



## Pricing Strategy E433 C SUM13

### Pricing dilemma

*Product trimming is pure pricing magic*

In case you hadn't noticed, there's a quiet revolution taking place in the aisles of your local grocery store. Consumer products are shrinking, and it's nothing short of pricing magic: Prices are increasing, yet the ticket prices on the shelves remain the same.

How is this possible? The per unit volume inside is shrinking. Take a closer look next time; you might be in for surprise. What's most worrying is that most consumers seem to be completely unaware, so in effect the change is stealth move by manufacturers and retailers.

### Problem definition

We would expect a linear relationship between quantity purchased and price. The more quantity you buy, the more you pay. If any deviation from this relationship exists, it is that in some instances, a diminishing price *per unit* could be observed, as a volume discount is applied. However a common trend is that manufacturers are introducing replacement products where *less* quantity now costs *the same*, or in some cases, *more* on a per unit basis.

The effect is known as 'product trimming', and is as a result of manufacturers shrinking their products; quite literally. The consumer advocacy group, Which? recently found "a raft of products that had shrunk."<sup>1</sup> In a survey undertaken in 2012, they found that, "Jars of Lloyd Grossman Balti Curry Sauce had gone from 425g to 350g. Tubs of Dairylea Cheese Spread are 40g lighter, and that there were two fewer nappies in each pack of Pampers Baby Dry Maxi."<sup>2</sup>

In fact, the survey found shrinking products from most aisles of the supermarket – "including laundry tablets, chicken, jam, dishwasher tablets, yoghurts and cereals."<sup>3</sup> Product miniaturisation, at first, seems innocuous, as long as there is a corresponding price reduction. However, when checking the prices of smaller products, items are almost always "for sale at the same price as before, or more per gram than at the time the sizes changed."<sup>4</sup>

The trend is large and growing. The result is that *less* volume costs *more* on a per unit basis after a change. These changes often happen in a discreet way and are not usually widely advertised or known to the average shopper. But why? This paper looks at the role of costs (supply) and consumer psychology (demand) to uncover potential reasons, but the hypothesis becomes obvious when we consider what is really going on to firms' profits:

Holding the price constant, while reducing the cost of production – appears at first to be a cost reduction. As we know, price is the single most powerful lever in a firm's profit formula. While at first a shrinking products seems to have nothing to do with pricing, in fact by reducing volume, but keeping the product price the same, *the effect is nothing less than a per unit product price increase*.

A market review by this paper found that the average change in price from an analysis of 5 products (see **Exhibit 3**) is on average, a +29.5% increase. This is an incredible per unit price increase. Most manufacturers and retailers could never sustain a shelf ticket price rise of that amount, but shrinking allows the same to be done indirectly. The result is hugely valuable; from a quick back-of-the-envelope calculation, the effect on the UK grocery market alone is likely to generate an incredible £48bn additional gross profit.<sup>5</sup>

## The role of costs (supply)

### *Food inflation, or other increases in raw materials*

An often touted reason by food manufacturers is that the cost of food has been rising, and thus that they must ultimately pass on these costs to consumers. While food inflation figures from the ONS<sup>6</sup> confirm this, this paper finds that the rate of food inflation for a basket of goods is significantly lower than the price increases observed on a percentage level, (please see **Exhibit 6**). On average a basket of goods in the UK has increased +2.7% but the implied increase in prices by some product shrinking is as much as +49%, (see **Exhibit 5**) a difference of 46 percentage points above inflation. This reduction in variable cost per product is directly captured as profit, less some plant adjustment cost or new packaging costs.

Often however, it is advantageous for a manufacturer not to change the product packaging. When product trimming occurs, the product's packaging often remains the same. A significant portion of almost any product's cost is in its packaging, so it is surprising that a product's exterior is not also changed when a product's contents are reduced. Assuming that procuring smaller jars, boxes, cans or bags, or retooling a plant is not prohibitively expensive, and that these fixed costs could be defrayed through mass volume sales, we would expect to see smaller contents being sold in smaller exterior packaging. This however, is not the case, and conveniently, by keeping the same product, this has the effect of potentially misleading consumers about the quantity of the product contents remaining the same.

