1. Introduction.

The Soviet Union and other Communist countries have been notorious for the low quality of commodities and services that they produced.\(^2\) The literature on planning (for example Hayek (1945), Kornai (1992)) offers a number of explanations for this phenomenon. Common to them is the claim that the incentive and information structures in planned economies are incompatible with efficiency, and thus they produce low quality goods. Inefficiency, however, does not necessarily mean low quality; indeed, inefficiency might manifest itself in quality that is “too high.” In this paper I offer a distinct efficiency explanation for the observed low quality. To a substantial degree, this explanation also applies to government production and procurement in market economies.

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\(^1\) I wish to thank Haideh Salehi-Estafanifor her comments.  
\(^2\) Kornai (1992, pp. 307-310), provides specific examples of low quality commodities and services.
In market economies, private producers’ reputation backs their high quality commodities or commodity attributes. I argue that given the suppression of profits in planned economies, planners undersupplied quality because they were unable to create the appropriate incentives needed to deploy reputation for guaranteeing it. Governments in market economies face similar problems in producing and procuring high quality commodities. But as they are embedded in markets, they are able to escape some of the effects that planned economies are subject to.

Buyers use objective criteria to evaluate some of the commodity attributes they purchase, and subjective criteria to evaluate others. In market economies, state-enforced contracts are usually used to guarantee attributes evaluated by objective criteria. When an attribute falls short of the contractual specifications, buyers can demonstrate that fact. In case of dispute, the courts can assess the loss and award the buyers the appropriate compensation for overpaying for the product. Buyers that evaluate attributes subjectively know how they feel about them, but they cannot objectively document such sensations. Therefore, such attributes cannot be contractually stipulated and guaranteed effectively. Market sellers, however, can use their reputation to guarantee the subjectively evaluated attributes. My basic argument is that under government production, which includes state-planned
production, commodities and services will consist almost entirely of the contractually guaranteed attributes. These commodities will not be provided with much reputational attributes, which accounts for the low quality of commodities produced by governments.

I use the distinction between attributes guaranteed by contract and those guaranteed by reputation to define “standard” and “high quality” commodities. I define “standard” quality commodities as commodities guaranteed entirely by contract. The attributes of a commodity guaranteed by reputation are what turn it into what I call, a “high quality” commodity, seemingly in accord with the common usage of the term.³ “High quality” does not necessarily mean “expensive,” only an improvement over the standard commodity. As argued below, the content of standard and high quality attributes is not fixed, as opportunities are available for shifting attributes from one category into the other.

I now briefly present the well-understood case of the use of reputation to guarantee subjectively measured attributes or commodities (Klein and Leffler, 1981). Suppose that some of the advertised attributes of a commodity a seller offers for sale cannot be measured objectively. Although

³ The quality of a commodity surely also depends on its standard attributes, but I think that the way the term is used justifies the distinction in the main text.
promised, we do not expect the seller to agree to compensate buyers for shortfalls in these attributes. Had he agreed to do so, buyers could have claimed shortfalls whether or not they occurred, and such claims could not be refuted. A seller, however, may be able to persuade buyers to buy the commodities if he can credibly show that whereas they would not be compensated if cheated, he would lose from cheating.

Consider a reputable seller who charges a premium over and above his cost for a high quality commodity he is selling. When buyers perceive that the quality of the commodity is not truly high, they will stop dealing with him and he will be deprived of the future premiums. Somewhat more formally, suppose that Commodities B and C are available in the market. C’s seller claims that C contains both the attributes that B has as well as those of B’, where B’ is a vector of subjective attributes. He prices C such that P(C) exceeds P(B) by an amount that covers the cost of the extra attributes as well as the Klein-Leffler premium. As long as C actually contains B’, some buyers may find C a better buy than B. If C does not contain B’, however, B is a better buy for them (and for others). When the loss C’s seller would sustain from foregoing the stream of premiums on its future sale exceeds the one time gain from providing the sub-par product B, he will include B’ in his
commodity. A large enough stream of the (Klein-Leffler) premiums will keep him honest, then.

