

A Labour Market Fable

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by

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1. Introduction

The American Heritage Dictionary defines a myth as “a traditional, typically ancient story dealing with supernatural beings, ancestors, or heroes that serves as a fundamental type in the worldview of a people, as by explaining aspects of the natural world or delineating the psychology, customs, or ideals of society”. This definition is not particularly instructive in relation to economics. However, a myth is also defined by the American Heritage Dictionary as “a fiction or half-truth, especially one that forms part of an ideology.” In economics we sometimes find brand new half-truths developing out of thin air. On the other hand, some tend to gradually wither away, only to be revived occasionally. And some were born long ago never seem to die out.

In his excellent collection of published journal articles that demystify and refute many of the profession’s commonly accepted half-truths concerning market failures¹, Professor Daniel Spulber notes that such half-truths in economics are often perpetuated by the use of *fables* - “picturesque moral tales meant to illustrate or even support fundamental economic theory”.² According to Spulber, “although some of these fables are factually inaccurate, their appeal to economists continues undiminished, being recited in countless classrooms, textbooks and academic seminars.” He goes on to note that:

“The anecdotes told by economists are entertaining, instructive and undoubtedly create social and intellectual bonds within the profession. Many of these anecdotes have a common purpose. They attempt to show the existence of some type of market failure. These anecdotes also have

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¹ Spulber, D. (2002) *Famous Fables of Economics: Myths of Market Failures*, New York: Blackwell Publishing.

² Spulber, D. (2002), page 1.

operational value: government intervention in the economy may be needed to set matters right.”³

Spulber’s book contains articles which examine the veracity of “picturesque moral tales” concerning the private provision of public goods and the free-rider problem; production and consumption externalities; network externalities, path dependence and “technology lock-in” effects; contract hold-up; moral hazard; predation and foreclosure; barriers to entry and speculative bubbles (eg “tulip mania”). All of the fables involve market failures which indeed can occur at least in theory; but the main point is that these fables – many of which consist of stories or real world examples, and which are intended to illustrate basic theoretical points and justify government intervention in other similar cases - do not stand up to varying degrees of further scrutiny.⁴

2. Some Examples of Fables: Old and New

Consider, for example, James Meade’s famous “fable of the bees”.⁵ In the original fable, bees pollinate an orchard, providing benefits to the orchard grower and making nectar, thus benefiting the beekeeper. The beekeepers and the orchard owners receive benefits for which they are not compensated and so society has less beekeeping and orchard growing than is socially optimal, thus providing a justification for government intervention. However, when Professor Stephen Cheung examined the fable in more detail, he found that in the United States, contractual arrangements which tend to internalize the externalities between orchard growers and beekeepers had long been routine.⁶ As Spulber notes, “the correction of the fable of the bees shows that in practice, private bargaining and contractual arrangements can reduce or eliminate such inefficiencies”, in the spirit of Ronald Coase’s well known analysis of externalities.⁷

Another interesting example of a “picturesque moral tale” is the fable of the lighthouse. This was supposed to be the prototypical example of a public good which the private sector would not supply. In

³ Spulber (2002), pages 1-2.

⁴ Another outstanding recent collection of articles that address many market failure arguments (particularly arguments relating to informational asymmetries) is Cowen, T. and Crampton, E. (eds) (2003) *Market Failure or Success: The New Debate*, London: Edward Elgar.

⁵ Meade, J. (1952) “External Economies and Diseconomies in a Competitive Situation” *Economic Journal*, 62: 54-67.

⁶ See Cheung, S. (1973) “The Fable of the Bees: An Economic Investigation” *Journal of Law and Economics*, 16: 11-33.

⁷ Coase, R. (1960) “The Problem of Social Cost,” *Journal of Law and Economics*, 3: 1-44.

1974, Ronald Coase wrote a powerful article on this fable, in which he destroyed a myth that the economics profession had believed for over 120 years.⁸ Lighthouses are generally considered to satisfy the formal economic definition of a public good: the services of lighthouses are automatically made available to all ships (non-excludability) and consumption of lighthouses by one ship does not affect consumption by other ships (non-rivalrous consumption). The textbooks concluded that private sector suppliers would free-ride and that unless the government collected taxes to pay for lighthouses, no lighthouse services (or not enough of them) would be provided.

Coase traced the history and evolution of the British lighthouse system and observed that private individuals began building lighthouses and collecting tolls in the seventeenth century, and also found that by 1820, 75 per cent of all lighthouses had been built by the private sector. Even though the lighthouse satisfied the formal model of a public good, Coase showed that the commonly reached conclusion did not fit reality very well.

