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versus producer cooperative**

ISTVÁN R. GÁBOR

Labour Research Department, Institute of Economics,  
Hungarian Academy of Sciences

Department of Human Resources, Corvinus University of Budapest

Budapest, 2004.

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relationship between institutional rationality/diversity  
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**CAPITALIST FIRM VIS-À-VIS WITH TRADE UNION,  
VERSUS PRODUCER COOPERATIVE**

A PERIPATETIC SCHOLASTIC TALE ON THE CONTROVERSIAL  
RELATIONSHIP BETWEEN INSTITUTIONAL RATIONALITY/DIVERSITY  
AND MARKET SELF-REGULATION

BY ISTVÁN R. GÁBOR

***Abstract***

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*By way of presenting an ahistorical fictitious story, this paper is ment to illustrate that:*

- in contrast to conventional wisdom, trade unions, in their symbiosis with capitalist firms, may further rather than impede price-mediated self-regulation in the labour market via their involvement in wage-setting,*
  - whereas producer co-operatives, although they might seem to represent a close collateral of fully unionized capitalist firms, are fundamentally at variance with the logic of market self-regulation, in that they tend to respond to an increase in demand by restraining rather than extending supply,*
  - with the consequence that they cannot even in principle be an alternative to capitalist firms, at least on a mass scale, unless combined with the adoption of some kind of bureaucratic price control.*
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**GÁBOR R. ISTVÁN**

**TŐKÉS VÁLLALAT VIS-À-VIS SZAKSZERVEZET,  
KONTRA TERMELŐSZÖVETKEZET**

PERIPATETIKUS TANMESE AZ INTÉZMÉNYI RACIONALITÁS/DIVERZITÁS  
ÉS A PIACI ÖNSZABÁLYOZÁS ELLENTMONDÁSOS VISZONYÁRÓL

***Összefoglaló***

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*A tanulmány történelmietlen tanmese, amely azt igyekszik szemléltetni, hogy:*

- míg a tőkés vállalkozással való szimbiózisában a szakszervezet – az uralkodó szakmai közfelfogással ellentétben – alapvetően az árszabályozó piac működési logikájába illeszkedő intézmény,*
  - addig a tőkés vállalkozás és a szakszervezet funkcióit egyazon szervezetben egyesítő termelőszövetkezet, lévén a termékkereslet növekedésére kínálatszűkítéssel reagáló intézmény, szöges ellentétben áll az árszabályozó piac működési logikájával,*
  - amiből következően a szakszervezeti bérkontroll mellett működő tőkés vállalkozásnak elvileg is csak valamiféle bürokratikus árkontroll mellett lehetne tömegméretekben intézményi alternatívája.*
-

Imagine that we each own and manage a small firm in an imaginary capitalist country of an imaginary world, where trade unions are as yet non-existent. As is shown by the first two entries in the row of italicized figures of the attached table, each of our firms is employing 10 workers, and pays them 100 thousand „dumps” (designated as  $\text{D}$  from now on) a month, the going rate of pay in their labour market. Assume that everyone who wants to be employed in this labour market for that pay has a job, and that there are thousands of firms in our industry, all alike, producing one and the same kind of product.

More specifically, we all employ identical workers and an identical technology, in which workers and physical capital are imperfect substitutes. Each of us produces 205 units of product a month, by the optimum (i.e., unit-cost minimizing) combination of labour and physical capital given the rate of compensation and the price of capital, at  $\text{D}650,000$  fixed costs a month. (A cut-back by, say,  $\text{D}50,000$  on these fixed costs at any firm should be offset by the employment of one more worker, and a cut-back on employment by one worker should be offset by expending  $\text{D}150,000$  more on fixed costs, so that output be kept constant, with the obvious result of  $\text{D}50,000$  net rise in monthly total costs at the given level of production in either case.)

We all sell our product for  $\text{D}10,000$  a piece, which is the current market price of this product. (More precisely, for  $\text{D}12,000$ , but since the yet unmentioned costs of production – material, energy, etc. – are directly proportional to production, and amount to  $\text{D}2,000$  per product at any level of production, we can – and will – make our calculation simpler by subtracting these variable costs from both the selling price and the unit cost of our product.) We thus obtain  $[205 \times 10 - (10 \times 100 + 650)] \times 1000 = \text{D}400,000$  monthly profit. Of this  $\text{D}400,000$ , we regard  $\text{D}350,000$  as a fair compensation for our entrepreneurial/managerial effort, and the remaining  $\text{D}50,000$  as a fair return to our capital investment. As a matter of fact, those from among our competitors who bought the physical capital of their firms on credit must each bear this amount of monthly cost on interest as additional fixed cost, and those who rent theirs are charged  $\text{D}700,000$  per month for its use, i.e.  $\text{D}50,000$  more than our fixed costs.

