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Acquiring Pharmaceutical Industry Assets in the UK: 1 + 1 = 1?

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Abstract The recent AstraZeneca takeover bid from Pfizer puts pharmaceutical R&D once again on the public agenda. Three pertinent questions are (a) what can be expected from this acquisition, (b) what are the implications for the UK economy and science base, and (c) whether such a deal should go ahead. Although the key driver behind this acquisition would be an improvement in company performance and shareholder value, past evidence suggests that mergers and acquisitions (M&A) of large pharmaceutical companies imply a neutral net effect on productivity, if not a decline, with employment decreasing and R&D spend following a similar trend. Similarities between the two companies include dropping sales; however, relative to its size, AstraZeneca has a more promising R&D pipeline, especially in therapeutic areas where Pfizer's strength is currently limited (e.g. oncology). Ensuring a portfolio diversification would make Pfizer's takeover proposal a knight's one, but history points towards a knave-like behavior.

1 Introduction

The recent debate about Pfizer's proposed takeover of the UK-based AstraZeneca felt like history repeating itself: in late January 2009 Pfizer acquired Wyeth to create one of the leading global pharmaceutical conglomerates and a few years before that, it also acquired Pharmacia (2003) and Warner Lambert (2000). The combined company that

would emerge would be the largest pharmaceutical in terms of sales revenue and R&D budget. A number of questions arise however, about the value of such a merger and its impact both in corporate, but, more importantly, in social terms: the first relates to the expectations from and the wider implications of such a takeover, should it happen in the future; as a result of these, the second question relates to whether it should be allowed to go ahead. In the sections that follow we discuss the above questions and outline our rationale for the takeover not necessarily being in the UK economy's best interests.

2 Expectations from a Likely Takeover of AstraZeneca from Pfizer

As things currently stand, both Pfizer and AstraZeneca have similarities: total sales in both have declined by about a quarter (24 and 23 % for Pfizer and AstraZeneca respectively) since 2010 (Table 1) [1, 2]; R&D budgets have also suffered as a result, showing a declining trend; but profits have been resilient in both cases. The two firms also have differences; among them an important difference is that, relative to its size, AstraZeneca has a more promising R&D pipeline than Pfizer with several molecules in late stage development—particularly in oncology—and more drugs at registration phase (Table 2) [1, 2]. If a promising R&D pipeline is a signal towards future market strength and sustainable profitability over the long term, then AstraZeneca is certainly a good bargain for the American conglomerate.

In light of the above, what can one expect from this deal? Again, history offers interesting insights. First, the key driving force for this acquisition appears to be improvements in company performance and shareholder

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Table 1 Total sales, total R&D expenses and total workforce 2008–2013

Year	2008	2009	2010	2011	2012	2013
Total sales (\$ billion)						
Pfizer	48.3	50	67.8	61	54.7	51.6
AstraZeneca	31.6	32.8	33.3	33.6	28	25.7
Total R&D expenses (\$ billion)						
Pfizer	7.9	7.8	9.4	8.7	7.5	6.7
AstraZeneca	5.2	4.4	5.3	5.5	5.2	4.8
Total R&D spending (% revenues)						
Pfizer	16.5	15.7	13.9	14.2	13.7	12.9
AstraZeneca	16.5	13.4	15.9	16.4	18.6	18.7
Workforce (total, 1000 s)						
Pfizer	81.8	116.5	110.6	103.7	91.5	77.7
AstraZeneca	66.1	63.9	61.0	57.2	51.7	51.5

Source: Company financial and annual reports [1, 2]

value, mainly through economies of scale, removal of duplication in R&D, cost optimisation or reduction, increased tax efficiency and leveraging synergies, potentially leading to higher sales and greater market shares in the global pharmaceutical marketplace. However, evidence suggests that, for large companies, acquisitions in the pharmaceutical industry lead predominantly to an output decline of new molecular entities (NME) and, for mergers and acquisitions (M&A) overall there does not appear to be a net effect on productivity [3], in other words value is neither created nor destroyed [4]. Second, employment is likely to decline and R&D spend could also suffer as a result. After acquiring Wyeth in 2009, Pfizer reduced its

total workforce at the end of 2013 by 36 % to a total of about 77,700 [1]. This was accompanied by a 41 % reduction in overall R&D spend: from a combined spending of \$11.3 billion at the end of 2008 before the acquisition, to \$6.7 billion at the end of 2013. Declining R&D spend is not always the case post-M&A, but Pfizer's direction of travel seems to be going in the same direction: following its three largest acquisitions (Warner-Lambert, Pharmacia, and Wyeth), numerous R&D sites were shut down and the decrease in R&D spend could explain the reduced output observed post-M&A. In the case of Pharmacia, the Swedish Prime Minister referred to his country's "negative experience" when Pfizer failed to honour its commitments following Pharmacia's takeover [5], although much of that could be attributed to failure to bring new products to market.

3 Implications for the UK Economy

The acquisition of AstraZeneca will ensure the sustainability of Pfizer's current business model, including a greater portfolio diversification in areas where Pfizer's strength is currently limited, e.g. in oncology. But there is much in Pfizer's takeover proposal pointing to a knave-like behaviour. For one, history is not on its side: the closure of the R&D plant in Sandwich in the UK 3 years ago is still a fresh—and for many, painful—memory. This took place at the time when UK health and industrial policy for the pharmaceutical sector was ambivalent about the future of the Pharmaceutical Price Regulation Scheme (PPRS), predicting its abolition over the mid- to long-term.