### *Manufacturers defend a quantity decrease as a preferred method to pass on cost increases*

When challenged with why products have shrunk, manufacturers state that it is a preferred way to pass on increases in costs. Manufacturers comment that customers prefer to pay the same price for a given product, and prefer to buy less content within the product and adjust their consumption accordingly. This suggests that for the very same product they have greater price elasticity than quantity elasticity. When Which? "asked the makers of these products why they had shrunk them, [we] were generally told that in the face of rising costs they chose to shrink products rather than increase prices." But of course, consumers *are* paying more *per unit volume*.

This also does not account for the unequal reduction between price and volume, and often that a larger volume can be bought for a significantly cheaper per unit volume price. Perhaps more importantly, most consumers would also argue that these changes happen without their knowledge, and as such the move is 'stealth move' by the product manufacturer.

### *Some manufacturers are 'playing fair'*

Shrinking product sizes is not all bad. Some 'fairer' practices are happening out there. These are important to differentiate as being distinctly different to the negative effect of product trimming. Some manufacturers have chosen to reduce the package size, but keep the same quantity of product inside.

As a result, not all 'shrunk' products reduce consumer value. Some manufacturers are cutting costs by concentrating on the containers. These are products that contain the same as before but with less packaging. Unilever has shrunk down its deodorant aerosols but kept the amount of deodorant – and £2 retail price – the same.<sup>7</sup> These changes should be welcomed as efficient ways of using resources and reducing packaging and transportation costs, while keeping the same amount of product in each package. Interestingly, and perhaps more revealing to the dilemma, is that these 'good guys' often make it explicit on their products

that they have a “new bottle – same great value”, or “same size – different design”. These manufacturers are keen to avoid any consumer backlash or drop in demand from some more watchful consumers who suspect that the product contents has been reduced.

## **The role of consumer behaviour (demand)**

### *The ticket price is king*

The psychology of the consumer is critical in the shrinking phenomenon. Another recent survey by Which? found that “84% of consumers are worried about rising food costs.”<sup>8</sup> As a result, their focus on the ticket price (the shelf price at a supermarket) will dominate their purchase decision, thus making any other option to increase price, without actually doing so, such as product trimming, very attractive.

Most consumers shop frequently, but in a hurry. In doing so, they shop without due attention to per unit prices, only that they aim to purchase low priced products to combat rising food costs, and thus focus on a product’s ticket price. However, even this is unclear. In one study of shoppers at a supermarket found that most could not even recall the price of a product that they had just selected to purchase, just a few moments after they had placed it in their basket.<sup>9</sup> As a result, shoppers rarely remember the ticket price beyond the moment of the purchase decision, let alone the per unit price.

As shoppers search the store and make purchases quickly, buying decisions are likely to be made on limited data points only – the headline ticket price, quality or brand of product and relative comparison to others. Where directly increasing the ticket price could significantly harm sales, indirectly doing so by reducing the product quantity provides an alternative lever to increasing price, without actually changing the shelf price.

### *Product trimming often goes unnoticed*

While shoppers are quick to notice changes in the headline price, they rarely notice fractional change in product quantity; hence it’s an easy way to use stealth to raise prices.

In the case of Innocent, a premium smoothie juice manufacturer, 1litre cartons have been replaced by 750ml cartons. A 25% drop in volume is very significant, but Innocent has done so in a very subtle way. This product downsizing is not unusual, but what differentiates this as more than just the typical product trimming example is that many consumers (myself included), did not notice the subtle shrinking of the carton by 25% in size. The carton appears identical in design and proportion to the previously issued (and now no longer available) 1litre size. It is difficult to notice the subtle change in store, and conveniently, the volume labelling does not feature prominently on the carton.

One consumer (see **Exhibit 4**) was shocked to find this on returning home, but it is probable that even this significant drop in product size went completely unnoticed for many consumers. It also doesn’t stop there – product trimming can happen in services too, such as cable channels that you suddenly lose, or Internet or phone tariff extras that a provider stops delivering as part of a package.<sup>10</sup> Many of these are subtle changes which will simply go unnoticed within a consumer’s hectic lifestyle.

Ultimately, as consumers, we should be prepared to actively compare products, prices and quantities during the buying process. Unfortunately however there is a tradeoff,

particularly with mundane, repeat purchases in something as trivial as a weekly shopping trip. This makes it unlikely that consumers will invest a lot of time in closely checking per unit prices.