2. The state’s dilemma in providing reputational guarantees.

Whereas in market economies many workers are self employed and many others are partly remunerated by bonuses, all government workers, from the lowliest to the highest are employees, are rewarded by wages or by the piece. Wage or piece rate workers are not the primary residual claimants of the quality of their products. I argue that as such, employees lack the incentives required for guaranteeing quality.

Guaranteeing, whether by reputation or by contract requires the guarantor to become the residual claimant to his actions. The courts enforce contractual guarantees, and thus force the guarantor to bear the consequences of the contractual component of his actions. The courts cannot effectively enforce promises backed by reputation since objective evidence for these is unavailable. For his guarantee to be credible, the reputational guarantor must demonstrate that he will do what he promised. I. e. that he will assume the residual claimancy and bear the consequences of his action; otherwise he would lose when not providing the promised quality.

Turning to government production, buyers of its products would like it to guarantee them. A prior condition for such a guarantee, then, is that the
appropriate government employee, or the unit employing him, will assume responsibility for the quality (and of course quantity) of the product and become the residual claimants to their action. The unit employing the employee, however, would not back him up because it consists of supervisors who are also employees, and would not bear their own, or their employees’ residual claim. The employee, then, must become the direct residual claimant. But this would alter his status from employee to an independent, profit-seeking worker. Whereas there is nothing wrong with shifting the operation of such an employee to the market, the emerging arrangement ceases to be government operation.⁴

Consider, for instance, a steak restaurant run by an employed manager. Two steak attributes are weight and taste. Weight can be readily measured objectively whereas measuring taste is subjective. An employed manager, backed by his organization’s capital, is capable of contractually guaranteeing that a steak he prepares weighs, say, no less than eight ounces. However, he cannot guarantee that it will taste good unless he exposes himself to losses if he does not deliver. But such exposure would make him the residual claimant to the taste attribute. Becoming a residual claimant

⁴ Later in this section I consider the possibilities that employees would become partial residual claimants, and that the ultimate employer will assume that role.
means that he is not an employee any more, and neither is the restaurant, then, a government enterprise.

To gain further insight about the incentives needed to produce goods with subjectively evaluated attributes, consider a patron who orders a steak in the state-run restaurant. Suppose that he judges that the steak did not taste as good as he was led to expect. In spite of his disappointment, he is unlikely to be compensated, however. The restaurant’s manager would not gain from returning his money because the patron cannot properly document his complaint, and a documented complaint is the only basis by which the manager can be compelled to compensate him. The patron may switch in the future to another restaurant. This, however, does not harm the manager of the first restaurant as he is rewarded by a wage and not by the restaurant’s revenues or profits. The incentive of the second restaurant’s manager to provide good service is no greater than of the first. Indeed, the same manager could well manage the two, or alternatively, the same government bureau might employ the two managers. It seems that under the stated constraints, no action is available to the patron that would compensate him for the low quality steak nor generate a good tasting one in the future. Since the patron does not gain from placing a complaint, the planner cannot expect to even be informed about the quality of the service.
In a market economy, on the other hand, the patron’s threat to turn to another restaurant tends to be credible. To start with, the patron expects a good tasting steak at the second restaurant as its owner, by charging a quality premium backed by his brand name can credibly promise to furnish good service. The owner of the first similarly stands to lose the premiums from losing the patron’s future business. Thus, in the market, through the deployment of reputation, commodities and services can be produced that would not be produced by government.


The question arises whether it is inevitable that government production (as well as government procurement) would be entirely by contract, or could it develop its own reputation as well as rely on vendors’ reputation when making purchases in the market. I argue that the government may take advantage of reputation, but its cost of doing so is higher than for similar transactions in the market. The main reason for that is the problem of graft or of bribery. The attempt to back high quality attributes by reputation opens the door for bribes. As it is difficult to demonstrate that the high quality attributes were not actually produced it is difficult to identify and to punish those who claim of producing high quality but not delivering it. That would be true in market transactions also, but there, by
making workers residual claimants, they will profit from producing high quality, and so will tend to actually produce it.

