ESSAYS ON CULTURE AND TRADE

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ABSTRACT

This thesis consists of three self-contained essays. The first two essays address the consumption of culture and are closely related in terms of the theoretical framework used. The third essay is a separate analysis of international trade and competition.

The studies of culture are motivated by the special treatment of culture consumption in most modern societies: there are usually large, government-provided subsidies, the aim of which is to stimulate both the production and the consumption of culture. The purpose of the present work is to explore reasons for this special treatment. Using a stylized theoretical framework, the essays contrast culture with another, generic, good or activity. Culture is thus regarded as an “experience good”: previous consumption of the good enhances the current appreciation of the good. The generic good is one where experience is assumed not to be at all relevant for the appreciation of the good. For experience goods, decisions made today will influence future utility and future choices. This makes the intertemporal preferences essential. If, in particular, consumers have time-inconsistent preferences of the type that can be characterized as a present-bias—modeled with “multiple selves” using quasi-geometric discounting—as opposed to standard, time-consistent preferences, there will be a case for government subsidies. The first essay explores this possibility in detail in a framework where experience is mainly of importance in the short run. The second essay then studies cases where experience is more potent and can cause persistent diversity in culture consumption across individuals.

Culture and Control: Should There Be Large Subsidies to Culture? studies the circumstances under which public support for culture is warranted. A policy example is designed to illustrate important aspects of public support systems currently in place, and is calibrated to Swedish data. The essay concludes that, given present-biased agents with self-control problems, public support of culture can work as a commitment device and improve long-run welfare. Furthermore, it is demonstrated that welfare-maximizing subsidies to culture can be substantial if the present-bias is profound and the taste-cultivation property of culture consumption is pronounced.
Origins of the Diversity of Culture Consumption analyzes the diversity of culture consumption among individuals. If the culture good and the generic good are sufficiently close substitutes in a static sense, very large and persistent differences in the consumption of highbrow culture across consumers can be explained by differences in initial experience levels alone. Moreover, slight differences in preferences and time endowments can cause significant diversity between individuals, both in the long- and short-run levels of culture consumption. In addition, if consumers have time-inconsistent preferences, further diversity can be rationalized. If there is a present-bias, there may also be Pareto-ranked multiple equilibria with “optimism” and “pessimism”: high (low) culture consumption of the current self is rationalized, based on the belief that future culture consumption will be high (low).

Has International Competition Increased? Estimates of Residual Demand Elasticities in Export Markets studies the impact of the last decades of intense economic integration on the competitive conduct of Swedish export industries. The functional relationship between the inverted residual demand elasticity and the Lerner index is used to estimate markups in eight industries. The econometric evidence suggests a deviation from competitive behavior in all industries. Moreover, the results demonstrate a trend of decreasing market power.
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Chapter 1

Introduction

1 Introduction

This thesis consists of three self-contained essays. The first two essays address the consumption of culture and are closely related in terms of the theoretical framework used. The third essay is a separate analysis of international trade and competition.

1.1 Culture

The studies of culture are motivated by the special treatment of culture consumption in most modern societies: there are usually large, government-provided, subsidies, the aim of which is to stimulate both the production and the consumption of culture. These public subsidies are frequently debated and questioned, especially since redistribution often seems to favor a relatively wealthy and well-educated minority. The purpose of the present work is to explore reasons for this special treatment. Using a stylized theoretical framework, the essays contrast culture with another, generic, good or activity. Culture is thus regarded as an “experience good” in the sense that previous consumption of the good enhances the current appreciation. Put differently, a refined mind is needed to grasp culture. The generic good is one where experience is assumed not to be relevant for the appreciation of the good, i.e., the good gives instant utility, but generates no intertemporal value-added. For experience goods, decisions made today will influence future utility and future
choices, which makes the intertemporal preferences essential. If, in particular, consumers have time-inconsistent preferences of the type that can be characterized as a present-bias—modelled with “multiple selves” using quasi-geometric discounting—as opposed to standard, time-consistent preferences, there will be a case for government subsidies. Chapter 2 explores this possibility in detail in a framework where experience is mainly of importance in the short run. Chapter 3 then studies cases where experience is more potent and can cause persistent diversity in culture consumption across individuals.

