# Some Cross Country Determinants of National Per Capita Advertising

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*Three potential reasons for differences in per capita national advertising across countries is the level of economic development, the extent of national integration with the global economy, and the magnitude of government's share in the economy. This paper uses cross country regression analysis for the year 2002 to simultaneously test and estimate the potential effect of these three forces on national per capita advertising. The empirical findings indicate that statistically all three factors are of consequence in determining the level of per capita national advertising.*

## INTRODUCTION

With the ending of the Berlin wall, capitalism, in its traditional western democratic form or in its autocratic Asian form, is fast becoming the favored type of economic system of countries throughout the world. With the spread of capitalism, advertising is apt to become more prevalent and pervasive, since advertising is an endeavor, if not the most important activity, emanating from the heart and soul of modern capitalism. Capitalism constantly requires bigger and bigger markets and advertising is *the* means, the sine qua non, to constantly pursue this ever elusive objective.

Advertising is not something that is inconsequential and that should be taken lightly. Advertising really matters for a country's culture, for an individual's identity within a country, and for the way members in society both view one another and relate to each other. Advertising engages in the critical image creation business which historically has been in the hands of art and literature.

Advertising is one of the major vehicles in promoting status consciousness, and in fostering status conscious products. It defines status, artificially creates status goods, and associates goods with status.

Given the importance of advertising for a nation's way of life, the purpose of this paper is to look at three potential determinants of national advertising intensity, that is, of national advertising per capita. They are the level of economic development, the extent of economic integration with the rest of the world, and the share of government in the economy.

To achieve this objective, the paper is divided into four sections. The first section outlines the model. It discusses the variables involved, their expected signs, and the reasoning behind their anticipated signs. The second section identifies the sources of the variables. The third section

presents the empirical findings. It shows the results of cross country regressions of advertising per capita on measures of the level of economic development, the degree of integration with the global economy, and government's share in the economy. The fourth and final section concludes.

## THE MODEL, THE VARIABLES, AND THEIR THEORETICALLY EXPECTED SIGNS

The model to be considered is just a simple one equation model with three arguments. The equation, coupled with the associated partial derivatives showing the theoretically anticipated signs for each of the three arguments, is as follows:

$$1.\ A = f(D, I, G) \qquad \delta A/\delta D > 0,\ \delta A/\delta I > 0,\ \delta A/\delta G$$

In the equation, A represents national advertising per capita, D is the level of economic development, I is the degree of economic integration with the rest of the world, and T the extent of government's share in the economy.

The partial derivative of national per capita advertising to the level of economic development is anticipated to be positive. A country's per capita advertising is expected to be positively related to the level of economic development. Advertising is foreseen to become more and more important as a market generator for business with economic growth and development. With growth and economic development regular utility products, products depending on absolute utility, become sated due to diminishing marginal utility. In such an environment, business is forced to turn more and more toward status goods, goods that depend on comparison utility, which is the primary preserve of advertising.

Business has a complete fixation on profits. The purpose of business is both to make profits and to constantly seek to make bigger and bigger profits. Ultimately, the enhancement of profits almost always entails the expansion of markets. If production costs are constant, then in order to raise profits business needs to increase sales, that is, it needs to increase the size of its business. Business is, therefore, almost always on the hunt for new markets or for ways to expand existing markets. In financial terms, stockholders are interested in rising share prices, but the upward movement of stock prices is intrinsically wedded to rising earnings per share, which, in turn, is highly dependent on expanding markets.

Sales to business depend on consumption by consumers. Consumption in turn depends on the absolute utility from consuming the product and the relative, comparative, or status utility from consuming a product.

At low levels of income, prior to the onset of diminishing marginal utility, expanded sales are not a problem, as consumers are eager to purchase more products due to its contribution to absolute utility. However, as income rises and diminishing marginal utility takes hold, increasing sales on the basis of absolute utility becomes more and more difficult, and business must turn more and more to the artificial creation of status good through advertising.

Status goods are wonderful for business but can cause problems in the use of society's scarce resources. With regard to status goods, the objective of every consumer is to try to get more status, more of a status good, than his neighbor. If production doubles, and everyone doubles their consumption of a status good, then each individual's comparison or status utility remains unchanged, and the total welfare of society is unaltered. What this means is that the additional production, although good for business, for markets, and for profits, is wasted. Instead of

doubling the production of the status good, the resources could have been devoted to the production of some really worthwhile good, such as public infrastructure, thereby enhancing social welfare.