The use of subjective measures confronts the planner with a difficulty over and above that of creating reputation. Every principal must reduce agents’ opportunities to appropriate some of the value associated with their operations. The better defined are the agents’ rights, the lesser is their ability to appropriate. The reason is that when agents’ tasks are clearly stipulated, the principals can relatively easily judge their performance, and can pay them in accordance to their contribution. But where evaluating the tasks is judgmental, agents are afforded with ready opportunities to appropriate value. Especially important here is agents’ opportunities to take bribes. For instance, suppose that agents may be assigned the task of inducing the production of comfortable cars. Since measuring comfort is problematic, agents can collude with the producer to produce cars that are less comfortable than claimed and share with the producer part of the associated cost saving.\(^5\) Turning agents into residual claimants with reputation to protect would have averted the problem. However, as stated, an agent who becomes a residual claimant ceases to be an employee, and his operation is not within the government, then.

\(^5\) This issue is discussed in Barzel 2002, Ch. 5, p. 67.
The state may attempt to prevent the capture activities by making agreements that sidestep the difficult-to-measure attributes. In particular, the principals can confine their relations with their agents to those enforced by (well-specified) contracts. Central planners, it seems to me, would find this very attractive. If that is the case the principals will tend to confine his relationships with agents to those governed by contract. But this implies that the principal will seldom instruct agents to produce subjectively measured quality attributes.

In market economies, the state transacts with private firms. In its dealings with them it encounters the same problems as it does with its own production. The government would like to deprive its purchasing agents from opportunities to take bribes. If it attempts to acquire commodities that have subjective attributes, its purchasing agents could collude with sellers who charge high prices claiming to provide high quality commodities, but actually delivering low quality ones and splitting the difference in value with the agents. In making purchases, then, the government would tend to constrain its agents to the use of contracts. As all the bidders must meet the required specifications, the government is indifferent as to the particular supplier from which it would purchase the commodities, and can focus on
price. Indeed, it tends to require its agents to take the lowest bid. Not taking the highest bid would simply allow the bidder to raise his bid price without raising quality. Thus, if the bid is accepted, he will simply make more money, which may be partly used in the first place to bribe the relevant official to award him the contract.

The government too could rely on the sellers’ reputation, especially when maintaining long-term relations with them. This, however, also opens the door to bribes, as it is difficult to determine who should be the judge of the quality of the delivered goods. In the market tastes may differ. Some buyers may not be satisfied with the quality of the products they purchase and choose to stop buying from those suppliers. Others, however, may be satisfied and continue to purchase from such sellers. It is difficult for the government to maintain such a selective mechanism, and so will be used less frequently that in the market.

Wilson (1989) clearly demonstrated that the American government heavily relies on objective measures in its contracts with private providers.

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6 In Chapter 5 in Barzel 2002 I briefly discuss the use of contracts to govern government purchases.
7 There is plenty of anecdotal evidence of the poor quality of goods and services in planned economies, but I did not find solid evidence for that. Maria Kozhevnikova, in her dissertation, shows that government owned firms in the immediate post communist era did not offer commodity variety
He states (p.121) “a government agency must purchase much of what it uses by formally advertising for bids, accepting the lowest, and keeping the vendor at arm’s length...When a government agency has a satisfactory relationship with a contractor, ordinarily it cannot use the vendor again without putting a new project out for a fresh set of bids.” One of the results of such procedures is that “officials...were much less satisfied with the quality of computers and support services they purchased than their private counterparts...[Most] private firms buying a computer do not write up detailed specifications and then ask for bids.” He adds, “No government purchasing agent can afford to do business this way. He or she would be accused (by unsuccessful bidders and their congressional allies) of collusion, favoritism, and sweetheart deals.” He proceeds to say that (p127) “The essential rules are that all potential suppliers must be offered an equal opportunity to bid on a contract; that the agency’s procurement decision must be objectively justifiable on the basis of written specifications; [and] that contracts awarded on the basis of sealed bids must go to the contractor offering the lowest price...”

or post sales services to the same extent as market firms, which is indirect evidence for the difficulty of producing g quality.

8 Wilson does not elaborate on the relationship between reputational attributes and quality.
Suppose, however, that the planner (or the government) is willing to relax somewhat the form of remunerating employees, and allow them to become partial residual claimants. I. e., they are allowed to retain some of the gains from producing high quality goods. They are not allowed to retain the entire gain as that would make them independent entrepreneurs rather than being government employees; they are allowed, then, to keep only a fraction of the premium required to guarantee high quality. In that case they are at a disadvantage relative to their market counterparts because the total high quality premium they must charge is higher than that of the market. Therefore, fewer planned commodities would meet the Klein-Leffler condition, and on average, even under the inducement, quality under a planned economy would tend to be lower than in the market.