Table 2 R&D pipelines of Pfizer and AstraZeneca, 2014

	All areas	Cardiovascular and metabolism	Oncology	Neuroscience and pain	Respiratory, inflammation, immunology	Other areas ^a
Phase I						
Pfizer	35	3	6	8	6	12
AstraZeneca	32	2	14	2	8	6
Phase II						
Pfizer	23	4	4	4	8	3
AstraZeneca	28	3	9	2	12	2
Phase III						
Pfizer	20	2	8	4	3	3
AstraZeneca	16	0	8	0	6	2
Registration						
Pfizer	6	1	0	2	0	3
AstraZeneca	8	4	2	1	0	1
Total						
Pfizer	84	10	18	18	17	21
AstraZeneca	84	9	33	5	26	11

Source: Company financial and annual reports [1, 2]

^a Other areas mainly include rare diseases, vaccines and biosimilars in the Pfizer pipeline, and infection in the AstraZeneca pipeline

Beyond operational efficiency and the long term sustainability of Pfizer's business model, two additional arguments make a deal attractive for Pfizer: first, tax optimisation and efficiency and, second, the additional financial incentives provided by the new PPRS.

It is unsurprising that achieving greater efficiency in managing its tax obligations, through tax or corporate inversion, must have been a key consideration in Pfizer's pursuits to acquire assets outside the United States, where it is tax-resident. For sure, Pfizer has accumulated significant reserves from its international business over the past 5 years, which, if re-patriated to the US, will be taxed at the going rate (35 %). A likely acquisition of AstraZeneca could signal the movement of Pfizer's headquarters to the UK, where the corporate tax rate is significantly lower than the one the company faces in the US. Additionally, the US tax code, perhaps uniquely among developed nations, seeks to impose income tax on profits earned abroad by American corporations. Companies with strong international orientation, such as Pfizer, have a strong incentive to re-classify themselves as 'foreign' in order to avoid the burden of double taxation and return some of the profits to their investors. One can hardly blame Pfizer for this inconsistency in the US tax code. In fact, several other companies have strived to do the same in recent months or years, for example, Medtronic (acquiring Ireland-based Covidien) and Abbvie (acquiring UK-based Shire) and the only way for the practice to stop would be to either reform the US tax code or altogether disallow tax inversions. A favourable reform of the US tax code appears unlikely as the US authorities continue to push for legislation that could retroactively strip the tax advantages achieved by companies in some of the 2014 deals [6]. In the meantime, no direct pecuniary benefit to the UK economy is likely to emerge from a likely deal with AstraZeneca, although shareholders (in the UK and elsewhere) and large (mostly private and some public) institutional investors will realise a short-term benefit equal to the difference in the share price, discounting AstraZeneca's portfolio and future launches.

Considering the wider economic and social impact of such an important deal, it should be expected that the UK government's involvement will be substantive and focus on maximising the likely benefits to UK PLC. While free market economics, backed by acquiescing politics, usually determine the outcome of M&A, the UK government, as a guardian of health and industrial policy for the pharmaceutical sector has a legitimate right to become involved in discussions aiming to secure a better deal for long-term employment, research, production and exports. As a result such an involvement is in the public interest. After all, in the wake of the recent financial crisis, there is great interest in holding banking executives to account for messed-up

mergers and unfulfilled commitments. In preventing similar blunders by pharmaceutical industry executives, the scope and extent of likely commitments could be defined *ex ante* and monitored after they have taken place.

In a likely future takeover proposal, investors will demand a leaner organization post-takeover in order to retain and possibly enhance profitability and sustain this for a few more years until new products emerge to replenish an ageing product portfolio. Whereas human capital might suffer for the sake of improving operational efficiency, physical capital might not, at least in the short term. The new PPRS, which became operational on January 1st, 2014, allows a 21 % rate of return on capital employed (ROCE) on sales to the UK NHS. Scheme members will be able to retain profits of up to 150 % of this target and may even be able to apply for price increases if they forecast profits less than 50 % of this target [7]. As a result, a combined company with a broader physical capital base may be able to make more flexible use of capital, as per the current PPRS arrangements, allowing an additional tax optimization up to a point. But a rationalization of sales forces and, potentially, R&D activities is also a strong possibility, implying losses in different parts of the world. It is highly unlikely that the UK R&D operations will escape unscathed as both companies have research facilities in the Cambridge area.

4 Long-Term Concerns

Despite the obvious tax advantages for Pfizer and the incentives provided by the UK institutional framework, becoming part of a corporate global empire could have negative implications for creativity and entrepreneurship. While scale effects are usually a key driver of corporate M&A, it is doubtful that the same argument holds in research activities, where individuality and small team spirit often drive innovation and discovery. This gives credence to the 'small is beautiful' argument [8] as opposed to 'big is better'. Consequently, it is not necessarily the case that merging the activities of two large pharmaceutical manufacturers such as Pfizer and AstraZeneca will create additional value and greater impact further down the line.

Whereas it is obvious why AstraZeneca may be a good bargain for Pfizer, it is unclear how the UK economy and its science base may benefit and what the implications are for overall industrial policy. When listening to Pfizer's CEO before the House of Commons Business, Innovation and Skills (BIS) Select Committee, one cannot help but share MPs' worries. For sure, Pfizer cannot promise much about its UK presence over the long-term unless some specific targets are put forward and discussed upfront in

order to create a win-win scenario for all stakeholders. Such targets could embrace new products, new research lines of investigation based on research priorities and, potentially, new markets.

5 Conclusion

In a globalized economy, conglomerates such as Pfizer can almost free-ride on the back of successful government policies and incentives for biomedical innovation. For ventures like this not to end up being a zero-sum game, one can only hope that the scientific excellence the UK produces and the incentives provided for this purpose will continue to deliver first class research outcomes in the future. Additionally, governments (particularly the UK government) as sponsors of policies promoting research, innovation and entrepreneurship, have a legitimate right to have some say on the terms of M&A taking place in their territory and ensure that the benefits from such deals diffuse more widely in society.

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