*Given that, by employing 10 workers, each of our firms produces 205 products a month, how many products could they each produce by employing 11 workers?*

Should we pose this question to our upper-grade elementary school kid, who must be familiar with the mathematical rule of proportions but might be ignorant of the economic law of diminishing return, we should expect to



get the answer  $(205 \div 10) \times 11 = 225.5$ . We as experienced entrepreneurs, however, are aware of the saddening fact that increases in employment would not yield us proportionate increases in production, for at least two reasons. First, hiring additional workers would reduce the amount of physical capital per worker and, second, the larger the number of workers we employ the less effective our supervision would be, with both factors acting to worsen labour productivity. Without knowing the rate of decline in productivity that would accompany employment growth at our firms it is impossible to give an unambiguous answer to our question.

Be the right answer to our question this: If by employing 10 workers we now produce 205 products a month, then by employing an 11th we could produce (instead of 20.5 more units, as would follow from the rule of proportions) only 15 more units, that is, 220 products.

The way we arrived at this specific number can be traced from consecutive entries in column (3) – or, equivalently, in column (4) – of our table. Namely, should we employ only one worker she could produce 25 products per month (see the top entry in column (4) or column (3)); by employing two we could produce 24 more units, i.e. 49 units (see the next entries in columns (4) and (3), respectively); by employing three workers we could produce 23 more units, i.e. 72 units (see the third entries in the said columns); and so on. It then follows that our ten workers must indeed produce 205 products – 16 more than nine could –, and that eleven workers would produce yet 15 more; this is how we arrived at 220 products above as the right answer to our question. And it can be easily figured out that twelve workers would produce  $220 + 14 = 234$  products, thirteen would produce  $234 + 13 = 247$ , and so on. (Up to 325 products, which could be produced by a workforce of 25 workers. As a result of the high degree of tumult in the workplace, the employment of a 26th worker would not add to our firm's production, while hiring a 27th one would even cause it to decline, which means that we could not gain from hiring her even if she did not claim any compensation for her labour services.)

And now the next question:

*Given the going, £100,000 monthly compensation, would it not be worth the while for us to hire an 11th worker?*

The obvious answer is that, yes, it would. As was just shown, our production would thus increase by 15 units a month, yielding  $15 \times 10,000 = £150,000$  additional revenue – £50,000 in excess of the £100,000 additional labour cost that we should bear. To wit, we could register £50,000 increase in our monthly profit.

In fact, it would pay us to extend employment even further, as far as 15 workers. Indeed, the employment of a 15th worker would add  $11 \times 10,000 = \text{£}110,000$  to our monthly revenue, and would thus augment by  $110,000 - 100,000 = \text{£}10,000$  (and the employment of the 11th, 12th, 13th, 14th and 15th workers together by  $50 + 40 + 30 + 20 + 10 = \text{£}150,000$ ) our monthly profit.

Let us disregard for a moment that the going rate of compensation is  $\text{£}100,000$  a month, and rephrase our latter question this way:

*Would it also be profitable to strengthen our workforce if the going rate of compensation were somewhat higher – say,  $\text{£}115,000$  a month?*

The answer is again quite obvious. Provided that, in spite of the lower rate of profit that this higher rate of workers' compensation implies, we find that we had better stay in business (because, say, we insist on our entrepreneurial autonomy, and/or because this more modest profit is still higher than what we could expect to get as a wage labourer plus from property income), even at this  $\text{£}115,000$  rate of workers' compensation it would pay us to hire four more workers. To be sure, even the employment of a 14th worker would increase our monthly revenue by  $12 \times 10,000 = \text{£}120,000$ , i.e.,  $\text{£}5,000$  more than the amount it would add to our monthly wage bill.

Similarly, even at a rate of workers' compensation as high as  $\text{£}145,000$  a month we could increase our (then of course still lower) profit by extending employment from 10 to 11, since the employment of an 11th worker is supposed to increase our monthly revenue by more than  $\text{£}145,000$ , namely, by  $15 \times 10,000 = \text{£}150,000$ .