In *Culture and Control: Should There Be Large Subsidies to Culture?*, the two goods are interpreted as highbrow and lowbrow culture. The “experience good”, or taste cultivation, assumption of highbrow culture is prevalent within cultural economics and is expressed already in 1891 by Alfred Marshall as

> It is therefore no exception to the Law (of diminishing marginal utility) that the more good music a man hears, the stronger is his taste for it likely to become.

As already discussed, this taste cultivation property of the utility function produces intertemporal effects, since current consumption decisions will affect past and future utility. Depending on whether the consumer is forward-looking or present-biased, consumer behavior could be time-inconsistent. There is a recent literature, motivated by psychological and experimental evidence, dealing with quasi-hyperbolic discounting, which is a straightforward way of modeling time-inconsistent preferences. This form of discounting sets up a conflict between the preferences of different intertemporal selves, and introduces a need for self-control. It seems reasonable to deduce that time-inconsistency might have important implications for the consumption of experience goods such as highbrow cultural goods since, unlike standard goods, highbrow cultural goods give intertemporal utility effects.

This study outlines a theoretical framework that can nest these important qualities of culture consumption and can serve as a framework for policy analysis. It is shown that time-inconsistency reduces the steady-state level of consumption of highbrow culture and increases the consumption of lowbrow culture. The reason for this is that present-biased agents prefer the higher instant utility from consumption
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of lowbrow culture to long-run investments in highbrow culture, although the latter alternative would give a larger welfare over time. If the agent has a self-control problem and is incapable of internalizing these “internalities”, this study shows that there is a rationale for the government to intervene. A policy example is designed to illustrate some important aspects of public support systems of highbrow culture currently in place, and is calibrated to Swedish data. In Sweden, government support to highbrow culture is rather extensive, e.g., the average box office coverage rate of the national theatres is only around 13 percent. A key finding from this exercise is that large tax-financed subsidies could indeed be substantial, if the level of present-bias is extreme and the taste-cultivation property of highbrow culture is pronounced. However, although tax-financed subsidies appear to be a potent device in restoring consumption to time-consistent levels, the welfare gains seem to be rather small in general, irrespective of calibration.

*Origins of the Diversity of Culture Consumption* analyzes the diversity of culture consumption among individuals. If the culture good and the generic good are sufficiently close substitutes in a static sense, very large and persistent differences in the consumption of culture across consumers can be explained by differences in initial experience levels alone. Formally, the model delivers a law of motion implying multiple steady states. Thus, the model delivers “endogenous” long-run diversity in culture consumption. This occurs if the two goods are relatively close substitutes: over time, then, consumers either move toward complete specialization in the consumption of the generic good, or toward a mix with a significant emphasis on culture. If, on the other hand, the two goods are not close substitutes, then long-run differences in culture consumption can only be explained by fundamental differences in preferences or constraints, not by initial experience: there is a unique steady state, which is reached from all initial conditions.

If the two goods are close substitutes, there might also be a unique steady state with complete specialization on one of the goods. Here, notwithstanding the level of initial experience, the long-run outcome will be the same. Long-run specialization on the culture good will occur if the constraint set—the constraint that binds the consumption of both goods—is sufficiently generous and the goods are close enough substitutes: then current culture consumption can be set quite high and
therefore, induce future consumption in a manner which is beneficial even if the initial experience is very low. This can be understood from the perspective of complementarity between present and future consumption: if this complementarity is sufficiently strong, it will lead rational individuals to take advantage of it. Long-run specialization on the generic good, in contrast, results when the constraint is tight, because the complementarity is then not sufficiently powerful. Thus, there is a “scale effect” in culture consumption.