The second argument in equation 1, the degree of national integration with the global economy (I), is theoretically perceived to be positively related to per capita national advertising. That is, greater global integration is expected to lead to higher national per capita advertising. The opening up of countries, especially the opening up of less developed counties, permits the entry of sophisticated multinational corporations with their extensive advertising budgets, their awareness of the importance of advertising, and their profound advertising know how. Additionally, the added national competition that is likely to accompany greater national openness is apt to spur greater national advertising.

The third and final variable in equation 1 is the share of the government in the economy (G). National advertising per capita is expected to be negatively related to the extent of government. The bigger is the public share in the national economy the smaller is the private share. The private sector, driven by the profit motive and its accompanying desire for ever expanding markets, heavily relies on advertising. For the public sector, which is insulated from competition and has non-profit objectives, advertising is far less important.

## THE VARIABLES AND THEIR DATA SOURCES

Per capita GDP, in one form or another, is often used as a measure of economic development, and it is so used here. Specifically, the actual measure employed here is per capita GDP for 2002 in real 2000 U.S. dollars. Trade openness, the percentage of total national trade (exports plus imports) to GDP for 2002, is adopted as a proxy for the extent of global integration of a nation, and the percentage of government expenditure to GDP for 2002 is chosen as measure of government's share in the national economy. The source of all three of these explanatory variables is the World Bank (World Bank 2005).

The source of the dependent variable, total national advertising per capita for 2002, and the various forms of advertising per capita for 2002, television, print, outdoor, radio, and cinema, is the World Advertising Research Center (World Advertising Research Center 2004).

## THE CROSS COUNTRY REGRESSION RESULTS

Table I shows cross country regressions for the year 2002 of total national advertising per capita on various explanatory variables.

**TABLE I**
**CROSS COUNTRY REGRESSIONS OF TOTAL NATIONAL ADVERTISING PER CAPITA ON PER CAPITA INCOME (PCGDP), PERCENTAGE OF TRADE TO GDP (TRADEGDP), AND PERCENTAGE OF GOVERNMENT SPENDING TO GDP (GOVTGDP)**

|  | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| CONSTANT | 7.21 (.730) | -36.28 (-2.50) ** | 72.39 (3.27) * | 31.84 (1.47) |
| PCGDP | .0089 (13.70) * | .0088 (14.87) * | .0098 (14.90) * | .0097 (16.68) * |
| TRADEGDP |  | .5197 (3.76) * |  | .5481 (4.37) * |
| GOVTGDP |  |  | -4.35 (-3.28) * | -4.64 (-3.94) * |
| RSQ | .728 | .781 | .773 | .842 |
| N | 72 | 70 | 70 | 70 |

The organization of the table is as follows. The first column identifies the independent variables. Each subsequent column shows the outcome of a regression run. For ease of identification, the equations are numbered at the head of the columns in the first row. The second to last row shows the r-squared values (RSQ) and the last row the sample size (N). The numbers in the body of the table are the estimated coefficients and the individual t-statistics. The estimated coefficients are the topmost value and the individual t-statistics are underneath in parenthesis. The asterisks refer to level of significance. A variable that is significant at the ten percent level of significance in an equation is marked with three asterisks, one that is significant at the five percent level or better with two asterisks, and a variable that is significant a the one percent level or better with a single asterisk.

The first equation in table I is a simple regression of advertising per capita on per capita GDP (PCGDP), the measure of the level of economic development. The second and third equations add one additional variable to per capita GDP. Equation two adds the percentage of trade to GDP (TRADEGDP), the measure of national integration with the world economy, while the third equation adds the percentage of government consumption to GDP, the measure of government, as opposed to private, share in the national economy. Lastly, equation (4) combines all three variable in a single multiple regression.

