

Global vs. Local Products: A Case Study and a Model

December 2000

Rev. May 2001

Rev. August 2001

Pankaj Ghemawat
Harvard Business School
Soldiers Field Road
Morgan Hall 227
Boston, MA 02163

Phone: 617/495-6270
Fax: 617/495-0355
E-mail: pghemawat@hbs.edu

This paper has benefited from helpful comments by David Arnold, Rohit Deshpande, Thomas R. Eisenmann, Tarun Khanna, V. Kasturi Rangan, Jan W. Rivkin and seminar participants at the Harvard Business School. The Division of Research at the Harvard Business School provided financial support.

Global vs. Local Products: A Case Study and a Model

ABSTRACT

It is widely believed that globally standardized product varieties are displacing locally customized ones in many product categories. But a case study of STAR in Asian satellite television and a theoretical model based on the case suggest that the global standardization hypothesis has less momentum behind it than is often supposed to be the case.

Global vs. Local Products: A Case Study and a Model

Today, nearly every industry has a significant global segment in which customers prefer products or services that are much more global than they are local...The global segment is increasing in size in nearly all cases.

-George Yip, "Global Strategy in the Twenty-First Century" (2000, p. 1)

Are globally standardized product varieties displacing locally customized varieties in product markets around the world? Many opponents as well as proponents of globalization would answer this question affirmatively. Such affirmations are not based on systematic evidence, which has been hard to assemble in this context. Instead, they seem to be rooted in an intuition about comparative statics: that recent market dynamics generally favor greater global standardization or homogenization of products. This paper analyzes this intuition.

The analysis in this paper combines two different methodologies: a relatively detailed case study, of STAR TV in Asian satellite television, and a theoretical model, suggested in large part by the STAR case, of competition between standardized and customized product varieties. The analysis indicates that many plausible market dynamics should be expected to lead to decreases rather than increases in the equilibrium degree of global product standardization.

Section I provides a brief review of the relevant literature, most of it concentrated in international marketing. Background information on the STAR case is presented in Section II, and a simple cross-country model of the tension between global standardization and local customization based on the case is developed in Section III. Section IV uses this model to investigate how various market dynamics—mostly suggested by STAR's experiences—affect the predicted degree of standardization. Section V returns to the case, reviewing aspects of it that suggest avenues for additional analysis. Section VI concludes.

I. Antecedents

The (limited) economic literature on global versus local competition focuses on contrasting situations in which each product competes with all others with ones in which it competes only with its immediate neighbors in product space (e.g., Anderson and de Palma [2000]). Models that allow for competition between globally standardized and locally customized products are rare in the economic mainstream (for an influential exception, see Salop [1979]). For more elaboration on inter-modal competition of this sort, we have to turn to the applied subfield of international marketing.

Perhaps the best-known pronouncement in international marketing about global vs. local products is the argument made nearly twenty years ago by Ted Levitt that the the on-going globalization of product markets also increasingly implies the global standardization of products and even business models by multinational companies:

Gone are accustomed differences in national or regional preference... nothing confirms this as much as the success of McDonald's from the Champs Elysees to the Ginza, of Coca-Cola in Bahrain and Pepsi-Cola in Moscow, and of rock music, Greek salad, Hollywood movies, Revlon cosmetics, Sony televisions, and Levi jeans everywhere... With that, the multinational commercial world nears its end, and so does the multinational corporation. The multinational corporation and the global corporation are not the same thing. The multinational corporation operates in a number of countries, and adjusts its products and practices in each—at high relative costs. The global corporation operates with resolute constancy—at low relative cost—as if the entire world (or major regions of it) were a single entity: it sells the same things in the same way everywhere.”¹

Subsequent work in international marketing on the topic of global vs. local products can usefully be related to this apocalyptic—and controversial—vision. One strand of work has focused on being more explicit about what it means to sell the same things in the same way everywhere by probing the details of international standardization at the level of individual

elements of the marketing mix. These include not just product design and attributes but also packaging, channel relationships, brand names, symbols, levels of awareness, ad visuals and themes, other appeals to customers based on identity, image and positioning, prices, target customers, suppliers of marketing services (e.g., market research and advertising agencies), and even planning processes, presentations and manuals (e.g., Aaker and Joachimsthaler [1999]).

A second strand of work has focused on Levitt's hypothesis that tastes or customer preferences are homogenizing across national borders. The consumer-orientation of Levitt's examples notwithstanding, this body of work generally casts doubt on the cross-border homogenization of tastes at the end-consumer level. The counterarguments—that consumers aren't really becoming that similar, that most product markets are still segmented to a significant extent at national boundaries, that certain kinds of brand equity lack the heritage or meaning to be transferable across such boundaries, et cetera—were identified some time ago and will not be elaborated here (see, instead, Douglas and Wind [1987]). It is worth remembering, however, that to focus on the homogeneity versus heterogeneity of end-consumers is to ignore possibly more powerful spurs to global standardization from business customers that are themselves globalizing. Such spurs appear to apply to many consumer products as well as to business products and services because of the global spread of key intermediaries, e.g., cross-border retailers that have made integrated account management as important a marketing challenge as brand development and maintenance in many FMCG (fast moving consumer good) categories. Thus, Henkel reports that Euro accounts represent one-half of its turnover and that these accounts, rather than end-consumers, supply the major motive for its attempts to standardize across key European markets (Morwind and Schroiff [2000]). Systematic academic research on topics such as global account management and global pricing is just starting, however (e.g., Montgomery et al. [1999]; Arnold et al. [2000]; Narayandas et al. [2000]).

A third, somewhat better-developed strand of work can be seen, to some extent, as a reaction to the results from the second strand: it seeks to identify and investigate alternate customer rationales for global standardization. Batra [2000] has offered a useful classification of consumer rationales for global brands that can mostly be reinterpreted more broadly, as applying to global products. Global brands may be preferred not only because (1) they cater to

homogenizing tastes or preferences as emphasized by Levitt but, alternately, because (2) they convey higher quality, defined broadly to include expertise, authority, credibility, et cetera; (3) they enjoy higher prestige and status in the minds of many customers because of their foreign origins; or (4) they satisfy customers' cravings to become part of a global community. Rationale (2) can be traced back to Buzzell's [1968] argument that a global image can be a powerful way of increasing sales but has been framed more recently as the idea that a global brand is likely to be viewed by consumers as possessing a special 'high quality' credibility because of the signal supplied by its broad acceptance (Kapferer [1997]) and may therefore be able to tap into increasing-returns-to-scale dynamics. Rationale (3) is rooted in the idea, elaborated by cultural anthropologists, that national elites may desire to demonstrate competence with regard to foreign cultures—a display that the masses may then try to emulate—to communicate non-provincial tastes or cultural mastery and to build self-identity (Hannerz [1990]). One way of demonstrating such competence, of course, is by consuming foreign brands—a favorable foreign-origin effect thought likely to be strongest for First World brands in Third World product markets.¹ Finally, rationale (4) resembles rationale (3) in having been elaborated by cultural anthropologists (e.g., Appadurai [1990]), but operates at the level of a multicultural or even acultural global community rather than being focused on particular foreign countries of origin.