On the flip side, the supermarket makes an ideal environment to deploy price trimming to the benefit of product manufacturers and retailers.<sup>3</sup> This helps explain the effect to a large extent.

## **The role of competition**

### *Building strong brands facilitates product trimming*

Although the data researched for this paper do not explicitly demonstrate this, it is probable that ‘big’ brands either participate more frequently than others in product trimming, or, that when they do, they stand to benefit the most.

Big brands invest heavily in their products to differentiate them in the eyes of the consumer, and raise a shopper’s willingness to buy. Branding can have a powerful effect in creating value-based pricing perception to the consumer. Drawing on the research of Hinterhuber and Bertini, we can assume it is even rarer that a consumer would deeply consider variations in product price, let alone per unit price changes due to product shrinking, if the product branding is a strong factor influencing the purchasing decision.<sup>11</sup>

Where consumers share strong brand loyalty with a product, they will place a product into a shopping basket with minimal or only very light consideration of price. Thus branding has an important effect in that it can facilitate product trimming. More research would be required on this topic to determine if a strong correlation exists on this point.

### *The ‘double dividend’ of shrinking products*

Incredibly, shrinking products may have an even greater impact to profit than already outlined thus far. Product trimming has two effects – it clearly increases contribution margin per product, but it also may drive more sales, at the expense of the competition. This is essentially a double-dividend of product trimming and makes an already powerful lever, even more profitable.

As consumers look around a supermarket, or any other store, quickly evaluating their purchases using heuristic rules of thumb, they may in fact choose a trimmed product over a standard size product, despite it being of worse value or utility to the consumer. Consumers will probably use a variety of factors for their purchase decision, which will likely include; the headline price, product quality or a brand (as a proxy), and finally a relative comparison against competing products, in order to finalise their purchase decision. In an environment of rising prices, a fixed price product (due to trimming) may appear more attractive than others. Thus consumers, when evaluating a purchase, may reach for a trimmed product believing that it is cheaper than a ‘comparable’ competitor’s alternative.

If the price of a product is fixed, while the contents are reduced, then the effect is twofold; an increase in the profit margin, and also an increase in demand as the price appears lower than the competition and an overall lower ticket price is likely to attract more demand.

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<sup>3</sup> We note that M. Bertini notes that pricing strategies can be used for ‘good or evil’ depending on the action taken, and from the buyer or seller perspective. From Bertini, M., *Pricing Strategy Lectures*, 2014 MBA programme, London Business School.

This is particularly effective if product trimming occurs *with a concurrent* drop in price at the same time, but such that the price reduction per unit is less than the number of units removed. As a result, this product's ticket price decreases, but also increases in margin, while potentially going completely unnoticed to the consumer. Against the competition, the product may appear cheaper, and thus of greater value.

### Concluding thoughts

In the battle to increase profits and sales, product manufacturers and supermarket retailers are decreasing quantities of product sizes. The effect of doing so is nothing short of a price increase, and pure pricing magic.

Businesses are increasingly aware that price is an extremely effective, if often poorly managed tool. In our quick 'basket' of food and household goods (see data collected in **Exhibit 5**), a basket of goods that has suffered from product trimming has increased 29.5%, whereas the inflation rate for a national basket of goods has only increased by 2.7% in 2012. Cost inflation is hardly a valid solution to this dilemma if the effect is approximately x10 that of inflation, even accounting for the fact that this is a rough, and imperfect comparison.

The solution to the dilemma is that this pricing distortion occurs as a result of a combination of the careless consumer in making regular, small value items (demand) and the pressures of competition. The effect means that high volume, but small quantity and value purchases means that supermarkets are an ideal arena for the dilemma to flourish. The results are highly attractive to manufacturers and retailers, and if managed carefully can realise a 'double dividend' to the bottom line – increased contribution margin *and* greater sales. This paper estimates the value of the effect in the UK grocery market alone is likely to generate an incredible £48bn in additional gross profit.<sup>5</sup> Now we really are talking pure pricing magic.