To take a more recent example, Joseph Stiglitz's textbook on public economics suggests that many modern economists also tend to believe a similar proposition regarding weather services and forecasting. Stiglitz writes:

“Information is, in many respects, a public good...The private market will often provide an inadequate supply of information, just as it supplies an inadequate amount of other public goods. The most notable example of government activity in this area is the U.S. Weather Bureau.”⁹

There is no doubt that reliable information about the weather is a scarce good, just like every other good in economics. It is costly to produce. And information about the weather has economic value both as a final consumption good and as an intermediate good for firms.

And, as Stiglitz claims, it is also true that in certain cases, information about the weather (including weather forecasts) satisfy the textbook attributes of a public good. Providing information about the weather to one more individual in many cases will not reduce the amount of information that others have (non-rivalrous in consumption). And once information about the weather has been released to one

⁸ Coase, R. (1974) “The Lighthouse in Economics”, *Journal of Law and Economics*, 17(2): 357-376. John Stuart Mill first used the lighthouse as an example of a pure public good in his *Principles of Political Economy* in 1848.

⁹ Joseph E. Stiglitz (1988), *Economics of the Public Sector*, Second Edition, page 78. Curiously, this book also devotes almost half a page to explaining how the lighthouse is a public good which only the government can supply efficiently (page 75).

individual, it may often be difficult to prevent other individuals from learning this information (non-excludability).

Many economists schooled in the methods of welfare economics would stop at this point and would reach the same conclusion about weather services as Mill, Sidgwick, Pigou, Samuelson and Stiglitz did about the lighthouse.

The problem is that this conclusion is not quite right. In fact, given the sheer number of private firms in the weather-forecasting industry, and given the significant public prominence of private-sector weather information services and forecasters in the United States, the standard welfare economists' conclusion is so false as to be almost deliberately misleading. Consider the following facts. According to a recent study by the Heritage Foundation, there now are approximately 300 private companies in the United States preparing and disseminating weather forecasts to businesses and the public on a commercial basis.¹⁰ And, according to the Commercial Weather Services Association, private meteorologists and for-profit companies provide the US public greater than 85 percent of its weather forecasts through television weathercasts, in newspaper weather maps, and on radio.

One such firm – AccuWeather - has been operating since 1962 (24 years before the first edition of Stiglitz's book appeared) and provides weather forecasts, data, colour graphics, consulting services, computer hardware and software to over 15,000 clients worldwide in the media, government, industry and education. According to their website,¹¹ more than 180 million consumers recognize the AccuWeather name as the leader in weather forecasts and information. Included among AccuWeather's media clients are *The Washington Post*, *The Miami Herald*, and CNN Interactive. AccuWeather serves hundreds of television and radio stations all across the United States plus stations from Canada, Chile, Africa, Australia, Russia the Philippines.

The concern about such fables like the bees and the lighthouse is not that they do not conduct formal econometric tests of the theories they are intended to illustrate, or that the economic theory behind them is empirically irrelevant in all cases, or that the theory is completely wrong as a matter of pure logic. Externalities, public goods, informational asymmetries and so on do in fact exist, both in theory and in practice. "Fable" is not meant to be a pejorative term implying that an economic theory is false.

¹⁰ The Heritage Foundation (1997) *Balancing America's Budget*, Appendix 306.

¹¹ See <http://www.accuweather.com/wx/company/history.htm>

The problem is that the specific fables which are presented often only portray how the theory might work in practice in a very weak fashion, or may even illustrate the opposite point that proponents originally set out to make. Indeed, closer scrutiny of the fables in Spulber's book suggests that the market failures that are alleged to exist in the specific examples are not as severe, and the welfare costs not as high, as initially claimed. Furthermore, the collection of articles show that this is frequently due to private sector responses to the alleged market failures. Thus, not only are the fables not very suitable as illustrations of theoretical points regarding market failures – they are also not very good examples of how government intervention might be designed by would-be interventionists to mitigate the welfare costs of those failures, since private sector responses have already “corrected” the alleged market failure to a large extent.

Of course, not all fables that economists tell share these characteristics. Some illustrate theoretical principles and points about economic policy quite well. For example, the fable told in Leonard Read's 1958 classic piece “I Pencil” powerfully illustrates several conceptual points, and appears to have held up quite well after nearly half a century of further reflection.¹² By using the simple idea of the stages of production of a pencil, Read illustrates the theoretical point originally made by Adam Smith and developed later by Ludwig von Mises, Friedrich Hayek and others - that individuals cannot have perfect knowledge of all particular circumstances that might be relevant to them, and that there is no single person who knows how to make a pencil. But Read's fable also illustrates quite nicely the point that individuals they don't *need* to know this information because market prices perform much of this role.