These alternate customer rationales for global brands receive some support from recent empirical research, particularly a body of work by Batra and coauthors (e.g., Batra et al. [2000] and Steenkamp et al. [2000]), with quality-signalling effects (rationale (2)) appearing to dominate. Attempts have been made as well to test some of the contingencies—related to product category, customer type and geography—that might be expected to determine whether global brands actually are preferred over, but the findings and even some of the predictions in this regard (e.g., the prospects for global brands in durables vs. non-durables) are equivocal. Additionally, a complementary perspective is provided by work concerning the conditions under which local brands are likely to thrive, which places comparatively more emphasis on early-

¹ Note, however, that one might reasonably guess such effects to diminish with the passage of time after decolonization in functioning market economies.

mover entrenchment and comparatively less on (other) sources of advantage or disadvantage (e.g., Kapferer [2000]).

While these are valuable insights, they are qualified by a fundamental difficulty with the basic approach of focusing on customer rationales, however broadly construed, for global standardization. The “business” or supply-side rationale for global standardization—the economies of simplicity and standardization adverted to by Levitt, in addition to the alleged homogenization of tastes—is thereby de-emphasized. Yet, presumably, the viability of globally standardized products relative to locally customized products should reflect the interaction of supply-side and demand-side effects. In other words, customer preferences for globally standardized products are neither necessary nor sufficient for such products to displace locally customized varieties. Instead, assessment of their relative viability requires a cross-functional or strategic approach that integrates the supply and demand sides. The case example presented in the next section underscores the importance of such integration and helps suggest a theoretical structure for achieving it.

II. The Case of STAR Television

STAR TV operates in Asian satellite television, which represents a particularly interesting setting in which to examine issues of globalization for a number of reasons. The entertainment sector is quite concentrated globally and has become more so in recent years, to the point where there is specific agitation by anti-globalization activists against “media mono culture.” The entertainment sector is also supposed, as a result of the work of cultural anthropologists such as Appadurai (1990), to promote further globalization through customer homogenization. On the production side, electronic content, in particular, is subject to strong economies of global scale given its non-rival nature: its provision to one set of customers does not affect availability to others. In terms of distribution, satellite television itself is often cited as a key driver of globalization given its ability to stretch broadcast content across geographies. And since satellite broadcasting is a “new” industry, competitors that would be global haven’t had to confront entrenched local players. For all these reasons, we might assess a higher than average likelihood of successful penetration by global offerings.

STAR TV is a particularly interesting company to focus on within satellite broadcasting. (HBSP 2000a, 2000b). STAR was founded in 1991 by Li Ka-Shing and his Hong Kong-based Hutchison Whampoa group as an English-language, free-to-air broadcaster of mainly Western fare that targeted the top five percent of Asia's socioeconomic pyramid. STAR's launch strategy assumed that this regional segment was economically advanced enough to demand higher quality television entertainment than was currently available, shared tastes that could be satisfied, at least in part, by Western programming, and was of interest as a group to regional advertisers. Thus, STAR's original strategy was highly standardized across the Asian countries in its footprint. And it depended at least as much on the globalization/regionalization of businesses (potential advertisers) as on the homogenization of viewers' preferences.

In 1993, News Corporation, controlled by Rupert Murdoch, acquired a 64% interest in STAR TV for \$525 million. Two years later, it bought out the rest of Hutchison Whampoa's interest for another \$300 million. The acquisition was undertaken because of supply-side as well as demand-side impetus for standardization. News Corporation hoped to use STAR to arbitrage its existing programming resources—including the 20th Century Fox movie and television program library, Fox Broadcasting hits such as "The Simpsons," and BSkyB sports and news programming—in the Asian market. If successful, this strategy would cut the cost of programming for STAR to the bare minimum associated with copying tapes and broadcasting them.

But these increasing returns to scale were not realized to the extent originally envisioned. Instead, STAR metamorphosed in the course of the 1990s from a standardized pan-Asian programmer into what CEO James Murdoch described as "a series of local [national] businesses largely independent from each other" offering 29 channels of programming in 7 languages.² Both current and former managers at STAR suggest the interpretation that as the initial choice of a regionally standardized strategy proved unviable, the company switched to a more localized (and appropriate) strategy.

This is, of course, just one possible interpretation of STAR's history. To justify the focus on it in the rest of this paper, it is also useful to consider—and reject—three alternate interpretations: that STAR stuck to its initial strategy, that the initial strategy was appropriate when originally selected, or that the initial choice of an inappropriate strategy turned out not to matter very much. Consider each in turn.

The first alternate interpretation is that STAR has stuck to a global (or more accurately, regional) standardization strategy in the sense of establishing a single distribution channel through which to send content, a “portal” strategy. Note, however, that while a portal strategy involves some global standardization, it is less standardized than the strategy STAR pursued early on, which involved and in fact focused on standardization of content. The original dimension of attempted standardization was clearly overturned later on.

A second alternate interpretation is that even if STAR did switch strategies, its initial strategy was appropriate when originally selected: that customer preferences for localized programming could not have been predicted early on, or that there was an unexpected expansion of distribution beyond the elite segment originally targeted, into mass markets, that dictated greater localization once it manifested itself. In regard to the first subpoint, it should be pointed out that there is a strong “home bias” toward local as opposed to imported content in all but very small markets, particularly in Asia (see Figure 1, which will be discussed further later on). This pattern should have been of particular interest to STAR given the importance of China (220 million TV households in 1994) and, slightly later, India (46 million TV households) as well, to its business plan. Also note that the European and Asian data were relatively recent yet available when STAR made early decisions about content standardization.

<<Figure 1 about here>>

As far as the second subpoint is concerned, it is worth noting that an unexpected boom in demand should also imply a positive earnings surprise. Actually, the earnings surprises seem to have been negative: in the year ending June 30, 1999, STAR lost \$141 million, pretax, on revenues of \$111 million. Adding up the purchase price, operating losses, losses on joint

ventures such as Phoenix TV in China, and investments in uplinks and other infrastructure, News Corporation's total investment in STAR exceeded \$1.5 billion at the end of the 1990s—*without* accounting for the time value of the money. And it does not seem that a highly profitable growth vehicle has been created as a result of all this investment: there was even speculation, in fall 2000, that the uncertainties still afflicting STAR might hold down valuations of Sky Global, a carve-out of News Corporation's satellite TV assets (James 2000).

A third and final alternate interpretation is that even if STAR's initial strategy of standardization *was* inappropriate, it didn't matter very much because it was reversed in fairly short order. And in fact, there is some evidence that News Corporation started moving in the direction of more localization within a year or two of acquiring control of STAR. But there is also evidence that delays in, or confusion about, localization led to disadvantages over longer time horizons associated, in part, with letting competitors seize the initiative. In India, for example, News Corporation struck an early deal with Zee, the leading provider of Hindi-language programming, that restricted STAR's involvement in parallel efforts. While Zee quickly grew into the leading competitor in the Indian market, STAR was unable to unwind this contractual restriction on its activities in Hindi until the year 2000.