Consider finally the possibility that the ultimate planner will become the residual claimant to quality. First, the ultimate planner tends to be far removed from the actual producers, and thus one would expect much slippage in the chain of command. For the second point we have to distinguish between a democratic regime and a dictatorial one. The problem in a democratic regime is that the ultimate decision maker are the voters, and these are diffuse, and thus collective action problems would make good decisions difficult. In a dictatorial regime, the dictator is the residual
claimant, but to guarantee quality, he would have to make his status explicit. Dictators are unlikely to do that, and thus they are not expected to guarantee quality.

4. Quality under monopoly control over goods.

Klein and Leffler (1981) analyze the competitive supply of quality. Governments often assume monopolistic control of the commodities that they produce. We wish to explore how the analysis of the previous section relates to the monopolistic provision of quality, and how such provision compares to the competitive supply.

Like competitors, monopolists stand to gain from supplying quality attributes consumers desire, but they too might gain from claiming to supply such attributes without actually providing them. As in the competitive case, when asked to pay for the high quality, buyers have reason to wonder if they will get it. The monopolistic operation differs from the competitive one in consumers’ access to information and in the profit margin constraints. I first address the information issue.

In general, buyers will pay the high-quality premium only if they perceive that the seller’s gain from one time cheating would be less than in earning the premium they get by keeping them as regular, satisfied customers. In order to calculate the premium, they must have a good idea
about the sellers’ costs of producing the high quality commodity over that of the standard, easy to measure variety. Klein and Leffler assume that under competition such knowledge is freely available to all. This is a strong assumption. It may reasonably approximate reality for the cost of the standard variety, because under competition buyers can readily observe its price(s) and thus form an estimate of its cost. This assumption is less satisfactory for the cost of the high quality variety since its price is the sum of its cost and the quality premium. It is not so easy to estimate these two components even under competition. The necessary knowledge is still more difficult to obtain under (single price) monopoly because costs and prices there diverge. Moreover, under competition the standard quality commodity is likely to be readily available, so it is easy to ascertain its price, whereas under monopoly the standard commodity would be available only if the monopolist chooses to offer the two grades simultaneously.

 Turning to profits, Klein and Leffler show that whereas competitors must charge a premium over the high quality competitive cost, competitive forces compel them to dissipate the extra profits by investing in easy to observe brand name capital that would lose its value in case they cheat. The profits of monopolists who have exclusive rights over their commodities are not so constrained. Therefore, although buyers must be convinced that the
monopolists would lose from cheating, the rationale is absent for monopolists need to create the appropriate amount of brand-name capital that they would lose in case they cheat. This difference makes the estimation of monopolists’ gain from cheating that much more difficult to assess than that of competitors. In order to be able to collect the quality premium, the monopolist is expected to take steps to facilitate buyers’ estimation of his premium. Thus we expect that the greater the monopolist’s power over a commodity, the more he would invest in his brand name and in publicizing his commitments to high quality so as to reduce buyers’ difficulties in estimating the quality premium.9

5. Governmental supply and control of quality

In many market economies the government has been and is still the exclusive supplier of some goods. It also regulates some private monopolistic operators. The discussion of the state’s dilemma in the production of reputation was not restricted to competition, so there is no need to add to the earlier discussion of governmental supply of quality. In Section 9 below, however, it is shown that vertical integration can affect

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9 The business press often refers to “high profit margin” commodities, especially in the luxury business. Might it be the case that they are referring to monopolistically produced high quality goods?
quality, and that its impact in a fully planned economy differs from that of
government-production within a market economy.

The way governments, at least that of the United States handle
regulated monopolies has two related features that are relevant for the
problem here. One is its constraint on regulated monopolies’ rate of return.
If the constraint imposed on the rate of return is binding and is equal to (or
less than) the competitive rate, the allowed rate is likely to be insufficient to
support the appropriate quality premium, and thus it might prevent the
production of high quality goods. Whereas this may be unfortunate, there is
nothing to say about it here. The other feature is that the government tends to
make public the regulated firms’ costs. Therefore, regulated monopolies’
costs are more likely to be known to buyers than those of unregulated
monopolies. Buyers, then, could figure out more easily whether or not
regulated monopolies are more likely to keep their promises than are
unregulated monopolies.