The results lend support to the hypothesis that all three variables are important determinants of national advertising per capita. Per capita GDP (PCGDP) is significant at the one percent level of significance or better in all four equations and has the expected positive sign. The percentage of trade to GDP (TRADEGDP) is also significant at the one percent level of significance or better in the three equations that it appears and has the theoretically anticipated positive sign. Similarly, the percentage of government consumption to GDP is significant at the one percent level of significance in every equation that it enters and always has the expected negative sign.

Looking at equation (4), the variables in combination explain over eight four percent of the cross country variation in national advertising per capita in a sample of seventy countries.

It is also possible to look at the impact of the variables on the various types of advertising per capita thereby getting some idea of the breakdown of the influence of separate variables on the constituent parts of total national advertising per capita. Table II shows cross country regressions on five different kinds of advertising per capita, television, print, outdoor, radio, and cinema. The specification used in the table II equations is the same specification used in equation four of table I, that is, the equation that combines together all three explanatory variables in a multiple regression.

**TABLE II**
**CROSS COUNTRY REGRESSIONS ON THE VARIOUS KINDS OF ADVERTISING PER CAPITA**

|  | TV (1) | PRINT (2) | OUTDOOR (3) | RADIO (4) | CINEMA (5) |
|---|---|---|---|---|---|
| CONSTANT | 35.59 (2.50) ** | -8.51 (-.70) | 6.62 (1.67) | 6.77 (1.79) *** | .90 (1.68) |
| PCGDP | .0027 (7.16) * | .0058 (18.54) * | .0006 (7.52) * | .0006 (6.14) * | .0001 (7.35) * |
| TRADEGDP | .2011 (2.50) ** | .3204 (4.84) * | .0196 (1.07) | -.0050 (-.25) | -.0026 (-1.30) |
| GOVTGDP | -2.48 (-3.23) * | -1.66 (-2.61) ** | -.4967 (-2.65) ** | -.3133 (-1.57) | -.0449 (-1.96) *** |
| RSQ | .475 | .860 | .570 | .413 | .675 |
| N | 69 | 67 | 48 | 58 | 31 |

Inspecting table II and comparing table II to table I shows that the equations for television and print are exactly analogous to the total advertising per capita equation, equation (4), in table I. Just like total advertising per capita, all three variables seem to matter for both television and print advertising per capita. All three explanatory variables are significant at the five percent level of significance or better in equations one and two of table II, and, just as the case for total advertising per capita in table I, have the appropriate signs.

While per capita income is relevant for the remaining three forms of advertising per capita, outdoor, radio, and cinema, only one of the other variables, the percentage of government consumption to GDP, appears to matter for outdoor and cinema advertising and neither of the two other variables seem to matter for radio advertising. The percentage of government expenditure to GDP is significant at the ten percent level of significance or better in the outdoor advertising equation and is significant at the five percent level of significance or better in the cinema equation. In both equations, the percentage of government spending to GDP has the expected negative sign. In the case of radio advertising, neither of the two non income variables is statistically significant at the ten percent level of significance.

**CONCLUSION**

The cross country analysis indicates that greater economic development and greater economic integration increases national advertising intensity, but greater government involvement lowers advertising intensity. The current upward movement in economic growth and development in nations around the world and the present trend toward greater global economic interconnectedness are, therefore, two currents presently operating in the world to increase the intensity of advertising within nations. Hopefully, to some extent, the increasing dominance of business culture and the bias toward status goods at the expense of public and other goods that the expansion of advertising intensity entails, may be mitigated or counteracted by greater national involvement in the economy.

The argument aimed at advertising, advertising and status, and advertising and status goods, is not at all pointed at the obliteration of the existence of status. It is how we define status, what we define as high and low status, and how we define the whole constellation of characteristics and dimensions that constitute status that matters. These are extremely important areas of concern because the way we address these issues determines who we are, the way we live, and what we value. Matters of such import should not be determined by business through advertising and marketing, but answered publicly by society as a whole. In the business world, status is defined as possession of certain products and services which necessitate their production. The human desire for status can be placated in far more efficient ways, in far less costly ways, than by wasting valuable resources on the production of status goods and on the advertising required to make them status goods. In past times, in the earlier years of grade school, teachers often awarded successfully completed assignments and classroom activities with little gold and blue stars. Students would be unduly proud to obtain stars and compete furiously to get them. A box of a hundred of these stars would probably cost somewhere around a dollar in today's dollars.

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