For all these reasons, the perspective adopted in this paper is that STAR *did* switch its strategy, from standardization toward localization, that its initial strategy of standardization probably *was* inappropriate when selected, and that this inappropriate initial choice of standardization *did* matter. What, then, can we learn from this case, thus interpreted, that is of broader interest? Three implications come to mind. First, the customer rationale for STAR's initial strategy, of global standardization, was predicated as much on the globalization/regionalization of businesses (potential advertisers) as on the homogenization of viewers' preferences. This serves as a reminder of the importance of taking a broader perspective on customer rationales than is traditional. Second, assessment of the viability of globally standardized or, for that matter, locally customized business models requires a coupling of demand-side customer rationales and supply-side cost influences. Thus, STAR's initial strategy focused on cost-side influences but was overturned by demand-side home bias; its current strategy is more responsive to demand factors but still faces considerable challenges as it

has built up a cost structure of about \$200 million per year, in a business in which it took through the 1990s to move annual revenues past the \$100 million mark. Third, the case directly calls into question yet another common presumption in the international marketing literature: that the viability of globally standardized strategies relative to locally customized ones is generally increasing over time.³ Dynamics such as the development of mass markets in the case of STAR—which probably promoted more localization than if the business had remained a niche play—suggest that increasing global standardization is a possibility to be probed rather than a logical or empirically obvious implication of contemporary trends, even if they cut across countries.

This agenda can also be restated more broadly and abstractly in cross-country terms (as opposed to company-level ones). Can one predict theoretically why the shares of foreign TV programming vary the way they do in Figure 1? And what do various dynamics; at both the level of individual markets and across markets, imply about predicted changes over time? A simple microeconomic model of the competition between globally standardized and locally customized varieties, stimulated in large part by the STAR case, will help answer both questions. The next section builds a simple model that is integrative in this sense, and the following section elaborates some of its dynamic properties.

III. A Microeconomic Model

The model developed in this section keys off the setting described in the previous section, except in terms of customer preferences, where it explicitly generalizes the conditions of the particular case considered to accommodate obvious sources of variation across cases. The basic theoretical mechanism driving the model can be illustrated very simply in terms of Figure 1. The obvious reason locally customized varieties might fare better than globally standardized varieties in larger markets is related to country-specific fixed costs of customization that are incurred on customized offerings but not standardized ones: larger markets are more likely to be able to support these country-specific fixed costs than smaller markets. This theoretical mechanism seems consistent with both the emphasis in STAR's initial strategy on minimizing country-specific investments and, more broadly, with the observation that U.S. programming for

television (which dominates world exports) is sold into foreign markets for tenths of a percentage point of production costs to perhaps a few percentage points in the case of very large markets (Variety 2000). As a result, the cost of original programming tends to several times as high as imported programming even in very large markets (e.g., in Europe), rendering the overall dominance of broadcast schedules by original programming that much more striking.

The model developed in this section focuses, therefore, on the competition between locally customized producers that incur country-specific fixed costs and a globally standardized producer that does not. In order to support a simple examination of inter-modal competition, intra-modal competition is ignored: there is one globally standardized producer and, potentially, one locally customized producer per country. Competition between these two modes of production unfolds in two stages. In the first stage, potential local producers (one per country) decide whether or not to enter their respective country markets. In the second stage, the global producer, whose existence is taken as given, and the local producers that have entered and whose identity is common knowledge, simultaneously announce prices, i.e., engage in Bertrand competition. It is provisionally assumed that the global producer is allowed to price discriminate across countries—which seems to be consistent with both the STAR case and the pricing of U.S. exports of TV programs—and that customers' preferences are homogenous within countries. The implications of relaxing each of these assumptions are discussed in the next section.

It is also worth highlighting one respect in which the model deliberately generalizes the conditions that characterized the case study. Instead of assuming that locally customized varieties are always preferred to globally standardized ones (or vice versa), the theoretical set-up is flexible enough to let customer preferences tilt in either direction: to encompass product categories in which globally standardized varieties are preferred as well as ones in which locally customized varieties are preferred (e.g., STAR). All the conclusions derived below apply to both sorts of situations, unless explicitly noted otherwise.

It is time to be more specific in laying out the structure of the theoretical model, starting with the demand side.⁴ Suppose that there are n customer segments, each internally homogenous, in the world. For simplicity, assume a one-to-one match between customer

segments and countries such that all N_i customers in country i share common preferences with each other but not with customers in any other country.⁵ Demand is taken to be price-inelastic: each customer buys one unit of either the global variety or the relevant local one.⁶ Denote the gross benefit (i.e., the value of the product, gross of the price paid for it) that a representative customer in country i derives from the relevant local variety as u_i and from the global variety as $u_i + t_i$. Rational choice implies that customers in country i will purchase the globally standardized product in preference to the locally customized one if and only if

$$p_{iG} < p_i + t_i, \quad (1)$$

where p_{iG} is the price of the globally standardized product in country i and p_i is the price of the relevant locally customized product.

The t_i term is worth elaborating on. In the context of the STAR case, t_i was probably negative across most values of i given the apparent preference for local programming over compromise “outside” programming. In addition to heterogeneity in tastes, reasons for negative t_i s include various sorts of (extra) costs—transportation costs, transaction costs associated with information/search/communication, translation costs, tariffs and so on—that are entailed by cross-border economic activity that customers end up bearing, directly or indirectly. In contrast, many fast moving consumer packaged goods are supposed to exhibit positive t_i s—the case implicitly focused on by most of the large literature on customer rationales for global standardization that was cited above.

Note, however, that for t_i to be positive requires more than vertical differentiation or extra willingness-to-pay for the globally standardized product: it requires the pass-through of a higher price realization to the global producer after typically higher transportation and distribution costs, tariffs, or even risks, are netted out. Empirical evidence from the trade literature indicates that the extra costs (not directly borne by the global producer) and risks of cross-border operation continue to be very significant (e.g., Rousslang and To 1993, Anderson and Marcouiller 1999). Thus, it is advisable to focus on the net price available to producers rather than the total price paid by end-users. Since the net price premia (to producers) of globally standardized products over locally customized ones seem smaller, in general, than the premia paid by end-users,

assertions of positive t_i s merit scrutiny instead of uncritical acceptance. Having said all that, the conclusions concerning (static) market characteristics, and demand and cost dynamics that follow are robust to whether the t_i s are positive or negative.