To take another example, Cheung's 1973 paper itself turns the fable of the bees into an illustration of the Coase Theorem in action. In other words, detailed examination of fables can often illustrate a different but related theoretical principle and still remain part of the folklore of economics, but for different reasons than those that were originally intended.

3. A Recent Labour Market Fable

These days, stories in the same genre as Meade's fable of the bees or Read's pencil story rarely see the light of day. Instead, the “picturesque moral tales” that economists tell are more sophisticated (although some are more sophisticated than others). An interesting recent fable concerns the behaviour

¹² See Read, L. (1958) “I, Pencil: My Family Tree as told to Leonard E. Read” *The Freeman*, December. Archived on On the world at <http://www.econlib.org/library/Essays/rdPnc11.html>.

of firms in particular labour markets and the employment and welfare effects of minimum wage laws. Specifically, the fable is one of monopsony power of employers in the US fast food industry, as told by David Card and Alan Krueger (1995) [hereafter, C&K] in their well known but highly contentious study.¹³ They argue that:¹⁴

“The most interesting aspect of the monopsony model is that it can *reverse* the predicted adverse employment effect of an increase in the minimum wage. In fact, in a monopsony situation, a small increase in the minimum wage will lead employers to increase their employment, because a higher minimum wage enables formerly low wage firms to fill their vacancies quickly. The minimum wage forces these firms to behave more like the high wage firms, which experience lower vacancies and lower turnover rates. Of course, if the minimum wage is increased too much, firms will choose to cut employment, just as in the conventional model.” [emphasis in original]

Remarkably, one can find recently published intermediate microeconomic theory texts and turn to the chapter on “market power” and read about this study as an example of an “empirical test” of either (a) the existence of monopsony power in certain labour markets (to wit, the fast food industry in some parts of the United States) or (b) the neutral or positive employment effects of minimum wage laws, or both.¹⁵ Similarly, one cannot read a recent safety net decision by the Australian Industrial Relations Commission (or a submission by the ACTU to the AIRC) in which this work is not referred to, even if tangentially. In other words, in some circles C&K’s story seems to have taken on the status of a fable or “picturesque moral tale”, which is often “recited in countless classrooms, textbooks and academic seminars,” as well as by special interest groups, politicians, journalists and other commentators.

Like many children’s stories and like some of the fables in Spulber’s book, it does in fact contain a very small grain of truth – as we explain below, a minimum wage *can* indeed lead to increases in employment under certain strict conditions. The point is that even if we attach confidence to C&K’s results and ignore the data and estimation problems in the study, the fable that they specifically use – like the ones examined in Spulber’s book – is simply not very good at illustrating the theoretical point

¹³ Card, D. and Krueger, A. (1995) *Myth and Measurement: The New Economics of the Minimum Wage*, Princeton: Princeton University Press.

¹⁴ See Card and Krueger, (1995), pp12-13.

¹⁵ See, for example Mansfield, E. and Yohe, G. (2000) *Microeconomics*, Tenth Edition, New York: W.W. Norton, pp 474-475.

about monopsony power. And it does an even poorer job of justifying the particular government intervention embodied in the story (i.e. the effects and desirability of minimum wage laws).

In other words, if proponents of labour market interventions like the minimum wage wish to justify these policies, they should look elsewhere for other, more suitable picturesque moral tales. And textbooks should stop mentioning the study in sections on monopsony power, since C&K's work really has little to do with the textbook phenomenon.

The simplest way to understand the monopsony concept and its possible policy implications is to regard it as a kind of mirror image of the textbook model of monopoly power. Recall that a seller of a good is said to possess market power when, other things being equal, it has the ability to profitably increase its sale price above that of its competitors. Such a firm does not take prices as given, but instead exploits the fact that they can increase their sale price above that of their competitors without losing too many customers. In the single monopoly seller case, if the firm raises its price it will lose marginal consumers but it will retain inframarginal consumers. It can charge these inframarginal consumers a progressively higher price and will lose total revenue by doing so, but at the same time it is reducing its output and reducing its total costs. It would continue to do this until the net gains (the reduction in cost) were equal to the net loss (the reduction in revenue).

In the case of a pure monopsonist or single employer of labour, if the firm reduces its wage it will lose marginal employees but it will retain inframarginal employees. As it offers these inframarginal employees a progressively lower wage, its overall wage bill falls, but at the same time it is progressively losing workers and its revenue is falling. It would continue to do this until the benefits doing so (the reduction in its wage bill) were equal to its losses (the loss of revenue).