*How could we then justify the initial scene of our tale in which every firm in the industry, including ours, was assumed to employ only 10 workers each?*

Labour shortage may seem to be a potential explanation: as was noted at the outset, everyone who wants to be employed in this labour market at the going rate of compensation is already employed. True, but we have just seen that it would pay each of us to hire additional workers even at rates of compensation that are higher than the current rate – why do we not lure away workers from our competitors by offering more generous compensation?

It could be argued that should we all do so, the resulting higher market wage would certainly produce an inflow of workers into this labour market, but perhaps not a sufficiently large one so that each of us could hire even

one additional employee, while we should all suffer from the profit-reducing effect of the higher market wage. Or, if each one of us could hire one additional employee from the enlarged pool, then the several thousand times 15 additional products that would be supplied to the market should bring forth a fall in the market price of our product, and, again, we may all end up with lower profit.

Yet, these arguments are flawed in that they are based on the seemingly artificial assumption that several thousand competing firms act in concert in the labour market, as dictated by their collective group interest, instead of each pursuing its individual self-interest.

But if not our (voluntary or forced) compliance to the norm of collective group rationality, what else prevents us from entering into wage competition with each other, as a result of which labour shortage in this market would eventually be eliminated? Why none of us breaks the ice by posting a wage offer which is above the current market wage?

Assume that at least £5,000 a month additional compensation (above the current £100,000) is needed so that any one of us could attract at least one additional applicant – say, because for less no potential applicant would be willing to bear the psychic costs of moving to a new place of employment. But if that much is paid to the newly hired we can hardly deny her co-workers, whom we hired before, a similar pay rise. Should we try, some of them would respond by leaving our firms – either because they would see in our apparently discriminatory waging practice an insult, or would simply find it annoying to work for less than someone else around gets for the same job. As a result, we could even suffer a net loss of our workforce to our competitors, despite new hirings. We should, moreover, expect a deterioration in work moral among those of our employees who stay put.

True but, as we realized before, it would be worth it to hire new workers even if our workers should be paid uniformly £105,000 a month. The question thus arises:

*Why should not we hire an 11th worker for £105,000 a month and simultaneously raise the compensation of the rest of our workers to this level as well?*

The obvious reason is that in this case the hiring of an 11th worker would cost us  $(105 + 10 \times 5) \times 1000 = £155,000$  a month, as against £150,000 that it would add to our revenue. That is, instead of making additional profit, we would deprive ourselves of £5,000 prospective monthly profit. And we cannot know it for sure whether or not this loss of profit would be offset by the performance-enhancing effect of our workers' temporarily above-the-

market level of compensation. This is how we – as well as our competitors – may come, without any respect for collective group interest, to the conclusion that it is wiser not to break the ice. Which, in turn, implies that the market may in this case throw up its invisible hands in despair: although each one of us would want to increase employment – that is, there exists a substantial amount of excess demand for labour in this market –, spontaneous market forces may fail to generate an upward adjustment in the current market rate of workers' compensation.

*And how would we respond in this case if one morning we were noticed by our workers that they have become unionized and they urge us to raise their monthly compensation from £100,000 to £105,000?*

At first, perhaps, we would be angered by the prospect of the loss of profit that we should suffer if we meet our workers' wage demand, and conclude that we should resist. Why on earth shall we pay our workers more than what they could earn elsewhere, i.e., more than our fellow-entrepreneurs pay their workers? Still and all, after due consideration, we should choose to surrender – why?

Of course not because we are tortured by remorse at exploiting our workers, and want to unburden our conscience by surrendering. True, as was pointed out above, as long as the going market rate of compensation is £100,000, none of us will hire an 11th worker for £105,000 unless it results in at least marginally more than £155,000 additional revenue, which implies quite a high (close to 50%) rate of exploitation. But we can easily compromise with our conscience by reminding ourselves that the surplus from exploitation will in this case finance a rise in the monthly pay of our existing ten workers.

Instead, we would (unwillingly) meet the union's wage-demand from sheer opportunism. Namely, we must take it into account that since our workers can easily find jobs that pay £100,000 a month elsewhere, they could hardly be deterred by a threat of dismissal. Should we still resist, some of them may quit voluntarily as a revenge for our tight-fistedness, and – as was also pointed out above – we should offer at least £105,000 monthly compensation to find replacement anyway. And we cannot gain by carrying out a threat of dismissal either, for the same reason.