That completes the demand side set-up. On the supply side, the model focuses on inter-modal rather than intra-modal competition. It posits, potentially, a different local competitor in each country that, because it has chosen to customize its product, cannot serve countries other than the one it has targeted. If a locally customized producer were to enter and supply country i , its total costs would be

$$C_i = F_i + c_i N_i \tag{2}$$

where F_i is a fixed, country-specific cost and c_i is its constant marginal cost. The corresponding terms for the globally standardized producer are F_G and c_G . Note that F_G pertains to global fixed costs rather than to country-specific fixed costs, which by definition, are not incurred under strategies of maximal standardization. The invariance of the global producer's marginal cost, c_G , across countries, while inessential, is a simplification suggested by Levitt's characterization, cited earlier, of the global corporation as one that "operates with resolute constancy—at low relative cost—as if the entire world (or major regions of it) were a single entity: it sells the same things in the same way everywhere."

Assuming the existence and operation of the global producer, it will incur the fixed costs F_G no matter what; as a result, only the c_G term is relevant to its calculations about whether to beat out a local competitor that has elected to enter a particular market. Given the (provisional) assumption that it can price discriminate perfectly, it is in the global producer's interest to beat out a local competitor that has entered and is charging price p_i if and only if

$$c_G < p_i + t_i \tag{3}$$

And given equation (2), the minimal price that the country-centered competitor in country i can charge without losing money is $F_i/N_i + c_i$. Substituting this term for p_i in inequality (3), the globally standardized product will take over country markets for which

$$c_G < \frac{F_i}{N_i} + c_i + t_i, \quad (4)$$

with locally customized products accounting for the remainder. Note that the right-hand side of inequality (4) is the average cost of the local producer if it supplies its entire national market plus any disadvantages (possibly negative) that it suffers in terms of net price realizations. This suggests defining a “globalization index” for each country i of the form

$$G_i \equiv \frac{F_i}{N_i} + c_i + t_i. \quad (5)$$

If the global producer charges a price less than or equal to G_i , the country-centered producer in country i will drop out. Consequently, if country j has a higher globalization index than country k , then country-centered production is less likely to prove viable in j than in k . If country-centered producers do survive in both countries, the one in country j will post lower margins.

Examination of equation (5) confirms that locally-customized producers are more likely to survive (and to earn high margins) in large countries with exotic tastes that can be satisfied relatively cheaply.⁷ In contrast, small countries whose tastes are close to cosmopolitan yet still expensive to satisfy strictly will tend to purchase the global product.⁸ Note the affinity with the pattern depicted in Figure 1, and with the finding that at least in the European part of the TV sample, linguistic autonomy, as well as size, reduced the penetration of national markets by foreign programming (Biltreyst 1992).

IV. Market Dynamics and Global Standardization

The preceding predictions about global product market configurations at equilibrium, while interesting in and of themselves, are rendered even more interesting by the possibility of using them to track the links between market dynamics and global standardization. The particulars of the STAR case suggest analyzing a number of different market dynamics, most of which can be overlaid on the simple theoretical structure specified in the previous section. It is convenient to group them into demand dynamics, cost dynamics and convergence dynamics.

IV. 1. Demand Dynamics

The most obvious change in demand experienced by STAR during the 1990s consisted of rapid demand growth. STAR reached 11 million households in January 1993, before News Corporation acquired control; by January 1994, its reach exploded to 42 million households, and by January 2000 it expanded further, to 95 million households. Rapid demand growth, especially early on, has been cited as one of the reasons STAR had to switch strategies, from regional standardization to local customization. The question of broader interest, though, is whether this effect is a general one: whether demand growth should generally be expected to hurt the viability of standardized products relative to customized ones. Addressing this question requires turning from the case study to the model.

Scalar demand growth is most easily injected into the model by assuming that aggregate demand increases in all countries. This will lower the average cost of producing the country-centered varieties, shifting the G_i schedules downward. Because the global producer's marginal cost, c_G , stays put, increasing demand reduces the range of countries in which the globally standardized product wins out. Although this effect may come as a surprise, it can be explained relatively intuitively. As country markets expand, the importance of scale economies effectively decreases, as does local producers' fitness disadvantage from their inability to spread their fixed costs across country borders.

A second aspect of demand dynamics that was bound up with rapid growth but had a non-scalar component concerned the broadening of demand beyond the elite that STAR originally targeted ("Asia's Top 5%") to the mass market. Since an important part of the rationale for focusing on the elite was that they were likely to have relatively cosmopolitan tastes, the broadening to cater to mass market viewers may have tipped country markets to locally customized products to a greater extent than would be expected as a result of the market size effect alone. This intuition can be confirmed by extending the model developed in the previous section to allow for within-country heterogeneity of demand.

Specifically, assume that the N_i customers in country i are divided between n_i elite customers and $N_i - n_i$ mass-market customers, and that initially, only the elite customers are in the market. An elite customer's gross benefit from the relevant locally customized product (if offered) is u_i^E and from the globally standardized product is $u_i^E + t_i^E$. And the locally customized product secures country i if and only if

$$c_G > \frac{F_i}{n_i} + c_i + t_i^E. \quad (6)$$

Now let the mass market customers ($N_i - n_i$ in country i) enter the market as well, with each experiencing gross benefits of u_i^M from the local product and of $u_i^M + t_i^M$ from the global product. Assume a covered market, a single product per competitor and a single price per product across the two segments within a country. The local producer in country i can secure the mass market segment if

$$c_G > \frac{F_i}{N_i - n_i} + c_i + t_i^M. \quad (7)$$

Note that this is a less stringent requirement for the viability of the locally customized product than condition (6) under the assumptions that the mass market segment is larger than the elite segment ($N_i - n_i > n_i$) and that mass market demand is less cosmopolitan than elite demand ($t_i^M < t_i^E$). And the local producer can secure the entire market if

$$c_G > \frac{F_i}{N_i} + c_i + t_i^E, \quad (8)$$

which is again less stringent than condition (6) under the assumption that $t_i^M < t_i^E$. If both conditions (7) and (8) are fulfilled, the local producer selects the more profitable of the two configurations associated with them. Either way, the emergence of the mass market segment does make it more likely that locally customized products will be offered. So both the demand dynamics discussed in this subsection—scalar demand growth and the broadening of demand beyond the elite to the masses—are capable of reducing the equilibrium level of global standardization over time.

IV. 2. Cost Dynamics

On the cost side, the single most notable change that affected Asian satellite TV during the 1990s, particularly the second half of the decade, was the sharp decline in broadcasting costs per channel with the development of transponder oversupply and digital compression.⁹ Should the failure of global standardization in the STAR case be read as having occurred in spite of, or because of, such cost reductions? (Cost increases could be discussed in symmetric fashion.)

The model forces useful precision in answering this question. Consider how its workings are affected by reductions in the costs of the globally standardized product and all locally customized products. The effects turn out to depend on the degree to which fixed rather than marginal costs are affected. Equal cost reductions that affect only marginal costs do not matter, for reasons that should be obvious from inequality (4); however, asymmetric reductions in marginal costs favor the mode of production whose marginal costs fall more. The impact of reductions in fixed costs is quite different. Then globalization indexes decrease but the global producer's marginal costs do not, reducing the equilibrium degree of global standardization. The intuition, as in the case of increases in market size discussed in the previous subsection, is that reductions in the effective importance of scale economies hurt global standardization.

