of innovation.

Challenge prizes

What is a challenge prize?

Challenge prizes (or ‘inducement prizes’) offer a reward to whoever can first or most effectively meet a defined challenge. Since the reward is paid at the end of the challenge, they incentivise individuals or groups to solve a specific problem, rather than rewarding past achievement. This means that – unlike grant instruments, which can only incentivise effort – they pay for outcomes (McKinsey & Company, 2009).

How do they work?

This potential for challenge prizes was recognised by philanthropists and government in the past, who used prizes to drive innovation to benefit society. Famous examples include the British Parliament’s Longitude Prize in 1717, which inspired the development of the marine chronometer in response to the problem of measuring longitude at sea; and the Napoleonic-era Food Preservation Prize, which inspired the development of canned food (Gök, 2013).

The types of problem most suited to a challenge prize are those that (McKinsey & Company, 2009):

1. have a specific target that is measurable and achievable over a reasonable time frame;
2. have a large pool of potential problem-solvers;
3. the potential solvers are willing and able to contribute their own effort and resources to working on the problem without a guarantee of return – i.e. where there is sufficient risk appetite.

By being targeted in this way, challenge prizes can have a much wider impact on a whole system. For example, challenge funds may support sanitation efforts in developing countries by encouraging innovative approaches to the specific problem of transporting waste material from large urban areas.

On the other hand, Murray et al. (2011) point out that multiple criteria could be used to award prizes that solve problems with multiple objectives.

As shown by the more recent example of the $10 million Ansari X-Prize for the successful creation of a private re-usable space craft, the publicity that surrounds a prize may also stimulate further philanthropic and private sector investment to solve a social problem, far in excess of the initial prize value (Kay, 2011a; McKinsey & Company, 2009).

The National Academy of Engineering (1999) also points out a number of other advantages of the challenge prize mechanism that would motivate its use. They can:

- help identify and engage non-traditional participants and unorthodox approaches to challenges
- educate and inspire the public
- stimulate nascent or “stalled” technologies
- stretch existing technologies by demonstrating their usefulness
- foster technology diffusion
- address neglected or seemingly intractable societal problems;
- they can build social capital.

Are they effective?

The literature on incentives for innovation suggests that challenge prizes can be a powerful tool for encouraging technological improvement (e.g., Polanvyi, 1944; Wright, 1983; Kremer, 1998; Shavell and Ypersele, 2001; Scotchmer, 2004; Boldrin and Levine, 2008; Kremer and Williams, 2009; Chari et al., 2009, Brunt et al., 2011). However, empirical evidence on the effectiveness of prizes to spur innovation has been hard to come by, largely owing to the absence of suitable data. Nevertheless, a recent study by Brunt et al. (2011) overcame the lack of data by using patent data as a proxy for innovation. In a study which analysed 2,000 awards from the Royal Agricultural Society in England between 1839 and 1939, and the number of inventions registered at the British Patent office, they were able to show that the award of prizes was associated with a significant improvement in the quantity of innovation. They also suggested that these findings hold for relatively small prizes sums, and that the prestige of the prize medal appears to have been a stronger motivator than the prize sum.

Practicalities of design and set-up

The optimal design of a challenge prize is the main concern of the prize literature. Several papers argue that poorly designed prizes may be harmful, depreciating the trust of stakeholders, expending too much resource on prize administration, duplicating and displacing efforts (Kay, 2012; Murray et al., 2012; Williams, 2012; Kalil, 2006).