How can consumers fight back? A plethora of online forums contain a ground-swell of enraged consumers who feel ripped off. It is clear that this pricing practice can erode customer loyalty, even for premium brands such as Innocent. However, these voices remain the minority, and the effect is probably largely unnoticed, and rarely deemed important.

Ultimately, consumers need to sit up and realise the lost value in their purchases and vote with their wallets by ensuring they remain conscious in the buying process. Which? a consumer advocacy group, supports clearer 'per unit pricing' on shelf tickets to help combat the phenomenon. The intent is that this will help consumers make a more informed decision, but even this is not widely used, or even when used within stores, is used consistently, (see **Exhibit 7**).

As always; buyer beware. Check your *per unit* price.

**Exhibit 1**

The Product Trimming concept



|                           | Product A <sub>1</sub>  | Product A <sub>2</sub> |
|---------------------------|-------------------------|------------------------|
| <b>Size</b>               | <b>450g</b>             | <b>427g (-23g)</b>     |
| <b>Price</b>              | <b>£1.85 per jar</b>    | <b>£1.85 per jar</b>   |
| <b>Cost per gram</b>      | <b>0.411p /g</b>        | <b>0.468p /g</b>       |
| <b>Volume</b>             | <b>100%</b> of original | <b>94%</b> of original |
| <b>Increase in price</b>  | <b>0%</b>               | <b>+13.9%</b> increase |
| <b>'Equivalent' price</b> | <b>-</b>                | <b>£2.10 per jar</b>   |

Playing with semantics: an apparent change in variable costs is actually a change in price: Reducing the quantity of this product by 6% is equivalent to increasing the price by 13.9% to £2.10 per jar, but without changing the ticket price.

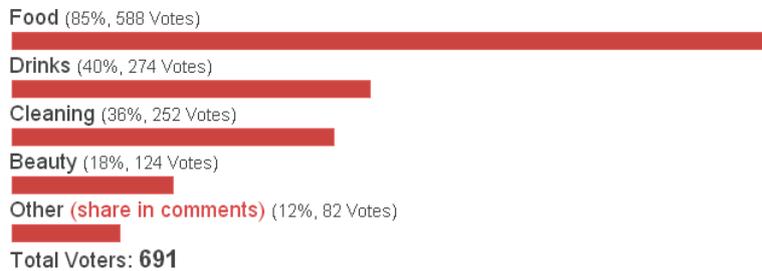
Note that a trimmed product may, or may not, have a smaller exterior packaging. If the product packaging is not reduced in size, it can have an additional misleading effect that reduces the chance of consumers realising that the product quantity has decreased.

## Exhibit 2

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Which? Online poll

**What types of products have you seen shrinking?**



Source: Which.com, retrieved 15<sup>th</sup> May 2013 <http://conversation.which.co.uk/consumer-rights/shrinking-products-supermarket-pack-sizes-prices-stay-same/>

## Exhibit 3

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Which? Online poll

**Selected responses from 100 comments regarding shrinking products**

*'It is clear many manufacturers have changed the shape of bottles, jars and other containers to conceal the fact that the volume is smaller, and the weight of the product has gone down. So this process of reducing the amount of a product while keeping the price the same is underhand, and manufacturers are deliberately trying to hide it from consumers.'*

- Chris Fowler

*'Manipulation of weights and measures instantly improves profits, confuses the public and there seems to be insufficient strong public opinion to bring about changes to a more open and honest industry.'*

- Lovodale

*'I don't want to have to do a maths test to make sure I am not being ripped off every time I enter a supermarket.'*

- KC

Source: Which.com, retrieved 15<sup>th</sup> May 2013 <http://conversation.which.co.uk/consumer-rights/shrinking-products-supermarket-pack-sizes-prices-stay-same/>

## Exhibit 4

### Quote from shoppers experiencing trimmed products

**snakehips916** 05-07-2011, 9:32 PM

# 1

MoneySaving Newbie

Join Date: Jul 2011  
Posts: 5  
Thanked 7 Times in 4 Posts

**"Innocent" smoothies! Carton rip-off**

I went into my local Sainsburys and saw that there was an offer of buy 2 Innocent smoothies for £4. This offer normally comes around every 2 months or so. I purchased said cartons and went home. On putting them in the fridge i noticed something was wrong.....eek! They have shrunk...by 25%. A subtle change and one that was not mentioned at point of sale or anywhere else for that matter.