Returning to the case of STAR, whether the (predictable) cost reductions that it experienced over time should have been expected to hamper its pursuit of standardization depends on the cost components affected. As far as marginal operating costs are concerned, one could argue that there was greater room for reductions in locally customized competitors' costs given that the marginal production and distribution costs for a global (or regional) competitor were already so low. If such asymmetric reductions materialized, that would hurt global standardization. And reductions in fixed costs—evident in the STAR case in the form of declining broadcast costs per channel—also hurt global standardization.

This analysis of the impact of changes in marginal and fixed costs can be melded by looking at the impact of changes in scale-sensitivity: the relative proportion of fixed costs and

marginal costs in total costs. In tracing the effects of such changes, it is important to guard against altering the values of other parameters. At the initial equilibrium, the outputs of the global and country-centered producers are uniquely determined. Hold each producer's average cost *at its original level of output* constant, but shift the technology so that fixed costs account for an increased fraction of average costs. What is the relationship between the degree of global standardization at the new equilibrium and at the old one? The technology shift does not, by definition, affect globalization indexes at all, but it *does* decrease the global producer's marginal cost, c_G , favoring increased global standardization. Once again, fixed costs are strategic because the global competitor and its local rivals have implicitly chosen to cover them in two different ways (internationally versus intranationally). Note that decreases in scale sensitivity can be dealt with symmetrically. Thus, in the case of STAR, it was probably the combination of the increasing number of channels per market and the decreasing fixed costs per channel that hurt standardization.

Of course, the question of whether scale-sensitivity is actually increasing or decreasing in a general sense is, as yet, unanswered. Some contend that we have increasingly moved to a winner-take-all/increasing-returns economy that would presumably help global standardization. Others argue that mass customization and, more broadly, sense-and-respond technology are fundamentally restructuring the trade-offs between scope and variety in a way that permits more of the latter at no extra cost (Pine 1992). But agreement in this regard is not required to draw a simple conclusion: distinguishing more sharply between different types of cost reductions—or increases—can help sharpen predictions about how cost dynamics are likely, if at all, to affect the relative viability of globally standardized versus locally customized varieties.

A final cost-related dynamic concerns the relative timing of entry. Note that the order of moves can affect market outcomes only if the moves involve irreversible commitments (Shapiro 1989, Ghemawat 1991). These are most naturally associated with the fixed costs in the original model— F_G and the F_{iS} —reinterpreted as one-time costs of entry that are sunk once they are incurred, and that enable production at the applicable marginal costs (which continue to be incurred in the short run on an ongoing basis, rather than once in the long run). It is simple to confirm that if the global producer enters first, the set of countries that it serves at equilibrium

will, as in the original model, continue to be given by condition (4). Things are different, however, if locally customized producers have entered first. The condition for the global producer to find it profitable to displace them, given that their entry costs are already sunk, is now given by

$$c_G < c_i + t_i, \quad (9)$$

which is more stringent than condition (4). Whether local producers move first matters because—unlike the global producer—they make commitments to particular country markets. The broader implication is that given such commitment opportunities, global standardization is less likely in “old” industries with entrenched local competitors than in “new” industries in which key competitors are “born global” from the outset.

Summing up this subsection, the effect of reductions in marginal costs on the equilibrium degree of global standardization depends on whether globally standardized or locally customized production experiences greater absolute cost reductions as a result. But reductions in fixed costs or decreases in scale sensitivity (in the sense defined above) unambiguously hurt global standardization. So does the ability of the locally customized producers to preemptively make sunk cost commitments to particular country markets.

IV. 3. Convergence Dynamics

A third set of dynamics concerns what might broadly be called convergence: the process whereby countries may be getting to look more like each other along certain dimensions over time. Whether countries actually *are* converging is a large question that cannot be addressed in detail here.¹⁰ What should be pointed out, however, is that even if convergence along particular dimensions is taking place, predictions that this will induce increases in global standardization are subject to several qualifications. To see this, one has to distinguish several different convergence dynamics and analyze them one-by-one.

The most obvious kind of convergence, stressed by Levitt among others, involves homogenization of tastes. In the context of the model, convergence in tastes can be expressed in

terms of reductions, towards zero, of the absolute values of the t_i parameters. If the t_i s are initially negative, it is easy to check that their tending towards zero *does* increase the equilibrium level of global standardization by increasing globalization indexes while leaving the global producer's marginal costs unchanged. Less obviously, though, if the t_i s are initially positive, declines in their absolute values can be seen—in an extension of the basic model to accommodate situations in which the global product is an “inside” rather than “outside” good—as declines in favorable lead-country or foreignness effects that can lead to decreases rather than increases in global standardization.¹¹ So whether the globally standardized or locally customized product is initially preferred does matter in the context of this dynamic, unlike the others that have been looked at so far.

A second kind of convergence entails countries starting to look alike in ways that extend beyond similarity in tastes to include the other components of the globalization index specified in equation (5). Note that as countries converge in this sense, globalization indexes tend to equality across them. With identical globalization indexes across countries, the globally standardized producer either succeeds everywhere or nowhere. In other words, if countries' globalization indices are sufficiently alike, they are likely to be subject to a “domino effect”: either the global producer or the country-centered producers will tend to win out across the board. Which of these two possible outcomes obtains, however, will depend on the specifics of the parametrization of the situation.

A third possible kind of convergence concerns the prices of the globally standardized product across countries. Mechanisms that have been cited as drivers of convergence along this dimension include Internet-related declines in search costs (Quelch 2000) and the insistence on global pricing by globalizing customers such as retail chains (Narayandas and Quelch 2000). Again, without offering any kind of warranty that such convergence is generally taking place, it *is* possible to look at its implications. Compare the original model, in which perfect price discrimination by the global producer across countries is possible, with the polar situation in which there are no price discrimination possibilities of this sort: the global producer has to charge the same price across all the countries that it serves. This iso pricing constraint does not affect globalization indexes or, therefore, the ordering of countries by fitness of local players

relative to the global one. But it does mean that the global producer will refrain from penetrating some of the “marginal” countries that satisfy condition (4) because the price reductions required to penetrate them result in inframarginal losses that more than offset the gains to be had, from additional business, at the margin. As a result, convergence in the prices of the globally standardized product across countries is predicted to reduce its equilibrium degree of penetration.

Summing up this subsection, the predicted effects of convergence on global standardization vary across different kinds of convergence dynamics. The effects of convergence of tastes vary with whether locally customized or globally standardized products are (initially) intrinsically preferred. The effects of convergence of globalization indexes more broadly depend on the parametrization of the problem, although at the limit, we *can* predict an extreme outcome in which the globally standardized product either wins out across the board or nowhere at all. Finally, the convergence of prices of the globally standardized product across countries hurts the equilibrium degree of global product standardization.