As earlier discussion suggests, inducing the production of the
commodity attributes that are backed by reputation requires an incentive
structure that is more sophisticated and more delicate than that required to
induce the production of commodities guaranteed by contract. I now enquire
whether a planned economy is capable of coming up with such a structure, or with a viable alternative to it capable of producing high quality commodities. As far as I know, the literature has not addressed this specific problem and thus it is not known what its direct response would have been. Instead I attempt to infer from the treatment of more general problems as to how the problem here would have been handled. I conclude that given the views of economists that wrote on planning, even those favorable to it, the planner could not have created the incentive system required to induce the production of high-quality, difficult-to-measure commodities.

Oskar Lange was one of the most astute theoreticians of central planning. In an essay on economic planning (1960) he devotes only a few paragraphs to incentives. These consist mostly of platitudes such as (p.18) “…nationalized enterprises and institutions [will grant] different rates of remuneration according to the quality of work done and skill involved.” He gives no hint as to how to measure quality. The only other type of incentive he brought up, other than the mention of premiums, is that (p. 19) “special honours are bestowed upon those who excel.” It is evident that these are not adequate incentives to induce the production of difficult-to-measure taste attributes.

10 He was also practiced planning in post World War II Poland.
Abba Lerner, who wrote about central planning in “The Economics of Control” (1944), is another first class economist who favored government intervention. The book makes it clear that he was most sensitive to the role of markets and to their incentives. He did not think that the state should produce everything. He rather argues that it should intervene only in sectors that are not perfectly competitive. But his instructions to the planner are sparse and vague. They definitely do not suffice for handling attributes evaluated by subjective criteria.

The actual functioning of planned economies, especially of the Soviet Union, was no model of efficiency. Janos Kornai (1992) besides being a keen student of planning theory is a keen observer of planned economies. In discussing planners’ ideology (pp. 324-5), the only reference to incentives he seems to be aware of is Marx’s notion of “To each according to his work.” Kornai then moves on to actual planners, indicating that they did not perceive the need to pay “very high managerial salaries.” “Even then ideology prefers to hide the fact, however, that financial remuneration is given for merit…”

He also explicitly discusses, albeit briefly, the production of high quality commodities under planning. He states (p. 184) that incentives were lacking for the production of such commodities. Later on (p. 310) he asserts
that “the command economy is only capable of issuing output instructions in terms of aggregate indicators; the fine distinctions of quality cannot be centrally prescribed”. In his view, the difficulty in attaining quality was exacerbated by the desire to boost production indexes, and spending resources to enhance quality would have impeded the growth such indexes display.

Boycko et al (1995), describe some aspects of the actual performance of the Soviet economy. Whereas they do not consider in any detail the incentives given to the individual workers, they are emphatic about the inefficiency of the system. They say, for example (p.36) “… the socialist economy was characterized by tremendous waste and inefficiency, since cost control and maintenance received little or no priority.” Discussing in a similar vein actual performance in the Soviet economy, Thornton (1998) emphasizes the distorted incentives produced by the use of rigid central planning via bureaucratic monopolies and of exhaustive price control. The system these authors portrayed is definitely not capable of generating the delicate incentives needed to produce difficult-to-measure commodities and services. I now turn to more specific assessment of the ability of planned economies to produce high-quality commodities.

7. The potential for quality under planning
Had proponents of planning addressed the problem of quality, they no doubt would have asserted that the planner would face no particular obstacle in producing high quality. Moreover, conceivably, they might have claimed that the high quality goods would be adequately supplied. Indeed, they might have also argued that the planner would be able to produce high quality commodities without the distortions associated with the Klein-Leffler premium that the market requires, and that consumers would not have to acquire information about costs or profits.

Given planning as it was practiced, the problem of producing quality was a lot messier than the above-idealized description. It was argued already that government is unlikely to be able to guarantee commodities or commodity attributes by reputation. This argument fully applies to planned economies.