To avoid this, the following design considerations are highlighted in the literature (Kay, 2012; Wei 2007; Gök, 2013;Mckinsey & Company, 2009):

Non-cash incentives	Participants' motivations vary. The non-cash incentives attached to the prize may be just as (if not more) salient to participants than the cash prize itself. In practical terms, this means that the prize challenge should be exciting and considerate of commercial opportunities for prize participants/winners
Resources	Prizes require a lot of resources, in terms of development, governance and management. Even before development, prize organisers should invest sufficient time to understand the market system and whether/how challenge prizes are appropriate.
Prize size	It is not always clear what size the prize should be because of information asymmetry and the difficulty of assessing the social value of innovations
Prize rules	Only open ended prizes rules and objectives may attract the diverse participants that would generate the novel approaches desired. Nevertheless, they should be simple and transparent.
Prize strategy	The success of prizes is rarely derived from their size. More important is the underlying strategy to produce change and the way the strategy is implemented

Every challenge prize will need a bespoke approach but there are common activities which can be grouped in phases. They will include (Nesta, 2014a):

1. Scoping phase – clarifying the objectives of the prize; conducting detailed research into the problem, and exploring possible partnerships and expert panels

2. Design and development – developing options for the prize design; designing a plan with milestones, timelines and resource requirements; developing specific plans for engaging innovators, judging entries and supporting innovators; recruiting a prize team (including experts and a judging panel)
3. Pre-launch – developing a process to engage innovators; producing prize materials (information on prize rationale, milestones, criteria etc); publicising the prize; securing strategic partnerships, and engaging relevant stakeholders
4. Support (post launch) – maintaining advice line for interested participants; facilitating networking events, and maintaining interest in the prize
5. Assessment and judging – closing the competition and collating entries; supporting the assessment teams; collating feedback; communicating results, and making arrangements to hand-out the award (including publicity)
6. Post-award – signposting participants to additional funding and support opportunities; assisting with the market development of the winning solution; providing participants with feedback; establishing a process to follow progress of participants, and evaluating the effectiveness of the prize.

Application to disability context

As previously discussed, there is evidence that many of the most important (specialist) products and services for disabled consumers exist in markets characterised by low economies of scale. This is a supply-side barrier to lower costs for consumers.

Innovation could represent a long-term solution by lowering costs of production and/or distribution, or by generating new products entirely. A report by Nesta's Centre for Challenge Prizes suggests that 'prize ready' markets are those where prizes could provide incentives to innovate that currently do not exist (Nesta, 2014a). The disability market is therefore particularly appropriate for challenge prizes because: i) innovators currently have little incentive to undertake the high development costs because the potential market opportunities are small; ii) the savings created by the beneficiaries accrue to society and not the innovators directly, and iii) the development costs per unit could exceed the potential revenue gain.

The potential of challenge prizes as possible solutions to innovation in the disability sector have been recognised before, with several disability-specific prizes launching in recent years. These have included the UK Design Council's Living Well with Dementia Challenge, Nesta's Inclusive Technology Prize, and Nordic Innovation's Independent Living Challenge; details of which can be found in Annex A.

The common rationale for challenge prizes across each of these examples was the understanding that there is an absence of strategic interaction between, users, producers and a diverse body of experts in many disability product and service markets. This is supported by qualitative research from Nesta (2014b) which finds that - despite the opportunities opened up by new technology- the market for assistive technology is yet to exploit the opportunities for innovative, more usercentred products. These prizes therefore set out to create an environment where it is possible to create the partnerships that bring these different perspectives together.

This rationale follows a precedent set in international development, where challenge 'funds' were seen as a mechanism that could stimulate collaboration (Brain et al., 2014; Pompa, 2013). They were therefore designed to incentivise the private sector to establish partnerships with NGOs, trade associations and government agencies. This would extend the range of skills and expertise applied to problems and possibly leverage additional financial resources in the process.

In this way, challenge prizes could have an impact at two levels: firstly, challenge funds may generate innovations that can solve the specific problem that they have been targeted to address; and secondly, they may have a systemic impact via the creation of sustainable networks that supports innovation within the sector in the long-term[3].

Partnership schemes

Partnership schemes are those that create value by promoting collaboration in meeting the demand from disabled consumers, such as between businesses and disability organisations, or between businesses with complementary strengths.

They create value by supporting the formulation of joint solutions to complex problems that cannot be tackled by any one stakeholder or by engaging groups that have a different perspective and complementary set of strengths.

Multi-stakeholder partnership schemes

What is a multi-stakeholder partnership scheme?