Recall that at any rate of monthly compensation between £100,000 and (less than) £110,000 we could maximize our profit by hiring five new workers. Now that the monthly rate of compensation at our firm has risen to £105,000 it is long odds that we will indeed soon find at least one to hire. Retrospectively, we ought to bless the hour when we tempered our

anger, and did not respond to our workers' collective wage-claim by threatening them with dismissal, since by hiring an 11th worker we should now risk our credibility.

Soon it will be talked about all over the place that we pay our workers more generously than our competitors pay theirs, and having understood that, new applicants will drop in. To the extent that some of them are hired, it will also become known that the higher price of labour that the union imposed upon our firm has not backfired, in the form of job loss – on the contrary: new hires have resulted. More and more workers elsewhere will thus feel encouraged to organize, and/or will be granted a pay rise by their employers, anxious to preserve their attractive force in the labour market, even lack of local union pressure. That is, a growing part of firms and workers in our industry may experience a simultaneous increase in wages and employment.

With the higher rate of compensation becoming more and more widespread in the market, our workers may one day come forward with a more ambitious wage-claim, setting in motion another industry-wide wave of wage growth and – as long as more workers are induced to enter the market – simultaneous employment growth thereby, and so on. Sooner or later, however, wages will exceed their equilibrium level, and employment will fall. (To be sure, a rate of compensation above £160,000 a month, even when combined with the current, £10,000 market price of our product, would induce all firms in our industry to shed part of their workforce – as can be easily checked by consulting with column (9) of our table –, and, with expanding production, the market price of our product must fall.) Falling employment will then simultaneously discipline unions' excessive wage-claims and increase employers' resistance against such claims. If that is the case, unions' visible hands, although (not unlike invisible hands of efficient markets) with the eventuality of overshooting, serve as means of pushing an otherwise upwardly inflexible rate of compensation towards, rather than above, the equilibrium level.

\*

Let us interrupt our tale at this point, and ask the following question:

*How typical is the above view on unions' wage and employment effects among labour economists, and to what extent does it conform to reality?*

Curiously enough, most labour economists would perhaps flout this view, and would rather favour one or more of the following alternative views, even though those alternative views seemingly run counter to both common sense and factual evidence in several respects.

*View 1* – In the most simple and most favoured view, trade unions as monopolistic organisations ready to forego jobs for wage gain use their monopolistic power to push wages above equilibrium levels, and, given that the quantity demanded of labour is negatively related to the price of labour, they thus tend to reduce employment.

*View 2* – In a more refined view, unions also serve as means of workers' collective voice, and in their latter capacity they may be instrumental in improving labour productivity – through, e.g., reducing dissatisfaction-induced labour turnover. Higher productivity may in turn partly offset the employment-reducing effect of union wage gains.

*View 3* – Beside their productivity-enhancing potential, a further factor that may curb unions' employment-reducing effect is pointed out by advocates of so-called efficient contract models, where negotiations between unions and employers are assumed to be over Pareto-efficient wage/employment combinations. In this setting, off-the-demand-curve wage/employment combinations, representing pairs of higher-than-competitive levels of wages and higher-than-competitive levels of employment, can result as Nash-equilibrium outcomes.

*In what respects are the above views contradictory to reason and at odds with experience?*

*Objection 1* – Note that both view 1 and view 3 take competitive outcomes as points of reference in evaluating unions' wage and employment effects. Now, if labour markets were indeed competitive in the absence of trade unions then it is hard to give economically sensible reasons for why anti-monopoly legislation must turn a blind eye to the exercise of unions' monopolistic power. If, on the other hand, labour markets were not competitive in the absence of unions, then it is hard to give reasons for why one should take competitive outcomes as points of reference when evaluating unions' impacts.

*Objection 2* – No less controversial is the assumption, shared by (and crucial in) all three views, that unions willingly trade off employment opportunities for wage gains. It is based on a false syllogism: to the extent that unions are conceived as monopolistic sellers of labour, they must find it in their interest to sell less if they can thus charge higher-enough prices – just like monopolistic firms will. It is false because, in

contrast to monopolistic firms, what unions sell – their members' labour power – is owned by their members as principals, who pay a fee for this service. To assume that unions as agents are ready to make such trade-offs is logically equivalent to assuming that they eagerly betray part of their principals for the sake of the rest of their principals at any time – quite a strange creed for a trade union to adopt (or to attribute to trade unions). Should they adopt that creed, they could hardly find principals (members) to betray.