Still, the planner possesses other tools with which he might have induced the production of difficult to measure attributes. One is the reliance on a panel of employees to evaluate such attributes. If successful, the panel could inform the planner whether or not the commodities being produced contained the appropriate attributes. Even though it is not clear to me how the members of the panel could be induced to provide the appropriate information, it is still plausible that this method could have generated the
desired data. Indeed, producers for the market seem to use this method to
determine whether or not consumers would appreciate new products. Even if
the planner could induce such results, the cost of generating the appropriate
data seems to be high. One reason for expecting high cost is that opinions
about subjective attributes are likely to differ. What tastes good to one
person does not necessarily taste good to others. Generating such data, then,
would be worthwhile only for large runs of relatively homogenous
commodities. But reputation is especially useful for low-volume
commodities produced to satisfy diverse tastes. Thus, for instance, panels are
unlikely to be economical in the evaluation of restaurants, which are seldom
very large. Large establishments, though, may justify the cost of evaluating
the quality of the products they produce.\textsuperscript{11}

The planner has at his disposal another useful tool. He may simply
reduce the domain of the attributes that might be guaranteed by reputation,
and guarantee some of these by contract. Whereas it may seem that all
attributes guaranteed by reputation are “taste” attributes, reputation may also
be used as a substitute for measuring. Sellers in market economies
sometimes use their reputation to guarantee attributes that can be objectively
measured. Although measurable, the cost of measuring these, however, is

\textsuperscript{11} East German and Russian automobiles that were mass-produced, however,
were notorious for their lack of comfort.
high. We expect that as the cost of maintaining reputation increases and as the cost of measuring attributes declines, market sellers will shift such attributes from the reputational component of their agreements to their contractual component.\textsuperscript{12} We also expect planned economies to explicitly stipulate some of these attributes, and therefore, that the explicit specifications of planned commodities would be more detailed than their market counterparts.

Returning to the steak illustration, it may seem that its taste is strictly a subjective matter. The subjective evaluation, however, is a substitute, in part, for objective measures. Among other things, the taste of the steak depends on freshness or degree of decay. That can be measured, or proxied, by bacteria count. We expect such measures to be more common under planning than in the market.

Whereas the planner is unable to generate reputational guarantees at a relatively low cost, he can specify in the plan directives attributes that are difficult (but not impossible) to measure. He may thus be able to enhance the quality of commodities possessing such attributes. As stated, the use of

\textsuperscript{12} The statement in the text is in the spirit of Stigler’s and Becker’s (1977) “De Gustibus” article. What appears to be the domain of taste is not always subjective; some of the supposed taste components contain systematic objective elements. These can be pared down and transferred to the component capable of being explained.
objective measures becomes less costly per unit of output as the number of specimens to which the measures are applied increases. The more uniform the output is, and the larger the production runs, the more economical is the use of objective measures. We expect that relative to the market, the planner would rely more heavily on such measures. Indeed, we expect the planner to induce greater uniformity than the market does (even though it detracts from the value of the commodity). Still, the planner is unlikely to ever substitute objective measures for all taste attributes.\textsuperscript{13}

Turning to procurement, a major exception for governments’ difficulty in acquiring high quality products results from that in market economies, but not in fully planned ones, it can exploit the existence of private markets for quality. As long as the government wishes to acquire commodities that are also supplied to the market sector such as canned goods for the army or office supplies, it could take a ride on the quality generated via reputation in the sale to private buyers.\textsuperscript{14} This also applies to

\textsuperscript{13} Kornai (p. 310) notes that most of the resources in the Soviet Union were directed to the production of standard, low-quality goods. Avoiding the production of idiosyncratic, high quality goods freed resources that were used to produce a high volume of standard commodities and generated a misleadingly high level of the output index.

\textsuperscript{14} Wilson (p126) states that “Congress and the president repeatedly have made clear their desire that this system [the procurement by the Defense Department] be run efficiently and make use of off-the-shelf, commercially
imports by planned economies. There is a hitch, however, in taking a ride on the market. It is difficult for governments’ experience with its purchases to police sellers. Therefore, the greater the share of a government in the purchase of such commodities the greater the sellers’ ability to either revert to low quality production, or to extract a premium larger than the market would have generated in its absence.