Multi-stakeholder schemes can be defined as interactive processes in which business, civil society organisations and possibly other stakeholder groups interact to make businesses' processes reach outcomes more desirable to society as a whole (Huijstee, 2012).

How do they work?

By bringing together a diverse range of stakeholders, partnerships have the potential to generate joint solutions to problems that are difficult for any one stakeholder to resolve. When voluntary standards arise from these initiatives, they may also drive a “race to the top" (Lang, 2006).

When a variety of businesses are involved, partnerships may add value by pooling resources. This may be particularly important in a market – such as the market for

[3] Nesta's Centre for Challenge Funds will be publishing a report on the long-term impact of the Dynamic Demand Challenge to demonstrate some of these early finding later this year.

Assisted Living Technologies– where individual providers seem unable to achieve the economies of scale to produce their goods at a lower price (AKTIVE, 2013).

In pooling, they are able to (Mackintosh, 1992; UNDP, 2010; Nelson and Zadek, 2000):

- Increase resource efficiency
- Reduce supply duplication
- Share overheads
- Gather market information
- Fill gaps in market infrastructure
- Adopt approaches for self-regulation
- Build knowledge and skills
- Improve operational efficiency
- Enhance product and service innovation
- Enhance reputation and credibility
- Gain access to a larger customer base (see 'Affinity marketing' below)

Affinity marketing

Affinity or partnership marketing involves a co-operative and mutually beneficial marketing arrangement between one or more product or service suppliers and organisations that already have a positive influence on and/or better access to a group of customers than the service supplies. This may be because the individuals in these organisations share a common cause, identity, interest or profession, which these organisations help facilitate (examples include large membership-based organisations, such as clubs, charities or industry bodies).

Since partnerships with these organisations can provide suppliers with a large pool of potential customers without the need to spend much on marketing costs, suppliers can offer preferential deals (e.g. discounts) to organisation members.

Are they effective?

Impact assessments of multi-stakeholder initiatives are relatively scarce. They appear to be effective at bringing parties together and encouraging common approaches, but the impact on the intended beneficiaries (such as improved working conditions for developing country employees) appears to be small and not well-understood to date. (Huijstee, 2012).

Practicalities of design and set-up

Multi-stakeholder initiatives are generally established to form and embed new norms for their sectors. While different initiatives can have a variety of different aims, they generally exist to facilitate dialogue, to set and diffuse norms, to establish and monitor rules, and to support capacity within a sector (World Bank Group, 2014).

While there are few quantitative studies that assess how the outcomes from initiatives vary against specific design characteristics, there are many papers which have sought to establish some key principles.

The following are recurring themes from a number of different papers (CIVICUS, 2011; World Bank Group, 2014; Huijstee, 2012):

Objectives	It is important to clarify the objectives of the initiative from the very beginning. It is helpful to set a common goal which all stakeholders can refer back to
Dialogue	Regardless of position or hierarchy, all dialogues should be approached with equality and respect
Constraints	All stakeholders should be aware of each other's limitations
Resources	Multi-stakeholder processes require resources, especially if they involve feedback loops. Both human and financial resources are required.
Expectations	Expectations must be realistic, but they should attempt to set ambitious goals
Work plan	A detailed work plan is important to reach the goals and build trust
Evidence	Stakeholders should support their work with sound evidence
Governance	Governance refers to the decision-making structures and processes within an initiative. To avoid poor governance, structures should be put in place to mitigate against voice and capacity imbalances.
Transparency	Transparency is needed if the initiative is to maintain credibility. Reporting on progress, results and impacts makes it possible for stakeholders outside the initiative to judge the value of its claims and recommendations

In short, the diverse set of interests which a set of different stakeholders will have mean that any initiatives which attempts to bring them together must set out to manage them effectively. Successful initiatives can be characterised by those that have sufficient processes to do this (i.e. establishing a governance structure and a work plan), and enough resources that enable different stakeholders to voice their views.