It is also useful, at this point, to look back across all the analysis that has been performed so far. Substantively, it suggests that the global standardization hypothesis has considerably less momentum than the juggernaut that it is sometimes portrayed as being: see Table 1 for a summary of the barriers identified. And methodologically, it illustrates the usefulness of specifying some sort of theoretical structure, if only a simple one, when working through such issues: intuition alone would probably be inadequate.

<Table 1 about here>

V. Extensions

The simple model of global vs. local product economics presented and analyzed in the last two sections could be extended and elaborated in a number of obvious ways. On the supply side, it would be useful to allow for intra-modal as well as inter-modal competition, in addition to enriching the treatment of the latter. On the demand side, explicitly unbundling horizontal and

vertical differentiation and allowing for additional heterogeneity within countries are clear priorities.

These modeling possibilities do not, however, exhaust the STAR case, which offers additional insights about how to advance, adapt, or alter existing theory. This section will briefly discuss three such directions that take us beyond simple comparisons of product economics: two factors that often constrain global standardization but were, in a sense, left out of the formal model and a third concerning the impact of strategy on performance.

V. 1. Political Constraints

Market-based models of global standardization, such as the one developed and discussed in the last two sections, implicitly assume that the degree of global standardization that is observed reflects the outcome of market-based processes. But in many industries, particularly in a cross-border context, non-market processes play an important role in shaping the rules of market games. Media, particularly TV broadcasting, are salient politically because of their potential to affect public opinion, and therefore remain subject, around the world, to extensive state control through licensing, regulation, ownership and even censorship (Djankov et al 2001). Thus, even in the relatively free-wheeling United States, the purchase of local television stations required News Corporation's Rupert Murdoch, formerly Australian, to become a U.S. citizen.¹² In much more tightly controlled Asian contexts, particularly China (STAR's key market), foreign firms could expect to be scrutinized closely, making circumspect handling of political issues a precondition for commercial success.

Early on, however, News Corporation/STAR's strategy did not seem to pay much more attention to political issues than did the model. Perhaps the most glaring political misstep was Rupert Murdoch's public pronouncement, after gaining control of STAR, that satellite television was "an unambiguous threat to totalitarian regimes everywhere," because it permitted people to bypass government-controlled news sources.¹³ Not surprisingly, the Chinese government retaliated by enacting a ban on the reception of foreign satellite TV services. And while News Corporation has since made strenuous attempts to rebuild its relationships with the Chinese

government, it is generally regarded as having been unable to score any major breakthroughs in that country. This is a critical failure because mainland China accounts for 60 percent of the households that can receive STAR.

Recognition of political constraints and, more broadly, non-market processes, is only a first step, of course. What would be ideal, of course, would be to integrate the analysis of such non-market linkages integrated with market-based analysis. For an attempt in the context of another case, see Baron (199x).

V. 2. Cultural Constraints

Constraints on global standardization based on cultural differences are, in principle, more easily assimilated into market-based models of product economics. The question of interest that can nevertheless be raised about them is whether they command sufficient attention, in practice as well as in academic analyses.

TV broadcasting supplies, once again, a strong example. The local consumption bias evident in Figure 1 has already been discussed. A prominent component—but not the only one—consists of local preferences for local-language programming. Yet in initially positioning STAR as an English-language broadcaster, its ethnically Chinese founders managed, at least in their own minds, to overcome this fact.

Of course, cultural differences, particularly linguistic ones, are more salient in TV broadcasting than in most other products or services. But that is not to say that such differences can be neglected on average. For instance, trade economists' analyses of bilateral trade flows suggest that, on average, a common language leads to about three times as much trade between a country pair as would occur in its absence (Frankel and Rose 2000). And this is true *after* controls are implemented for a range of other factors, including political/administrative ones such as past colony/colonizer links or common membership in a preferential trading agreement. Effects that are this large on average cannot sensibly be neglected. But they often are.

V. 3. Strategic Discretion

An emphasis on constraints, whether competitive, political or cultural, is suggestive of a preordination of outcomes. But it is worth remembering that strategic discretion matters: that performance depends not just on opportunity sets but also on the strategies that are actually tried—in other words, on whether choices from opportunity sets are optimal or suboptimal.

Yet again, STAR provides a good example. Two early missteps that seem to have cost it dearly have already been mentioned: Li Ka-Shing's English-language focus and Rupert Murdoch's anti-totalitarianism speech. But questions could also be raised about other choices that were made: the amount of due diligence that News Corp undertook before buying STAR, the complete buyout of Li Ka-shing (as opposed to retaining some of his interest and influence), the relatively adversarial approach adopted vis-à-vis a number of potential partners and content suppliers, the handling of negotiations with Zee in India, which delayed STAR's entry into Hindi-language programming while allowing Zee its independence, the general pace of localization efforts, which have not been swift, and the focus on controlling transponder capacity at a time when such capacity was becoming a commodity.

From a practical perspective, this litany of possible missteps at STAR fulfills the useful purpose of highlighting the range of levers that managers pull that affect the success or failure of a strategy—and therefore the room for value-enhancing managerial action as opposed to environmental determinism. And from an academic perspective, it serves as the reminder of the empirical usefulness of tracking, among other things, the choices that firms *actually* make instead of assuming a completely deterministic competitive mapping between product economics and market outcomes.

VI. Summary

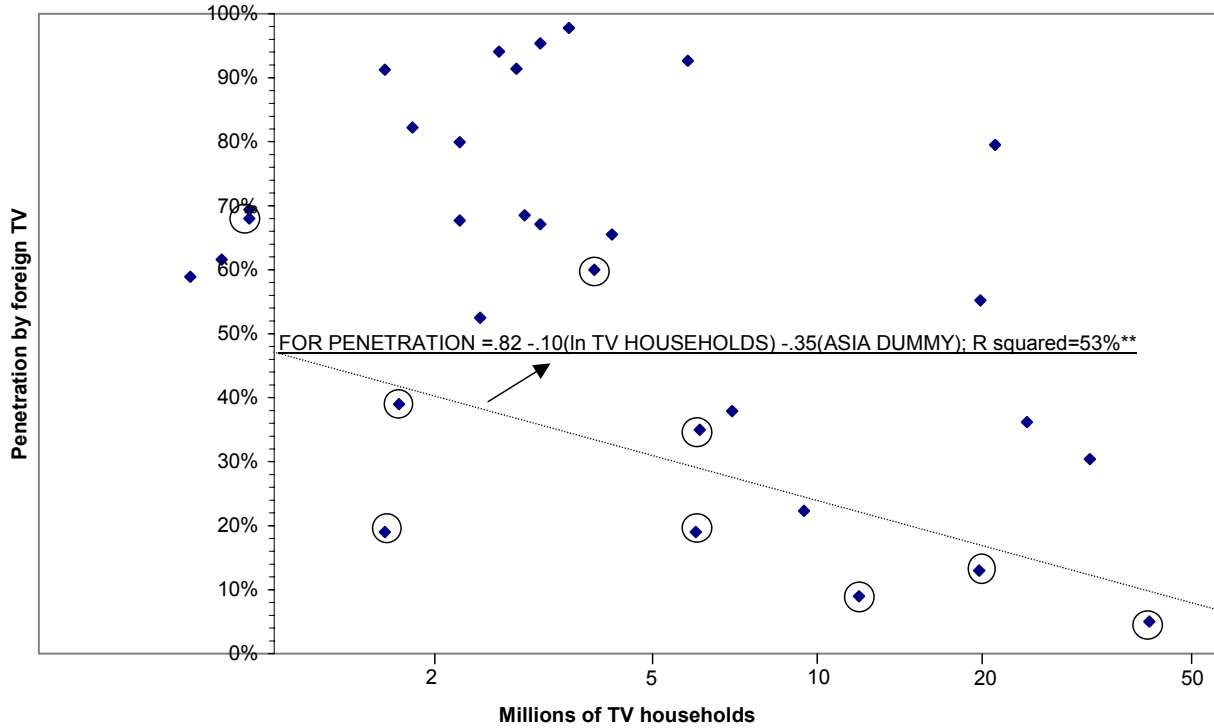
The conclusions from the modeling effort are clear, but worth resummarizing. Demand growth, the broadening of demand beyond the elite to the masses, and reductions in fixed costs/scale sensitivity on the supply side are all capable of reducing the equilibrium level of