The planner may also induce quality by relaxing his control of some activities in the economy, allowing an “informal” sector to emerge. Could such a sector produce high quality commodities privately within the planned economies, then? So long as such goods would be sold openly, it is implausible that the planners would have tolerated the premium required to bring about high quality. Indeed, such premiums might have constituted “profiteering,” which planners seem allergic to. Suppose, nevertheless, that the planner would have tolerated the quality premiums producers had to charge. In that case we are back where buyers must estimate costs to determine whether or not they would be willing to pay the premiums. A major feature of planned economies is that planners control prices, and indeed choose to set most prices below the market clearing levels. What information on costs the controlled prices convey is clear neither for the available products (as opposed to more expensive, “made to order” items).”

Note that “made-to-order” items are difficult to specify.
standard nor for the high quality commodities. Moreover, it is not clear how stable these prices were expected to be. Buyers would have encountered difficulty in using prices to police sellers against cheating. In addition, given the planners’ negative view of profits, the public probably would have viewed the viability of the quality premium as precarious. The discount rate buyers would have had to use to estimate a seller’s future gains from charging a premium must have been very high, then. This would have further reduced the scope of profitable high quality commodities. In the next section I discuss one more tool to enhance quality that is potentially available to the planner—that of vertical integration.

In summary, I expect, as others do, that under planning quality will be lower than in market economies. I also expect, as others allude to, that variety would be less. Finally, and these do not seem to be suggested by others, I expect first that the commodities actually produced under planning would be delineated in greater detail than those in market economies.\(^\text{15}\) I also expect that firms in planned economies to be more vertically integrated than their market economy counterparts.

\(^{15}\) The difference parallels that between contracts for future commodities and those for forward commodities. The former commodities (which are typically of low quality, sometimes designated “garbage quality”) are specified in great detail. The latter (which are typically of higher quality) are delineated in less detail, but their non contracted attributes are backed by sellers’ reputations.
8. Vertical integration in planned economies

To this point I considered the quality only of final consumption goods. The methods used in the market to deliver such commodities apply as well to intermediate commodities. Upstream producers of such commodities cannot contractually guarantee attributes that are evaluated subjectively, but downstream buyers may rely on the producers’ reputation for the quality of these attributes. Vertical integration is a substitute here for the reputational guarantee. Neither reputational guarantees nor vertical integration are free. Creating reputation consumes resources, and vertical integration is costly in that it reduces the number of profit centers and thus foregoes the added incentives they would have entailed.

Since the profit motive is suppressed in planned economies, the loss of the incentives it entails is largely irrelevant to the question of integration there. A downstream firm lacks the means to persuade the upstream one to supply the high quality commodities. The upstream firm gains nothing from supplying such commodities on its own. Whereas the profit motive is absent in planned firms, incentives are not totally lacking there. The manager of such a firm is penalized if he does not produce the required output, and is rewarded for exceeding it, by promotion, for instance. Suppose that the downstream firm can purchase its supplier or induce the planner to integrate
them. The manager of the combined operation will gain from the production of the high quality commodity by the upstream branch of his firm since the downstream branch could produce its output at a lower cost. Therefore, he will instruct the upstream employees to produce the high quality attributes. He still faces the problem, however, determining if they actually produced these attributes.

One major difference between producing the high quality commodity as an input in production and producing it for final consumers is as follows. In the case of final consumption commodities, not being able to agree on the taste attributes reduces individuals’ utility. For intermediate commodities, it reduces (the net value of) output. Whereas utility is not measurable, output, and its value are. When the high quality commodity is an input in the production process, its measurable effect on output can be exploited to induce its production. Observing the output of the downstream branch of his firm is necessary for the manager to determine whether or not the upstream branch delivered the high quality commodity. It is not sufficient, however, because the low level of the downstream output may be due to the low quality of the input, or due to downstream producers shirking while asserting that their low output level resulted from the low quality of the input they received. If the employer is able to determine the effort level either of the
upstream or the downstream producers, he may be able to sort these things out.

The central planner too is likely to be aware of the advantages of integration. Since it increases net output, he has good reason to facilitate it, and even effect it directly. We expect, then, the level of vertical integration in planned economies to be higher than that in market economies.