*Objection 3* – For a labour market to be competitive, it is essential that employees (unlike workers in our tale) could costlessly change employer. Now, to the extent it is indeed costless for them to change employer, unions can hardly hope to assume and exercise monopolistic power vis-à-vis employers, and achieve wage gains for their members, in the presence of non-unionized workers competing for scarce employment opportunities – except at high rates of unionization. Under the condition of costless mobility, however, high rates of unionization are hardly attainable.

*Objection 4* – Objection 3 tacitly assumes that employers can costlessly replace current employees by newly hired ones, which is a further condition for a labour market to be competitive anyway. The contrary assumption – i.e., that labour turnover is costly for employers – would, on the other hand, mean that even without unionization workers possess monopoly power vis-à-vis their employers, which would endow Objection 1 with particular relevance.

*Objection 5* – Our table suggests that should we cut down on our workforce from the current ten to, say, nine or eight workers, we could register an increase in our labour productivity (monthly production per employee) from the current 20.5 to 21.0 or 21.5, respectively. (Should we retrench our workforce in view of an external rise in the rate of workers' compensation, bigger increases in labour productivity should result, provided that we substitute physical capital for part of the now relatively more expensive labour.) Granting this, View 1, which attributes employment-reducing effects to unions, does not abide the crucial empirical test that unions should exhibit productivity-enhancing effects as well.

*Objection 6* – To the extent that unions do reduce workers' voluntary quits, as is assumed in View 2, they may do so partly by making quits relatively more costly an option. If this is the case, then, in terms of Objections 1 and 3, an evaluation of unions' wage and employment effects that takes competitive outcomes as points of reference is flawed

even if labour markets were competitive in the absence of unions. Besides, it is controversial whether it is indeed the presence of unions that explains lower rates of quits – as View 2 suggests –, or causality runs the other way, i.e., higher costs of changing employment encourage unionization – as is suggested by our tale. Recall that in the final analysis it was these costs that enabled workers in our tale to achieve simultaneous wage and employment growth via unionization. No less important, it is far from clear in View 2 why the role unions are claimed to play in enhancing productivity is not, instead, played by employer-initiated forms of workers' participation in decision-making.

*Objection 7* – Finally, as for View 3, to assume that collective bargaining is not confined to bargaining over wage rates but is widened to include bargaining over employment as well, and to demonstrate that in such setting collective bargaining may result in simultaneous wage and employment gains, this course of reasoning is seemingly artificial, for it leaves information asymmetries inherent in union-employer relationships out of consideration. To wit, in a setting where bargaining is confined to bargaining over wage rates, as is assumed in right-to-manage models of collective bargaining in Views 1 and 2, risk-averse employers will not initiate a renegotiation of the agreed wage rates on account of an unexpected bad turn of events unless, in case the initiation is rejected, they are ready to prove by dismissals that events have, in fact, taken a bad turn. Moral hazard on the part of employers, falsely accusing contingencies as cause for renegotiation, is thus automatically mitigated. By contrast, in a setting where bargaining is widened to include employment as well, as is assumed in efficient-contract models, even risk-averse employers are always tempted to initiate renegotiation, since with an efficient contract obligating them to employ redundant workers, they can always gain from dismissals. This latter setting is thus hardly more than a fiction, although an instructive one for thought experiments.

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Recall that, prior to the above detour, trade unions in our tale, in their symbiosis with our capitalist firms, served as visible hands acting to push an otherwise upwardly inflexible rate of compensation towards, rather than above, the equilibrium level, although (not unlike invisible hands of efficient markets) with the eventuality of overshooting. Let us now resume



the tale by putting the clock as far back as the day when we are noticed by our ten workers that they have formed a union, and they demand higher wages.

*What would we do if, instead of presenting us an ultimatum, they present us a choice of either granting them £5,000 immediate pay rise, or they will become their own masters: what they now do for us, as our employees, will do for themselves, as working members of a producer co-operative that they are ready to establish.*

We are offered a deal of selling them our firm's physical capital, which they would pay for either from credit or in installments, or of renting it to them if we prefer, and of our managing their cooperative firm for £350,000 monthly compensation, i.e., for the same amount of pay that we now earn. Also, they let us know that they would form their co-operative together with four more fellow-workers, who are now employed at other firms, for they have figured out – in accord with entries in column (14) of our table – that it is at this size of membership where average income per member would peak, and reach £110,000 a month. Yet, they are confident that they would in fact earn 10 percent more than that, i.e., £121,000 a month, for they believe that under conditions of a co-operative it would pay them to keep up a stiffer pace of work.