As far as I am concerned that is deception. Both Sainsburys and Innocent know what has gone on but have failed to mention it. I therefore returned the cartons and got a refund as I was really unimpressed. A)with the small cartons but mostly B)The underhand methods used.

I will be writing to Sainsburys and not purchasing any more Innocent products as I don't like the way they conduct their business.

A case of not-so innocent!

Quote
Report

The Following 3 Users Say Thank You to snakehips916 For This Useful Post: [Show me](#)

>>

Source: MoneySavingExpert.com, retrieved 2<sup>nd</sup> May 2013

<http://forums.moneysavingexpert.com/showthread.php?t=3340692>

**Defiant306** 1 year, 9 months ago

I have to say I'm miffed at Innocent changing the cartons to 750ml and not dropping the price to match the 25% loss. Felt like a stealth move by them!

Source: HotUKDeals.com, retrieved 2<sup>nd</sup> May 2013

<http://www.hotukdeals.com/deals/innocent-pure-fruit-smoothie-1-litre-1-farmfoods-980732>

Dave D

Latest one I've noticed – Boot's Cremolia hand cream – almost invariable out of stock in Sheffield – heaven know's why – so I usually buy 12 jars at once when I'm in Manchester, where it is always in stock in The Arndale. yesterday needed some more and managed to find 3 jars in Sheffield. They are a "New handy size" – i.e. they are now 110ml for £1.29 not 150ml for £1.19. My rough calculations make that a 31% price hike and also means the generation of a whole lot more waste.

Unlike a lot of items where the quantity has changed but, cunningly, the physical size and shape of the container hasn't, this hand cream, which still comes in glass jars, is now in a smaller glass jar, so Boots' have incurred the cost of re-tooling and sourcing different jars to make this change .... which must have cost a lot no doubt contributing significantly to the 31% price hike.

Report this comment

Posted 13 May 2012 at 1:05 pm 4 - 0

Reply

Source: When pack sizes shrink, why don't their prices? Which? Consumer Survey, 19<sup>th</sup> March 2012, retrieved on May 15<sup>th</sup>; <http://conversation.which.co.uk/consumer-rights/shrinking-products-supermarket-pack-sizes-prices-stay-same/>

**Exhibit 5**

Observed price changes in products by author's research, 2008 – 2012

| Product  | Original  |       | New   |       | Difference        |                           |                                     |
|--|---|-------|---|-------|-------------------|---------------------------|-------------------------------------|
|  | Size (volume units)   | Price | New Product   | Price | Volume change (%) | Absolute price change (£) | Implied price change (£/unit and %) |
| <b>Drinks:</b><br>Innocent Smoothie                |  1L      | £2.85 |  0.75L   | £2.95 | <b>-25%</b>       | +£0.10                    | +0.001/ml<br><b>+38%</b> increase   |
| <b>Food:</b><br>Lloyd Grossman Balti Curry Sauce   |  425g    | £2.09 |  350g    | £2.09 | <b>-17.6%</b>     | £0.0                      | +0.001/g<br><b>+21%</b> increase    |
| <b>Health &amp; Beauty:</b><br>Cremola Hand Cream  |  150ml | £1.19 |  110ml | £1.29 | <b>-27%</b>       | +£0.10                    | +0.004/ml<br><b>+48%</b> increase   |
| <b>Food:</b><br>Walls Soft Scoop Vanilla Ice Cream |  2L    | £2.00 |  1.8L | £2.00 | <b>-10%</b>       | £0.0                      | +0.11/litre<br><b>+11%</b> increase |
|  |   |       |   |       |                   | <b>Average</b>            | <b>+30%</b> increase                |

Source: Author research.