global standardization, as is the ability of local producers to precommit costs to particular markets. The effects of the convergence of tastes and of globalization indexes depend on what things are converging from or toward, although at least in the former case, it is possible to add that narrowing taste differences are likely to increase global standardization if taste differences initially favored local producers, and to decrease global standardization if the reverse were true. Convergence of the price of the globally standardized product across countries does, however, unequivocally reduce the global product's degree of penetration in equilibrium. Overall, the theoretical analysis suggests that the global standardization hypothesis has considerably less momentum than the juggernaut that it is sometimes portrayed as being. And once again, the substantive usefulness of the analysis also suggests the methodological usefulness of theoretical structures, even simple ones, to analyze complex phenomena.

The contributions of the case study should be spelled out as well. First and most modestly, the case studied provided a counterexample to the global standardization hypothesis in a context—satellite television—that might make proponents of global standardization pause and take notice since the medium is often supposed to be highly globalized/globalizing. Second, the case also supplied guidance about how to build a simple microeconomic model of the competition between globally standardized and locally customized products, and the comparative static analyses to be performed with that apparatus. Finally, aspects of the case that were left out of the present modeling effort flag several avenues for additional analysis. Taken together, these contributions suggest that the detailed analysis of individual cases can be a useful methodological vehicle for confronting microeconomic theory with reality.

FIGURES & TABLES

Figure 1
Foreign Penetration and Domestic Market Size in TV Programming*



Sources: Data for Asian countries for 1989 from Waterman and Rogers (1994), for European countries for 1990 from Biltreyest (1992), and for Latin American countries for 1996 from Chmielewski, Falkenheim and Jaqui (2000).

*Dots represent individual countries; circled dots are Asian countries (not including China or India).

**Line drawn with ASIAN DUMMY set equal to 1; coefficients on both independent variables are significant at the 1% level.

Table 1 Model Summary: Barriers to Global Standardization

Country Attributes	Demand Dynamics	Cost Dynamics	Convergence Dynamics
Large countries	Demand growth	Asymmetric reductions in marginal costs	Convergence of tastes if initial $t_i > 0$; divergence of tastes if initial $t_i < 0$
Exotic tastes but low cost to serve	Mass market penetration (if mass market customers are less cosmopolitan)	Reductions in fixed costs/scale sensitivity	Convergence of prices of global product

REFERENCES

- Aaker, David A., and Erich Joachimsthaler, 1999, "The Lure of Global Branding," *Harvard Business Review* (November-December), 137-144.
- Ahlemeyer, Stefanie, Chris Gilligan, and Gerrit Meier, 1999, "Growing globally by going local? MTV Networks in Europe," unpublished term paper for Globalization and Strategy course at Harvard Business School, Fall 1999.
- Anderson, Simon and André de Palma, 2000, "From local to global competition," *European Economic Review* 44, 423-448.
- Anderson, James E. and Douglas Marcouiller, "Trade, Insecurity, and Home Bias: An Empirical Investigation," National Bureau of Economic Research Working Paper 7000, dated March 1999. <<http://www.nber.org/papers/w7000>>
- Appadurai, Arjun, 1990, "Disjuncture and Difference in the Global Cultural Economy," *Theory, Culture & Society*, 7, 295-310.
- Arnold, David, Julian Birkinshaw and Omar Toulan, 2000, "Implementing Global Account Management in Multinational Corporations," MSI Working Paper Report No. 00-103.
- Baden-Fuller, Charles W.F. and John M. Stopford, 1991, "Globalization Frustrated: The Case of White Goods," *Strategic Management Journal* 12, 493-507.
- Batra, Rajeev, 2000, "Global Brands: A Critical Look," Presentation at the Harvard Business School, April 19.
- Batra, Rajeev, Venkatraman Ramaswamy, Dana L. Alden, Jan-Benedict E.M. Steenkamp and S. Ramachander, 2000, "Effects of Brand Local/Nonlocal Origin on Consumer Attitudes in Developing Countries," *Journal of Consumer Psychology*, 9, 2 (April), 83-95.
- Biltreyest, Daniël, 1992, "Language and Culture as Ultimate Barriers? An Analysis of the Circulation, Consumption and Popularity of Fiction in Small European Countries," *European Journal of Communication*, 7, 517-540.
- Buzzell, Robert D., 1968, "Can You Standardize Multinational Marketing?," *Harvard Business Review*, 46 (Nov./Dec.), 102-113.
- Caves Richard, Michael E. Porter, A. Michael Spence, with John T. Scott 1980, *Competition in the open economy: a model applied to Canada*, Cambridge, Mass.: Harvard University Press, Chapter 1.
- Djankov, Simeon and Caralee McLiesh, Tatiana Nenova, and Andrei Shleifer, 2001, "Who Owns the Media," Harvard Institute of Economic Research Discussion Paper No. 1919.