It is important to note that in the case of a pure monopsonist, the imposition of a minimum wage can, in theory, result in an increase in employment, and more importantly an increase in welfare, but only under certain conditions. The simplest way to see this is to think about the analogous situation in product markets. Imposing a maximum price on a single price monopolist imposes an upper bound on its marginal revenue and so the process described above cannot continue below a certain level (which is determined by the imposed maximum price). Thus, if the maximum price is not set at a level that is too low, the monopolist may be induced to produce more than they would than in the absence of the maximum price. Thus, price may fall and output may rise (although output could fall if the maximum price is set at a sufficiently low level, or not change at all if the maximum price is set too high).

The possibility that prices may fall and supply may rise is not a violation of the “law of supply”. It is simply a consequence of the behaviour of a monopolist who is subjected to a maximum price constraint and whose marginal revenue can no longer be manipulated. Once we understand the monopoly situation, it is clear that if the assumptions hold the argument is not, as such, a violation of the law of demand, any more than an argument that forcing a monopolist to charge a lower price and sell more output is a violation of the law of supply.

Nevertheless, the C&K study is simply not a very good illustration of this very special theoretical possibility regarding monopsony power. The reasons are as follows:

1. C&K fail to mention that there is nothing in economic theory that implies that under competitive conditions a rise in the minimum wage must reduce employment in *every* group of firms in *every* industry;
2. C&K fail to test for or explore in any great detail other explanations (for example evasion of the minimum wage, failure of the minimum wage to bind, adjustment of other employment conditions, and so on) of why a rise in the minimum wage would have little, or even a positive, effect on employment – but yet still result in welfare losses.
3. C&K do not undertake any formal empirical test (or even provide reasonable anecdotal evidence) of the rather peculiar empirical proposition that firms in the fast-food industry (an industry with many buyers of the same class of labour and with few barriers to entry) might possess monopsony power;
4. There exist literally dozens of earlier and subsequent empirical studies showing negative employment effects of minimum wage laws, particularly in relation to teenage employment¹⁶;
5. Several subsequent studies have been published which point out the massive problems with the C&K study itself (in particular, major problems with their data and their empirical methodology).¹⁷

¹⁶ See, for example, Bazen, S and Marimoutou, V, (2002) “Looking for a Needle in a Haystack? A Re-examination of the Time Series Relationship between Teenage Employment and Minimum Wages in the United States”, Oxford Bulletin of Economics and Statistics, Vol 64, Supplement, 699-725.

¹⁷ See for example Moore, D. (2002) “Minimum Wages: Employment and Welfare Effects, Or Why Card and Krueger Were Wrong”, 23rd HR Nicholls Society Conference, Melbourne.

6. The existence of monopsony market power would imply that output prices should fall in those industries affected by a minimum wage rises. Because higher employment raises production, and because firms are assumed to act competitively as sellers, firms must cut prices in order to ensure this extra output finds a market. But there is no evidence presented in C&K that this happens.
7. A monopsonist might engage in wage discrimination, just as a monopolist may price discriminate. In general, this improves welfare above the level of welfare that would obtain in the absence of such discrimination, since fewer unexploited gains from exchange remain. The imposition of a minimum wage would reduce these possibilities and lead to a reduction in employment by the monopsonist. Thus the presence of monopsony power by itself is neither a necessary nor a sufficient condition for employment to rise following a minimum wage.
8. Even if there is monopsony power, a rise in the minimum wage increases employment only within a certain range, which will differ from industry to industry. The informational requirements to “correct” this potential effect monopsony power are colossal. C&K’s study itself is a monument to the difficulty in measuring even how many people are employed in a particular industry. Interestingly, this very point was made by the AIRC in a recent decision, although of course it did not prevent them from increasing Australia’s minimum wage.
9. C&K and others fail to justify why a nation-wide, state-wide or industry-wide minimum wage law is the appropriate policy response to the possible existence of monopsony power in a single market or industry [which they never directly tested for in any case – see point (3) above]. If monopsony power persists, it is likely that there are barriers to entry in the buyers market for labour. Why aren’t reductions or eliminations of these barriers considered as a policy option, as they are in product markets, instead of industry-wide or economy-wide wage controls?

Some of these points on the C&K study are worthwhile expanding upon. As discussed above, monopsony power is the mirror image of this situation in the sense that if a firm has monopsony power in a labour market, other things being equal, it can reduce wages below those of its competitors and not lose too many employees to those competitors. For our purposes the crucial points are that “other things are equal” and that firms with market power can charge prices or set wages that are substantially different from those of their competitors *and can do so profitably*, without losing too many customers or employees.