Large short-run differences between two individuals in their consumptions of culture can also result from small differences in their initial experience levels. This only occurs if the two goods are close enough substitutes. Formally, this is also a case of multiple steady states but, in addition, the law of motion for the evolution of experience in culture is discontinuous. In other words, there is a cutoff level of initial culture experience such that the individual is indifferent between a large and a small level of current consumption, where each of these levels then persists over time, and with slightly lower (higher) initial experience there is a strict preference for the lower (higher) culture accumulation path.

If consumers have time-inconsistent preferences, further diversity can be rationalized. If there is a present-bias, there may also be Pareto-ranked multiple equilibria with “optimism” and “pessimism”: high (low) culture consumption of the current self is rationalized, based on the belief that future culture consumption will be high (low). More precisely, in the dynamic game, there are sometimes multiple equilibria—multiple decision rules each of which is a Markov-perfect equilibrium—that can be ranked in terms of welfare. Thus, the model offers an explanation of differences in culture consumption that cannot be based on observables. Moreover, in this case, there could be a different role for government policy: an appropriate policy could potentially eliminate the bad equilibrium or equilibria. Second, there is another source of long- as well as short-run differences in culture consumption: whereas the model with standard time-consistent preferences generically delivers either one or three steady-state culture consumption levels and at most one discontinuity in the decision rule for culture accumulation, the model with time inconsistency can deliver an equilibrium decision rule with several jumps and more than three steady states. Third, there are parameter configurations for which pure-strategy equilibria
do not exist; i.e., culture consumption diversity arises from endogenous uncertainty.

1.2 Trade

Increased openness is widely believed to induce competitive effects. Intense competition, inefficient firms exiting the markets, and difficulties in sustaining collusive behavior will lead to lower prices, and thus higher welfare. However, economic theory gives an ambiguous correlation between exposure to international competition and competitive conduct in a market. Whereas the theoretical predictions on import competition are negative, given imperfect competition in domestic markets, the competitive conduct of an export competing industry could be adversely affected. If the exporting industry is a price-taker on the world market, it will be constrained to competitive conduct in the same way as the import-competing industry. Conversely, if the industry can exert some market power, an enlarged world market may enhance profitability by allowing firms to spread fixed costs over a larger production volume and taking advantage of economies of scale in production. Declining marginal costs and a sustained price level, i.e., a larger markup, is an explicit confirmation of increasing market power. Moreover, if the exporting firm can discriminate between domestic and international markets, firms in the industry can maintain their price above the world market price. Mergers, acquisitions, and collusion triggered as defensive responses to internationalization can be regarded as a market failure on the international markets and will clearly counteract the competitive pressures of trade openness. Hence, the impact of globalization on competition depends on the underlying assumptions of the theoretical analysis and is ultimately an empirical question.

*Has International Competition Increased? Estimates of Residual Demand Elasticities in Export Markets* investigates the competitive conduct of the Swedish manufacturing industries over the period 1969-1994. The Bresnahan approach, which involves estimating the residual demand elasticities, is employed to derive the standard measure of competition, i.e., the Lerner index. After some robustness checks, the changes in competitive conduct over time are estimated.

Theoretically, the most straightforward method for measuring the Lerner index is of course to directly calculate the markup over marginal cost, i.e., accounting
markups. However, since this is normally impossible due to data deficiency, estimating the right-hand side of the profit-maximization condition by the residual demand approach may be the second best alternative. The evidence from this econometric study suggests a deviation from competitive behavior in all industries. Moreover, the results demonstrate a trend of decreasing market power. It is uncertain whether the increasing competition will apply to the entire international market. One interpretation of the results might be that competition has hardened for Swedish industries, but not for the markets as such, e.g., assuming a foreign price-setter and the Swedish industry as part of a competitive fringe.

Finally, the results are compared with two conventional methods of calculating the price-cost margin; accounting markups and the Solow-Hall approach. The validity of the residual demand analysis is neither confirmed nor rejected since all three approaches give contrasting outcomes. However, the methods are not completely comparable due to different market definitions etc. in the datasets, but it may still be interesting to compare the outcomes, as long as the limitations of the analysis are kept in mind.

Overall, although drawing definite conclusions regarding the absolute markups seems hazardous, the Bresnahan approach does add evidence on the general competitive conduct.