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Reply to James Heintz

Bill Gibson

My thanks to James Heintz for his detailed and perceptive comments. He has framed the issues around the monitoring of labor standards clearly, especially his summary of their "unintended consequences." This suggests, perhaps even more strongly, that a comprehensive, macroeconomic analysis, tracing as many feedback mechanisms as possible, is the proper way to analyze these issues.

Heintz's comments consist of two major points, one on endogenous preferences and the other on global commodity chains. He makes many valuable observations on both. Under the rubric of the first point, Heintz suggests that the number of "conscious consumers," K, ought not be taken as a fixed and given parameter of the model. Using Hirschman's distinction between values and tastes, he argues that if values were endogenous, this would change the dynamic around the size of the market share and the amount of monitoring firms undertake.

This is a valid point, but it should be noted that the number of conscious consumers is already endogenous in the model, at least in part. As in the original Phelps and Winter analysis, consumers are attracted to the monitoring firm by a process of observation and "comparing notes." This is why the market share is assumed to take a sigmoid shape in the mathematical representation. Consumers with similar values bump into one another, "spreading the word" about the processes by which the goods they buy are made. This conversation may imply a bit of proselytizing, as consumers both impart information and convince themselves that buying a monitored product is indeed worth the extra money. Neither is the model hostile to "snob appeal" or any other motive or mechanism operating behind the scenes that would cause consumers to "pony up" the extra cash to pay for better working conditions abroad.

What, then, of K? Must we add another equation to the model to trace its evolution over time? This is certainly feasible within the simulation

methodology, and could be done with very little effort. It might be just as well, however, to define *K* more precisely as those "consumers who could be convinced to care about process, within the time frame of the model." Some residual complement of *K* most probably exists, those consumers who care only about tastes; and the logistic curve already takes into account these holdout consumers.

Here's how it works. Initially, the market share of the monitoring firm is small. Consider a consumer in the complement of *K*. There is a deafening amount of advertising about every commodity on the market with which our consumer must contend. Most firms try to attract consumers on the basis of tastes, but some information is also available with respect to values, or the processes by which the goods are produced. Consumers successfully filter out untrustworthy and unintelligible information until they encounter some other consumer who begins to inform/convince our consumer to switch brands. If there is no reason, other than tastes, the process will be random and the market share of monitoring firms relative to that of unmonitored firms will remain constant. Bias creeps in if there is an underlying reason why our consumer should, in fact, switch to the monitored product. The effect accumulates at an increasing rate below the inflection point of the logistic curve. The effect begins to taper off above the inflection point, however, because it becomes more difficult to find conscious consumers who are not already part of the market share. It might also take more effort to convert consumers beyond this point, perhaps because they are skeptical. If these consumers effectively resist conversion through the relevant period, then the model takes them as members of the complement of *K*.

The question of global commodity chains is more complex and cannot be defined away as easily. Heintz is correct to point out the principal-agent problem that exists between multinationals with name recognition and their subcontractors in developing countries. He is also correct to note that this institutional detail is swept under the rug in my formal model. The model treats the multinational firm as local and effectively aggregates across all countries in which the firm is active. This is no doubt a sweeping simplification.

What would a richer model look like? It is not difficult to imagine. A multinational firm subcontracting in several different countries would have to take into account the local macroeconomic conditions in each of the countries in which its subcontractors are resident. One of the main implications of the model is that microeconomically determined optimal paths may encounter macroeconomic constraints. Optimal processes often exhibit "bang-bang" controls, in which the control variable rises to its maximum value for some sub-period and then falls to its minimum. Firms may, for example, increase expenditure to very high levels, dramatically improving working conditions, only to then turn off the expenditure, letting

working conditions deteriorate again. ~~The paper~~ shows that once embedded in a realistic model for the rest of the economy, the "bang-bang" characteristic disappears and an interior solution emerges. The optimal process is constrained by the structural features of the domestic economy - and in particular, capacity utilization in the nontraded goods sector - as discussed in ~~my original~~ chapter.

It follows that if the multinational firm is small relative to the rest of the world, the micro-macro interaction is less relevant. This is likely to be the case, since once constraints on the firm's optimal choices begin to bind, there is an obvious solution: move the operation to a more congenial environment, in another country or continent. On the other hand, as the number of commodities for which consumers care about the production process rises, the impact on the local economy would rise in tandem. Once local macro constraints begin to bind and there are no other escape options, the model of ~~"Monitoring Labor Standards in a Macroeconomic Context"~~ again becomes relevant. China, ~~of course, is~~ an enormous well of cheap labor. To the extent that firms relocate in China, the macroeconomic constraints on monitoring may well be ameliorated. Experiments with the model show that monitoring in an unconstrained environment is more intense, but lasts for a shorter time. Hence, to the extent that macro constraints evaporate with capital mobility, monitoring of labor standards is even less likely.