Strangely, in a recent book,¹⁸ Alan Manning - a proponent of the view that labour markets are riddled with monopsony power - claims (at page 5) that the source of monopsony power is that “employers set wages”. This is a misleading characterization of monopsony power and market power more generally. In a free society firms are free to choose whatever prices, wages or quantities they wish to; the key to possessing market power is therefore not that firms choose their own prices; rather, it is that they can charge prices which are higher than their competitors without losing many customers. In other words, the key to understanding competitive behavior is not that firms do not set prices or wages; it is that the forces of competition create an incentive for the firm not to alter its prices or wages away from market-determined levels.

The definition immediately suggests a straightforward test of the existence of monopsony power in labour markets. First, economists could look around for obvious examples of single purchasers of particular classes of labour, since these would seem to offer the best chance of finding market power. Publicly provided private goods and services in which private employers are either prohibited from hiring altogether or who find it difficult to do so because of artificial barriers to entry (such as hospitals, prisons, schools or universities) might make good candidates, since regulations prevent private sector employers from entering these markets and offering higher wages. Alternatively, we could try to find labor markets which exhibit high labour mobility costs (for example small, “single employer” regional towns). We could then try to estimate the wage elasticity of labour supply *at the level of the firm*, controlling for other factors. The smaller this number in absolute terms, the lower the response of labour supply to the firm’s change in wages, and the higher is the firm’s measured monopsony power.

What is remarkable as far as the C&K fable is concerned is that well-known proponents of the monopsony view freely admit that (a) very few results using such direct tests exist and that (b) when direct tests have been conducted on such “textbook” examples of monopsony power (which, interestingly, involve publicly provided, rather than privately provided goods or services), the evidence does not support the theory.

On the first point, for example, Manning (2003) notes (at page 80) that:

“The most direct way to establish the existence of employer market power over its workers is to estimate the wage elasticity of the labour supply curve facing the firm. Studies of this elasticity are few and far between...The lack of

¹⁸ Manning, A. (2003) *Monopsony in Motion*, Princeton: Princeton University Press.

literature contrasts with entire books written about the demand for or the supply of labour by individuals and with the literature on industrial organization estimating the extent of product market power.”

On the second point, Staiger et al (1999) state (at pages 2-3) that:

“Direct estimation of the elasticity of labor supply to individual firms suggests that firms have very little market power over wages even in labor markets that are textbook examples of monopsony such as nurses and coal miners.”¹⁹

Although there are several studies of the effects of minimum wages in Australia, to our knowledge there have been very few (if any) direct formal empirical tests of monopsony power in labour markets along these lines using Australian data. Of course, this does not appear to have prevented the ACTU from using the monopsony power argument in their submissions to the AIRC. On the other hand, the AIRC’s reaction to the monopsony power argument is a little more encouraging:

“The ACTU also relied upon a book by Professor Alan Manning, Professor of Economics and Director of the Labour Markets Program in the Senate for Economic Performance at the London School of Economics, titled *Monopsony in Motion - Imperfect Competition in Labour Markets*, in which he provides a theoretical basis under which employment might increase in response to an increase in minimum wages. This will arise where the employer has the power to determine the level of wages. If a minimum wage is set at a market clearing level, then employment may increase concurrently with increases in the minimum wage. *Since the ACTU provided no empirical research which relates this theory to the fixation of award rates in Australia, we are not assisted by it.*” [emphasis added]

4. Conclusion

The point of this article has not simply been to point out some of the inaccuracies of the Card and Krueger study. It has been to point out that, even if we were to take their empirical results at face value, their work is not a good way of testing for monopsony power or the employment effects of minimum wages. Nor does their empirical work provide a credible argument as to why a widespread minimum wage might be desirable. As we have shown, in these respects the work shares common faults with many fables in economics. The problem with such is not only their historical or empirical inaccuracies. Rather, it is that many of the stories share a common moral – markets fail and the government should intervene in the economy to solve the problem. However, upon closer scrutiny the fables fail to do this. The lesson is that economists should carefully examine both new and familiar

¹⁹ Staiger, D. et al (1999) “Is There Monopsony Power in the Labor Market? Evidence from a Natural Experiment” *NBER Working Paper*, No. 7258.

fables to determine whether the analysis or interpretation of a historical event is accurate, or whether it is designed to serve a particular public policy agenda. In many cases the latter is true, but upon closer examination, they fail to achieve this goal. Purveyors of inaccurate fables and who advocate government intervention should be held accountable.