Although we find nothing objectionable in either their argumentation or the proposed managerial compensation (let alone the invitation itself), had they made their offer yesterday or before, we might have turned it down. Were cooperative firm just as viable an organizational form as capitalist firm, why would the latter have become so predominant all over the world? But we are now under the influence of today's news that one of our competitors was noticed this morning that his workers had formed a union, and he now has no other choice but to raise his workers' monthly compensation from £100,000 to £105,000. And he should be glad if he can soon find an additional employee at this new rate of compensation, and end up with £5,000 a month modest damage. (Compare 400 in column (10) to 395 right below it.) Unlike our unlucky fellow-entrepreneur, a salaried manager of a cooperative firm need not be afraid of sudden falls in remuneration for his managerial efforts, due to union wage-claims. So, we answer in the affirmative, and suppress our misgivings concerning the viability of cooperative enterprise by attributing its subordinate economic position to the difficulties producer co-operatives face in financing entry into more capital-intensive, core industries.

Under our leadership the co-operative has been functioning smoothly, with the founding 14 working members and with the projected results, for

several months. We may thank our stars we took the opportunity and converted from firm owner into salaried manager. The more so since during these months spreading unionization has brought in its train huge losses of profits to those who still own their firms.

Too good to be true: thanks to a sudden increase in market demand, the price of our product has risen from £10,000 to as high as £12,000 this morning, and we have reasons to believe that this increase in demand will not be transient. True, it does not have an immediate impact on our managerial compensation, for we are employed at a fixed salary. Nevertheless, we look to our cooperative members to cast us a bone. After all, with this 20 percent increase in the market price of our product, the average income of our members will go up by significantly more than 20 percent: from £110,000 a month to £147,000 – compare corresponding figures in columns (14) and (15). (Or, from £121,000 to £161,700 if they indeed work so much more effectively as cooperative members as they initially calculated.)

More importantly perhaps, our instinct guides us to respond to the higher market price by admitting new members – a capitalist owner would surely respond to this new market price by strengthening his firm's workforce. (Pairwise comparisons of corresponding figures in columns (9) and (12) will make it clear that profit-maximization would indeed dictate him to employ more workers at the new market price at any wage rate – at £120,000, for instance, to employ 15 workers instead of 13.) And our salary was agreed upon on the premise of a fixed membership.

*Provided that the unit price of our product remains £12,000, what are the odds that we will sooner or later succeed in exacting a pay rise in return to managing an enlarged membership?*

Let us not build castles in the air: as a result of the new, higher market price, the optimum size of membership, at which income per member is maximized, is now smaller, not larger, for our co-operative firm than it used to be – namely: 13, instead of 14 working members. (Compare the positions of the highest, bold-type figures in columns (14) and (15).) Consequently, instead of looking forward to an enlarged membership, we had better be prepared to an erosion of membership – and realize that, surrounded with capitalist firms, which do normally respond to a price rise by expanding employment, we should lose in market share even with an unchanged membership.

Facing this prospect, we may now wonder whether we backed the wrong horse when, for fear of unions, we suppressed our bad forebodings

concerning the viability of cooperative business enterprise, and exchanged our position of the owner/manager of a capitalist firm for that of a salaried manager at a cooperative firm.

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Our ahistorical scholastic tale concludes here. It shows the moral that:

- trade unions, in their symbiosis with capitalist firms, may further rather than distort price-mediated self-regulation in the labour market via their involvement in wage-setting,
- whereas producer co-operatives, although they might seem to represent a close collateral of a fully unionized capitalist firm, are fundamentally at variance with the logic of market self-regulation, in that they tend to respond to an increase in demand by restraining supply,
- with the consequence that they cannot even in principle be an alternative to unionized capitalist firms, at least on a mass scale, unless, perhaps, combined with either the adoption of administrative price control or the involvement of some kind of consumers' „unions" in price-setting.

Yet, this contraposition is not meant to imply that trade unions are an unmixed blessing, and producer co-operatives are limbs of the devil.