While there is some evidence on the characteristics of successful multi-stakeholder initiatives, there appears to be much less evidence on the crucial question of how we can form them.

Nevertheless, a report by the Synergos Institute (2012), a global non-profit organisation, does provide some lessons from a number of different partnerships that were formed to reduce poverty and social justice. Their findings suggest that most partnerships start with a high-level champion or core group of 'initiating' partners that have the political will to address the issue. These partners frame the partnership and, over time, are able to widen the number of participants involved. To support this process, it is then necessary for these partners to have a strong understanding of what has been tried, what works and what does not. A credible analysis of the problem can enhance efforts to gain the attention of key leaders who may be able to provide this political will. Similarly, an understanding of the key organisations, individuals, how they link to gather, and their relative influence makes it possible to focus efforts and engage multiple stakeholders at the right level.

Application to disability context

In the preceding sections, we have already discussed how partnerships between different groups of stakeholders can support the effective implementation of other interventions that seek to influence business. Firstly, when assessing the feasibility of a social label, for example, it is important to establish whether the interests of business, consumers and beneficiaries (in this case disabled consumers) sufficiently overlap to provide the right market-based incentives that enable this voluntary arrangement to work. If the incentives aren't quite aligned (perhaps because consumers in general aren't sufficiently responsive to reducing costs faced by disabled people), partnership schemes may help facilitate the kind of public awareness initiatives that could resolve this by increasing the awareness and thus responsiveness of consumers to these issues.

Secondly, successful attempts to improve the level of innovation in the disability sector – a possible route to better outcomes for consumers - may be supported by attempts to bring different groups together. On one level, this is because innovation may require a unique set of skills/perspectives which existing product and service providers lack. On another, the success of challenge prizes as a mechanism to incentivise innovation may well depend on the number and variety of possible 'solvers' that engage.

Finally, when different businesses are involved, partnerships could support supply-side improvements by facilitating the pooling of knowledge (i.e. market information) and resources.

Conclusion

Existing evidence on many disability product markets suggest that there is room for initiatives that can influence businesses to address the market demand and supply issues that are barriers to better outcomes for disabled consumers.

On the demand-side, it is possible to incentivise business to solve these issues by providing consumers with more information. On the supply-side, the issues appear to be more related to the structure of the market. For these issues, there is potential in initiatives that encourage the pooling of resources or improve productive efficiency.

Our search of the literature suggests there are three types: those that provide information signals to consumers by recognising business achievement; those that encourage innovation, and those that encourage partnerships. While available evidence on the costs and benefits of these initiatives is limited – making it difficult to recommend which would be most cost-effective - it appears that social labels, challenge funds and partnership schemes represent three promising initiatives, each useful in different circumstances.

Social labels represent an elegant market-based approach that uses information to influence the behaviour of firms. Challenge funds can be used to incentivise innovation, with the potential to generate a range of new ideas and interest in the benefits for disabled consumers. Effective partnerships could enhance the impact of these two initiatives and supplement them by facilitating the pooling of knowledge and resources. Such partnerships may be needed to maintain the engagement of businesses on this area of work beyond the formal lifetime of the Extra Costs Commission.

The success of these initiatives requires sufficient resources and careful design. We have provided an overview of these practicalities and design considerations. However, the absence of quantitative evidence and the as-yet untested application of these initiatives to the disability context highlight the need for further research.

Priorities for future research

In this report, we have identified several promising initiatives which the Commission could explore. While our research is sufficient to acknowledge where the costs and benefits of each initiative are likely to come from, the literature has not provided us with the quantifiable cost and benefit data that would allow us to make cost-effectiveness comparisons. A starting point for future research in this area might be to make efforts to quantify these costs and benefits for the three priority schemes (social labels, challenge prizes and partnership schemes) through piloting one or more of these initiatives in selected markets. As highlighted in both this and our other report (Walsh and Hancock, 2015), one of the main challenges is finding a way to measure the economic and social benefit of these schemes. We therefore suggest that any further research initially focuses on costs. Thereafter activity levels generated by such schemes (e.g. number of submissions for a prize; number of firms that sign-up for a social label etc.) should be monitored. Ultimately, the effect on availability, price and quality of goods available to disabled people should be evaluated, most simply through a before and after comparison, requiring baseline measurements. Ideally, a more robust evaluation would be carried out. It may be that more quantitative evidence of this nature will do more to persuade businesses more generally to join such initiatives and persuade organisations with substantial buying power (e.g. NHS trusts; government departments) to place their orders with firms that participate in such initiatives, thus helping the schemes to achieve even greater impact.