Not all production in market economies is private; governments often own various businesses. For instance, some governments nationalized and have been operating their oil industries. The nationalization decision does not necessarily imply that the government would own every vertical link of the nationalized firms; it has a choice regarding what precisely to keep and to produce. To the extent these industries have been producing commodities with significant difficult-to-measure quality attributes, the government has the option of keeping those parts of the industries private or of privatizing them. Similarly, it may tinker with level of vertical integration of such industries. For instance, unlike commodities that are relatively easy to standardize, many of the attributes of retail services seem to be difficult to measure.\(^\text{16}\) We expect, then, that retail services would remain, or made

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\(^{16}\) Government has the choice of paying soldiers entirely in cash, or alternatively, paying them partly in kind—in meals, clothe, etc. The more difficult is the description of a commodity, the less likely will governments
private even if the products the retailers are selling are produced by the nationalized sector. Thus, we expect states that nationalize their oil industry to tend to keep gasoline stations private. This option, however, is not available to the planner who plans the whole economy.

Still, planners have one related margin they can operate on. Planners tend to not interfere with home production. They may take advantage of the existence of home production to solve, in part, the quality problem by manipulating the degree of completion of commodities sold to final consumers. Consumers may find it economical to put the finishing touches on some commodities at home. If these finishing touches involve difficult-to-measure attributes, we expect that the planner will sell these commodities in their less fully finished form, and let buyers finish them. Correspondingly, we also expect to observe buyers in planned economies to be provided with not quite fully finished commodities more often than buyers in market economies do. For example, individuals in planned economies are more likely than those in market economies to prepare food at home than to eat restaurant ready to eat food.\(^{17}\)

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\(^{17}\) I expect planners to produce mostly generic garments and I expect final consumers to sew or modify garments at home. Consumers, then, are
A similar argument applies to exports. Here too the planner has the option of exporting commodities in less or more finished form. I assume, as seems reasonable, that the more finished the commodities are the more important are the difficult-to-measure attributes. We expect the exports from a planned economy relative to exports between market economies to be more “basic.” The easier it is to measure raw goods, the higher the prices they will fetch per unit of resource expenditures, whereas the quality of the more finished commodities is likely to be low, and they will fetch relatively low prices. The return on the resources devoted to the extra production steps, then, will be low.

In summary, I expect, as others do, that under planning quality will be lower than in market economies. I also expect, as others allude to, that variety would be less. Finally, and these do not seem to be suggested by others, I expect first that the commodities actually produced under planning would be delineated in greater detail than those in market economies.\(^\text{18}\) I also expected to have superior sewing skills and perhaps more sewing machines than their market economies’ counterparts.

\(^\text{18}\) The difference parallels that between contracts for future commodities and those for forward commodities. The former commodities (which are typically of low quality, sometimes designated “garbage quality”) are specified in great detail. The latter (which are typically of higher quality) are delineated in less detail, but their non contracted attributes are backed by sellers’ reputations.
expect that firms in planned economies to be more vertically integrated than their market economy counterparts.

9. Conclusions

In this paper I offer a new explanation for the low quality products produced by government in general, and in planned economies in particular. The explanation relies on the problems governments encounter in handling difficult-to-measure commodity attributes. The results may explain, among others, Kornai’s (p. 384) observation that in planned economies “there are frequent complaint...about...the low quality and narrow choice of products.”

Government workers are employees and not residual claimant to the quality of their output. When producing commodities that are clearly delineated and enforced by state enforced contracts, deviations from their assigned tasks can be easily detected, and thus they can be penalized or rewarded according to their performance. Some commodity attributes, the one responsible for what we tend to call “quality,” however, are assessed only subjectively. In the market, such attributes are guaranteed by reputation. So long as government employees are rewarded according to their measured output, they will not suffer a loss if they do not provide the subjective attributes. Therefore, they are not asked to produce the quality attributes.
Governments have a variety of means to induce the production of quality attributes. One is to make government employees partial residual claimants to their actions and part of it is by explicitly specifying their products in more detail than in the market. Another is by more intense vertical integration than in the market as well as providing consumers with less finished commodities than the market provides. Such methods, however, are expensive compared with the use of reputation in the market. Therefore, we still expect the quality of government-produced products to lag behind those of the market.

References


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