- Douglas, Susan and Yoram Wind, 1987, "The Myth of Globalization," *Columbia Journal of World Business* (Winter), Vol. 22, No. 4, 19-30.
- Ghemawat, Pankaj and Fariborz Ghadar, 2000, "The Dubious Logic of Global Megamergers," *Harvard Business Review*, July-August, 65-72.
- 1991, *Commitment: The Dynamic of Strategy*, New York: Free Press.
- Gilley, Bruce, 2000, "Star-Crossed," *Far Eastern Economic Review*, July 27, 2000, p. 32.
- Granitsas, Alkman, 2000, "Black Hole," *Far Eastern Economic Review*, July 27, 2000, p. 34.
- Guillén, Mauro F., 1999, "Is Globalization Civilizing, Destructive or Feeble? A Critique of Six Key Debates in the Social-Science Literature," Commissioned by the *Annual Review of Sociology*, Vol. 27 (2001), December 1999 version.
- Hannerz, Ulf, 1990, "Cosmopolitans and Locals in World Culture," *Theory, Culture & Society*, 7, 237-251.
- Harvard Business School Publishing [HBSP], 1986, "Fox Broadcasting Co." case number 9-387-096.
- 1993, "British Satellite Broadcasting vs. Sky Television," case # 9-794-031.
- 2000a, "STAR TV in 1993" case # 9-701-012.
- 2000b, "STAR TV in 2000." case # N9-701-031.
- James, Steve, 2000, "USA: Wall St Salivating over Murdoch satellite TV IPO," *Reuters English News Service*, August 11, 2000.
- Kapferer, Jean-Noel, 1997, *Strategic Brand Management*, Dover, NH: Kogan Page, 2nd edition.
- 2000, "Is There Really No Hope for Local Brands?," *Conference Summary*, Marketing Science Institute's Conference on Global Branding, June 20-21 (Milan)
- Knetter, Michael M. and Matthew J. Slaughter, 1999, "Measuring product-market integration," NBER Working Paper 6969, February 1999.
- Levitt, Theodore, 1983, "The Globalization of Markets," *Harvard Business Review*, 61 (May-June), 92-102.
- Montgomery, David, George Yip and Belen Villalonga, 1999, "Demand for and Use of Global Account Management," MSI Working Paper Report No. 99-115.
- Morwind, Klaus, and Hans-Willi Schroiff, 2000, "Global Branding: Changes and Risks for a Transnational Company," *Conference Summary*, Marketing Science Institute's Conference on Global Branding, June 20-21 (Milan)

- Narayandas, Das, John Quelch and Gordon Swartz, 2000, "Prepare Yourself for Global Pricing," forthcoming in *Sloan Management Review*.
- OECD, 1987, *Structural Adjustment and Economic Performance*, Paris: Organisation for Economic Cooperation and Development.
- 1996, *Globalisation and Industry: Overview and Sector Reports*, Paris: Organisation for Economic Cooperation and Development.
- Pine, B. Joseph II, 1992, *Mass Customization: The New Frontier in Business Competition*, Boston, MA: Harvard Business School Press.
- Quelch, John, 2000, "Global Marketing Guru," Interview by Randall Rothenberg in *Strategy & Business*, Booz Allen & Hamilton (Third Quarter), 93-100.
- Rousslang, Donald J. and Theodore To, "Domestic Trade and Transportation Costs as Barriers to International Trade," *The Canadian Journal of Economics* Vol. 26, No. 1 (Feb 1993), pg. 208-221.
- Rugman, Alan, 2000, *The End of Globalization*, New York: Random House Business Books.
- Schotter, A., and G. Schwodiauer, 1980, "Economics and the Theory of Games: A Survey," *Journal of Economic Literature* 18 (June): 479-525.
- Segal-Horn, Susan, David Asch and Vivek Suneja, 1998, "The Globalization of the European White Goods Industry," *European Management Journal* 16(1): 101-109.
- Steenkamp Jan-Benedict E. M., Rajeev Batra and Dana L. Alden, 2000, "How Perceived Brand Globalness Creates Brand Value," forthcoming in *Journal of Marketing*.
- Sutton, John, 1991, *Sunk costs and market structure: price competition, advertising, and the evolution of concentration*, Cambridge, Mass.: MIT Press.
- 1998, *Technology and market structure: theory and history*, Cambridge, Mass.: MIT Press.
- United Nations Industrial Data Organization, *UNIDO Database*, 1995.
- Vernon, Raymond, 1966, "International Investment and International Trade in the Product Cycle," *Quarterly Journal of Economics* 80, p. 190-207.
- 1977, *Storm over the multinationals: the real issues*, Cambridge, Mass.: Harvard University Press.
- 1979, "The Product Cycle Hypothesis in a New International Environment," *Oxford Bulletin of Economics and Statistics* 40, p. 255-267.
- Yip, George, 2000, "Global Strategy in the Twenty-First Century" (2000, p. 1).

END NOTES

- ¹ Ted Levitt, “The Globalization of Markets,” *Harvard Business Review*, May-June 1983, page 92.
- ² Author’s interview with STAR CEO James Murdoch and COO Bruce Churchill on May 1, 2001.
- ³ For example, “Today, nearly every industry has a significant global segment in which customers prefer products or services that are much more global than they are local...The global segment is increasing in size in nearly all cases,” George Yip, “Global Strategy in the Twenty-First Century” (2000, p. 1).
- ⁴ The model draws on Ghemawat and Spence (1986) but generalizes its parametric assumptions and extends the analyses undertaken.
- ⁵ The reason for this assumption is cosmetic: it simplifies the notation. International homogeneity could easily be dealt with by shifting the level of analysis from individual countries to groups of countries; intra-national heterogeneity would require an analytic shift to individual segments. Some analysis along these lines is sketched in the next section, in the subsection that looks at the impact of demand dynamics on globalization.
- ⁶ The generalization to price-elastic demand is nontrivial, and typically requires strong symmetry assumptions to yield closed-form expressions (Anderson and de Palma 2000). In the present context, it seems more important to allow for asymmetry rather than price-elasticity.
- ⁷ Mass customization suggests a possible caveat to this conclusion. Note, however, the limits that have been observed to date in successful implementation of such strategies.
- ⁸ Caves, Porter, and Spence (1980, chap. 1) informally reach similar conclusions.
- ⁹ There were probably some reductions in programming costs, adjusted for quality, as well.
- ¹⁰ See, the discussion of convergence in “The Cross-Border Integration of Markets and International Business” Pankaj Ghemawat, Harvard Business School working paper.
- ¹¹ Just in case this second possibility seems rather improbable, it is worth mentioning that data from the last few decades have indicated greater geographic dispersion rather than concentration of production in most categories of products around the world (UNIDO, 1995), and have led to a rejection of product life cycle theory by its original proponent, the late Raymond Vernon, principally on the grounds that it no longer makes much sense to talk of lead countries. See Raymond Vernon (1966 & 1979). Also note that at least some microeconomists find it natural to assume that globalization is making consumers more rather than less picky (Anderson and de Palma 2000), i.e., increasing t_i s.
- ¹² More recently, in spring 2001, Murdoch’s attempts to buy General Motors’ interest in DirectTV to fill out the U.S. gap in News Corporation’s global satellite TV holdings had

been challenged by Senator John McCain, then Chairman of the Senate Commerce Committee, on the grounds that it could result in “a consolidation of power the likes of which this country has not seen since William Randolph Hearst.”

¹³ Rupert Murdoch, as quoted in the *Los Angeles Times*, February 13, 1994, Part D, pg. 1, column 4.