Most of the literature that we have reviewed provides evidence on only general or non-disability specific applications of these initiatives. For example, the evidence on recognition schemes only considers schemes that address labour or environmental issues. While we have made suggestions for how these initiatives might apply to the disability context, the potential effectiveness of some of these initiatives and their models of operation in this context are still unclear. If we are to determine the potential success of social labels to improve the outcomes for disabled people, for example, we need to know just how responsive consumers would be to this type of label.

Similarly, to use challenge funds or partnership schemes most effectively, we need to focus them on the right problems[4]. For challenge funds, we know that schemes that encourage innovation can address supply-side problems – of which there appear to be a number. However, for challenge funds to succeed, we must be able to define the specific problem first. There would thus be great value in any research which could shed more light on the precise supply-side barriers to a more competitive market.

We believe that more research is required to establish what the precise barriers to reducing extra costs are. For the purpose of the current research, we found it necessary to look into this so that we could structure our thinking. By finding some evidence of these barriers in some markets, it was possible to come up with the information signal (on the demand side) and poor economies of scale (on the supply side) hypotheses. However, we do not yet know what the precise supply-side issues are in all markets and whether there are more effective alternatives to incentives that 'nudge' business. For example, it might be that regulatory options that open up markets work better than any initiative for business. To know this, the Commission could undertake a more detailed market analysis / consultation to better understand the characteristics of the market that keep the costs for disabled consumers high.

[4] If the Extra Costs Commission wish to explore Cause Funds in more detail, we recommend they contact Nesta's Centre for Challenge Funds, who have provided some valuable insights for this report (http://www.nesta.org.uk/our-projects/centre-challenge-prizes)

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Annex A – examples of relevant challenge funds

The potential of challenge prizes as possible solutions to innovation in the disability sector have been recognised before, with several disability-specific prizes launching in recent years.

Living Well with Dementia Challenge

In 2011, the UK's Design Council and the Department of Health launched a challenge prize to improve the lives of people affected by dementia. The aim was to design and develop products and services that 'rethink' dementia and launch them as real initiatives by bringing together people with design skills and those that could implement solutions. To get five successful entries to the stage where they could pilot their idea, they were given a total of £360,000 in R&D funding, access to key users groups, mentoring, and business guidance and market-building advice. The 12 month challenge saw the five winning solutions – developed by teams of designers, entrepreneurs, service users and experts – from a total of 154 entries. The five solutions demonstrated the potential of innovative ideas in an underserved market and the key role that design can play in addressing social issues.

Inclusive Technology Prize

In 2014, Nesta launched a £50,000 prize to encourage innovation in technologies and systems that enable disabled people, their families and carers to obtain equal access to life's opportunities. The prize specified the involvement of disabled people to co-create the innovation in areas including – but not limited to – education, home, leisure, transport and work. As of April 2015, the prize is still live, having just announced 25 semi-finalists.

The Nordic Independent Living Challenge

In 2015, Nordic Innovation and the five Nordic capitals launched a competition to boost innovation and collaboration in the health and welfare technology industry to increase the quality of life and independence of elderly and disabled people. The challenge then has the ambition of creating a joint Nordic market for these technologies. While the main prize is NOK 1 million, a total of NOK 16 million has been allocated to support the participants and their development of ideas and business plans. As if April 2015, the prize is still live. Over the next few months, a match-making event will support the collaborative development of proposals before five ideas are selected for testing and end user impact analysis. One winner will then be selected for the main prize.