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SUPPLEMENT TO "RELATIONAL CONTRACTS: PUBLIC VERSUS PRIVATE SAVINGS"

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THIS ONLINE APPENDIX discusses anecdotal evidence of the importance of implicit agreements on high consumption levels in employment and other relationships. The findings in the observable consumption case (see Section 5) may shed light on the role of high consumption in these instances.

The results of the paper establish that the principal benefits from a relationship with high consumption, as low savings prevent it from deteriorating in the future. As mentioned in the paper, Henderson and Spindler (2004) have provided various examples of how high consumption seems to be induced in practice, permitting more effective incentive provision. We review here their examples and suggest some of our own.

Henderson and Spindler (2004) argue that firms seek to reduce the savings especially of top employees through "payment-in-kind (perks), deferred compensation (corporate loans), and the encouragement of employees' conspicuous consumption" (p. 1835). They argue that these tools are being used precisely to resolve agency problems: "Employees who reduce savings are more reliable over the long term than employees who do not, since reduced savings makes employees more dependent on remaining employed into the future" (p. 1835). Therefore, high consumption can serve a useful purpose in the agency relationship with senior management and it is not necessarily the case that high perks are simply a sign of corporate excess and poor governance.

While our theory can also explain the use of perks or corporate loans to encourage dependency, the model provided in our paper most directly captures the encouragement of conspicuous consumption.[1] Henderson and Spindler (2004) argue precisely that high consumption expenditures may be an implicit requirement of an employer. They argue: "Contrary to the conventional wisdom that agents wear expensive clothes and drive fancy cars in order to impress principals, it may well be that principals *require* their agents to engage in such consumption, because spending money on these items increases an agent's reliance upon the future relationship with her principal" (p. 1869).

To develop their argument, Henderson and Spindler (2004) note ideas such as in Fournier (1991) that "products can help in the creation and management of identities at the group and society levels [...] by serving as unambiguous announcements of role and position" (p. 14). This suggests that the acquisition of certain types of goods can seem

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[1]Our findings suggest that, if consumption is otherwise hidden, the principal could benefit by paying the agent partly in kind (perks), effectively forcing the agent to consume. Also, loans to the employee could relax borrowing constraints to allow the employee to consume at a higher level.

close to being necessary for maintaining a certain role or position in a firm;[2] Henderson and Spindler argue that such a perception can benefit the firm by preventing top employees from accumulating wealth. Among their examples are the cars driven by corporate employees: "BMW makes a line of automobiles of gradated expense that are meant to be marketed to those at various stages of the corporate ladder; entry-level employees in the "executive segment" are meant to purchase, of course, "entry level" BMWs. Or there may be certain posh suburbs, expensive restaurants, or fashion designers that an employee is expected to spend her money on" (p. 1869). Another of their examples is historical, coming from Louis XIV of France: "Louis adopted extravagantly expensive fashions, which his courtiers were expected to emulate. The courtiers thus spent all of their money on these fashions and became entirely dependent upon Louis' allowance to them. In that case, as in the above examples, the employee destroys value through extravagant and wasteful consumption, which serves to bind herself to the firm (or sovereign, as the case may be)" (p. 1870). The case of Enron is then compared to Louis XIV in providing an example of corporate culture of high spending developed through leadership: Chairman Ken Lay and CEO Jeff Skilling "created a "culture of excess" that, according to one executive, "could spoil you pretty well." Lay and Skilling drove fancy cars and built mansions in Aspen, Colorado, and tiny Houston neighborhoods. Their minions followed suit.... According to the special report prepared by the Board of Directors after Enron was wiped out, Enron's senior leadership created a culture of spending to excess that permeated the ranks of top executives..." (p. 1870). Henderson and Spindler thus argue that even the infamous case of Enron can prove their point.

To add our own examples, similar ideas may apply to supply relationships between small firms and large procurers. A possible case in point relates to the US poultry industry, where chicken farmers supply to a few large firms that dominate the industry. An article at *The Guardian* illustrates what it sees as a common situation through the example of a farmer that contracted with chicken producer Tyson Foods.[3] The farmer in question entered an exclusive agreement with Tyson. After some time, Tyson began demanding additional expenditures on equipment such as extra feed bins and chicken houses the farmer believed unnecessary. The farmer commented: "If we are independent contractors, then why does the company have the right to tell us what equipment to use?" After the farmer failed to comply with the demands, the relationship deteriorated, and in the end, it was terminated. The connection to our theory is that Tyson asked for expenditures by the farmer that (according to the farmer) were to a degree superfluous, but as in our theory could have served the purpose of making him financially dependent. In fact, another farmer in the article commented precisely that such financial dependence is the producers' objective: "As long as they keep us in debt we have to keep raising their chickens. They don't want farmers to pay off their farms."

Still a further example of an institution encouraging high employee consumption and low savings is the "trucking system" that operated for instance in eighteenth and nineteenth century Britain. According to Hilton (1957), "in the nineteenth century, the truck system consisted mainly of compulsion to deal with the employer's grocery store at risk of reprimand or discharge" (p. 237). The requirement to shop at the company store was

[2]The view that established norms may require high spending is similar to an observation of Postlewaite (1998). He argues that excessive consumption might be sustained due to a need to meet cultural norms rather than necessarily being a result of signaling.

[3]See "Fowl play: The chicken farmers being bullied by big poultry," by Alison Moodie, published at *The Guardian* on April 22, 2017. https://www.theguardian.com/sustainable-business/2017/apr/22/chicken-farmers-big-poultry-rules.

typically only backed by an implicit threat. As Bailey (1859) writes about the typical worker under the system: "He is not obliged to go to the tommy-shop or the butty collier's drinking-shop,—of course not,—none of the workmen ever were; it is of their own choice to go there,—choice between that and having no work to do" (p. 17). As for the principal's optimal contract in our model, failure to consume at the specified level is associated with an implicit threat of termination. Bailey also describes the impoverishment of workers under this system. While the conventional explanation of the system is the expropriation of profits through elevated prices of goods, our theory suggests the impoverishment of the worker through the demand of a certain level of consumption could be a benefit in itself. The idea of impoverishment and dependence is perhaps best captured by the song Sixteen Tons by Merle Travis, first recorded in 1946, about a coal miner:

You load sixteen tons, what do you get?
Another day older and deeper in debt
St. Peter, don't you call me 'cause I can't go
I owe my soul to the company store

REFERENCES

BAILEY, DAVID (1859): *The Truck System: A Book for Masters and Workmen*. Fred Pitman. [3]

FOURNIER, SUSAN (1991): "A Meaning-Based Framework for the Study of Consumer-Object Relations," *Advances in Consumer Research*, 18, 736–742. [1]

HENDERSON, M. TODD, AND JAMES C. SPINDLER (2004): "Corporate Heroin: A Defense of Perks, Executive Loans, and Conspicuous Consumption," *Georgetown Law Journal*, 93, 1835–1883. [1,2]

HILTON, GEORGE W. (1957): "The British Truck System in the Nineteenth Century," *Journal of Political Economy*, 65, 237–256. [2]

POSTLEWAITE, ANDREW (1998): "The Social Basis of Interdependent Preferences," *European Economic Review*, 42, 779–800. [2]

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