- Unions of the kind that appear in our tale, i.e., ones that represent workers of a firm or of a group of firms, also produce consequences that clash with allocative efficiency – by, e.g., forcing employers to adopt work rules and staffing rules that interfere with cost minimization –, let alone the inherent supply-restraining role of unionization along occupational lines. There is no rose without thorn.
- As for cooperative firms, they exemplify that, by contrast, every cloud has a silver lining: it is exactly their „perverse" supply behaviour that may make them, as representatives of a subordinate species, a useful shock absorber in a market economy dominated by capitalist firms – let alone their often-referred motivational advantages over their capitalist counterparts.

## EPILOGUE

Those who are well-schooled in labour economics must have realized that capitalist firms in our tale were portrayed as peculiar labour market monopsonies, facing short-run labour supply curves that are horizontal at the going wage rate for levels of employment equal to or below their

current levels, then jump up at these levels, and slope upward thereafter, due to the (psychic or other) costs workers at the margin incur if they change employment. With such monopsonistic capitalist employers on the demand side, market forces may fail to generate an upward adjustment of wages that could eliminate excess demand for labour.

Monopsony models of the labour market have a long history in the analysis of the impacts of minimum wage legislations – see, e.g., Stigler [1946] as an early example, and Card and Krueger [1995] as a relatively recent (and hotly debated) one. Curiously enough, far less attention has been paid to these models in the analysis of the impacts of union involvement in wage setting. This is all the more surprising as there are well-elaborated models to choose from – see particularly Burdett and Mortensen [1998], where existence of employers' monopsonistic power is derived from labour market frictions – as well as anomalous empirical findings that call for their adoption – see particularly unions' ambiguous productivity effects found by, e.g., Hirsch and Addison [1986] for the US or Metcalf [1988] for Britain.

It is symptomatic that in Pencavel's [1991] book on the labour market impacts of trade unionism no mention is made of labour market monopsony, and in Boal and Ransom's [1997] paper on labour market monopsony no mention is made of trade unionism. Even where union involvement in wage setting is put into the context of monopsonized labour markets, like in, e.g., Fearn [1981] or Manning [2004], it is mostly done in passing (in one single paragraph, on page 208, in Fearn's book and also in one paragraph, on page 155, in Manning's paper).

Inverse supply (employment) response to higher product price as a peculiarity of cooperative enterprise, which was also pinpointed in our tale, is a long-established theoretical finding as well – see, e.g., Ward [1958] and Domar [1966]. As a matter of curiosity, note that medieval craft guilds are conceived in Gustafsson [1991] as early versions of co-operative enterprise exhibiting this same peculiarity. In his interpretation, it was primarily this peculiarity which necessitated the adoption of administrative price control in medieval cities, and led to the historic defeat of craft guilds with the advent of capitalist enterprise. To my knowledge, the relevant literature has not addressed the question of whether this same peculiarity of co-operative enterprise might play a positive role in mitigating business-cycle fluctuations in a full-blown capitalist market economy.

It is instructive to note that, inspired by empirical findings presented in Addison and Siebert [1979], chapter 5, section 4 and Ben-Nem [1987], as well as on theoretical grounds, Mikami [2003] comes to the conclusion that

conditions of monopsonistic local labour markets might be conducive to the formation of producer co-operatives. This suggests that the formation of unions and the formation of co-operatives may indeed be seen the way they were seen in our tale: as alternative courses of collectively rational action for workers facing with monopsonistic employers.

Due attention should be paid, however, to the paradox that collective interests of members of a group will not necessarily move individual members to act accordingly, as is well known since Olson [1965]. This paradox implies that recognition of the possibility to achieve simultaneous growth in wages and employment via unionization will not automatically lead to high rates of unionization, particularly with gains from unionization to be shared with non-members as well. Similarly, perception of the prospective benefits of forming a co-operative does not guarantee that individual workers will find it in their self-interest to do their share in forming it, just as cooperative members' collective interest in high work moral will not necessarily translate into high on-the-job efforts. The question of how pure self-interest may induce a significant part of workers to willingly incur the costs of unionization rather than to free-ride is addressed and given a hypothetical answer – one that starts from workers' diverging interests rather than their common interest – in Myles [2001]. Questions of how far cooperative firm may induce its members to act in their collective group interest, and of what aspects of cooperative and capitalist firms – including problems of monitoring and incentives; portfolio diversification by workers; workers' wealth constraints and access to credit; collective decision-making, etc. – may explain the predominance of the latter form of business organization in today's developed market economies, are addressed in Nilsson [2001] and Dow and Putterman [2000], respectively.

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## APPENDIX: Fictitious firm-level data

[illegible]