## Exhibit 6

### Statistical bulletin: Consumer Price Inflation, March 2013

**Figure A: CPI 12-month rate for the last ten years: March 2003 to March 2013**

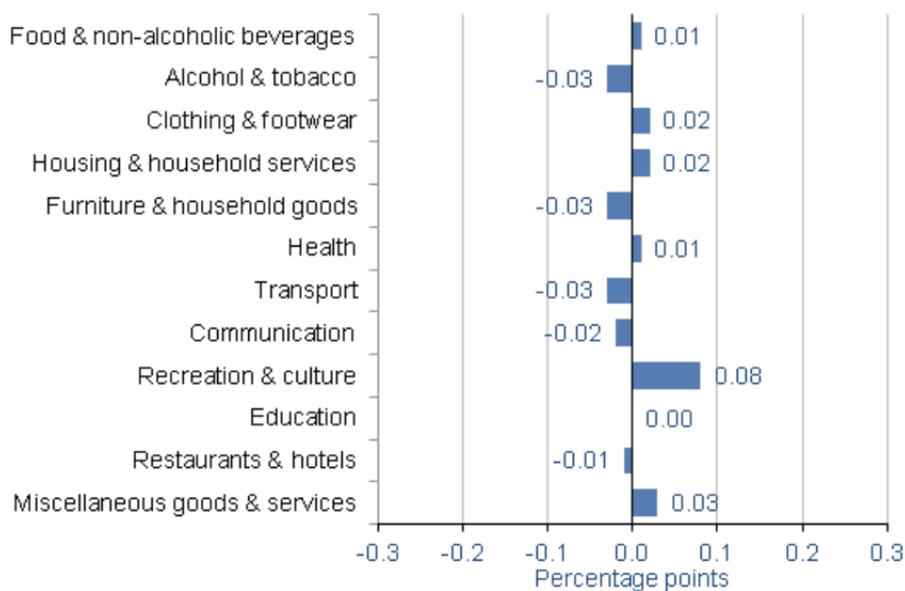
United Kingdom



Source: Office for National Statistics

**Figure B: Contributions to the change in the CPI 12-month rate: March 2013**

United Kingdom



Source: Office for National Statistics

## Exhibit 7

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Per unit pricing at one supermarket



*This image from Which? shows the price labels for two different brands of ketchup at the same supermarket. As one price is in ml and the grams, it is impossible to compare the two.*

Source: <http://www.thisismoney.co.uk/money/bills/article-2199154/Confusing-supermarket-pricing-misleads-consumers.html#ixzz2TNv016oS>

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## Endnotes

- <sup>1</sup> *When pack sizes shrink, why don't their prices? Which?* Consumer Survey, 19<sup>th</sup> March 2012, retrieved on May 15<sup>th</sup>; <http://conversation.which.co.uk/consumer-rights/shrinking-products-supermarket-pack-sizes-prices-stay-same/>
- <sup>2</sup> Ibid
- <sup>3</sup> Ibid
- <sup>4</sup> Ibid
- <sup>5</sup> IGD Estimates that the UK grocery market was worth £163.2 billion in 2012, an increase of 3.8% on 2011. If the average product trimming has the effect of a 29.5% increase in price. The value that could be potentially generated is an additional £48.1bn, assuming that demand does not significantly decrease, but that consumers adjust consumption accordingly. IGD Estimate was based on; IGD report, retrieved 15<sup>th</sup> May 2013 <http://www.igd.com/our-expertise/Retail/retail-outlook/3371/UK-Grocery-Retailing/>
- <sup>6</sup> ONS is the Office for National Statistics. A UK agency that measures inflation for a basket of goods amongst other statistical and data analyses.
- <sup>7</sup> *Growth of the shrinking consumer products*, Financial Times, April 18<sup>th</sup> 2013, <http://www.ft.com/cms/s/0/d660c704-9272-11e2-851f-00144feabdc0.html#axzz2S9RJAGNY>
- <sup>8</sup> *When pack sizes shrink, why don't their prices? Which?* Consumer Survey, 19<sup>th</sup> March 2012, retrieved on May 15<sup>th</sup>; <http://conversation.which.co.uk/consumer-rights/shrinking-products-supermarket-pack-sizes-prices-stay-same/>
- <sup>9</sup> Gourville, J. and Soman, D., *Pricing and the Psychology of Consumption*, September 2002, Harvard Business Review, R0209G
- <sup>10</sup> Vanishing Product article from Sold Short? *Are You Getting Less Than You Think? Let Us Count The Ways*, Consumer Reports, February 2000, 65-67
- <sup>11</sup> Bertini, M. Hinterhuber, A. *Profiting when Customers Choose Value Over Price*, Business Strategy Review Issue 1 – 2011