International Journal of Public Opinion Research Vol. 6 No. 2 0954–2892/94 $3.00

MEDIA EFFECTS UNDER A MONOPOLY: THE CASE OF BEIJING IN ECONOMIC REFORM*

Xinshu Zhao, Jian-Hua Zhu, Hairong Li, and Glen L. Bleske

ABSTRACT

What impact do media have on public opinion when they are tightly controlled by the government, as in the People's Republic of China? Little reliable information is available for an answer, especially at the individual level. This study is a secondary analysis of a stratified random sample of 870 Beijing residents concerning economic reform in China during the mid-1980s. They were questionnaire-interviewed in 1986 with a 90 percent response rate. Regression and path analysis suggest that the government media were effective in increasing knowledge about reform and in affecting some attitudes, but it was less effective or totally ineffective in others. When compared with U.S. media studies, the magnitude of effects appears larger, a result consistent with message competition theory. This relatively new theory has been offered as an alternative to the classic 'selective exposure' and 'two-step flow' theories in explaining why little correlation has been found between individual media use and attitudes in the West. The theory predicts that competing messages tend to neutralize net effects of the media, while controlled media systems tend to show increased net effects.

Empirical studies of media effects on China's public opinion are scarce, according to communication scholars and political scientists (Houn, 1961; Yu, 1964; Schramm and Roberts, 1971; Barnett, 1979; Howkins, 1982, foreword; Chaffee and Chu, 1992). Media studies of China, however, can improve our understanding of political communication and its effect on public opinion. Besides providing important information about media effects upon one-quarter of the world's population, media studies of China can also serve as a comparison with similar studies in the USA—one being the largest Western democracy, and

* To support this research, Xinshu Zhao received the University Research Council Award and the Junior Faculty Development Award from the University of North Carolina at Chapel Hill, a summer research stipend from Pennsylvania State University School of Communications, and a faculty travel award from Chiang Ching-kuo Foundation. The authors thank Steven Chaffee, Stanley Rosen, and anonymous reviewers for their useful comments.

the other the largest 'remaining outpost of traditional communism' (Stevenson, 1994, ch. 8, p. 1). Using Chaffee and Chu's (1992) analogy, one may see China as a 'gigantic experimental group' and the USA as a huge 'control group'. The plausibility of competing theories can be tested by comparing the findings from the two groups.

This study has two objectives. First, we report a questionnaire-survey of Beijing residents to ascertain media effects during the Chinese economic reform in the mid-1980s. Second, to put our findings in theoretical perspective, we will compare findings from this study with studies conducted in the USA with similar variables. And to further understand our findings, we will use a path model that hypothesizes a chain relationship between residents' media use, knowledge, and attitudes with regard to economic reform and the Communist Party.

THE SEARCH FOR MEDIA EFFECTS

Studies in the United States during the 1940s and 1950s failed to find strong media effects on people's voting behavior and attitudes (Lazarsfeld *et al.*, 1944; Berelson *et al.*, 1954; see also Chaffee and Hochheimer, 1985; McLeod and Blumler, 1987; Rogers and Storey, 1987), leading to the conclusion that media do not tell people what to think (Cohen, 1963; McCombs and Shaw, 1972). Later studies found that media do have a clear impact on what people know (knowledge) and what they think about (agenda setting) (see, for example, Chaffee and Hochheimer, 1985; McLeod and McDonald, 1986; Chaffee and Schleuder, 1986; Iyengar and Kinder, 1987). Studies at the aggregate level (Page *et al.*, 1987; Fan, 1988; Shapiro *et al.*, 1991) found correlations between media content and public opinion, suggesting that media also may tell society what to think. Studies at the individual level, however, continue to report minimal correlation between media use and attitudes or voting behavior, reconfirming that media content has little effect on what individuals think (Rogers, 1988; Shaw, 1992).

During the search for theoretical explanation, 'selective exposure' and 'two-step flow' became two of the major conceptual bases for the 'limited effects' image: audiences tend to attend to, process, and retain only the messages that are consistent with their prior attitudes and experiences; and they tend to obtain information from opinion leaders, but not directly from the media (Klapper, 1960; Kraus and Davis, 1976). While early efforts to find supporting evidence have been largely unsuccessful, recent researchers (Chaffee and Hochheimer, 1985; Donsbach, 1991) suggested that the effects of selective exposure and two-step flow may have been overstated. In spite of that, 'the theoretical terms simply became "facts" independent of their empirical origins or lack thereof'

(Chaffee and Hochheimer, 1985, p. 82). Today, as classic theories, the ideas of selective exposure and two-step flow continue to appear in text books and synthesizing literature, and remain among the most influential in the field.

One alternative explanation for limited effects assumes that great media effects do occur, but that competition between messages leads to measurement problems (Chaffee and Hochheimer, 1985; Bartels, 1993). The argument, which we call 'message competition theory', posits that the mainstream media, trying to be balanced and objective, often report facts and opinions from all major sides of a debate or issue. Faced with opposing views—all having some merit, which is often in political communication—some people may change their opinions in favor of one side, some may change to the opposite direction, and others may change little after considering the arguments of all sides. As a result, the 'net effect' of the competing messages tends to be 'neutralized' (Chaffee and Hochheimer, 1985, p. 82). Or, in Bartels' (1993, p. 275) words, 'positive effects in one period canceled out negative effects in another period ... or because similar effects of roughly equal magnitude for both candidates canceled each other out.'

Comparison of Theories

Message competition theory and the two classical theories have very different implications regarding the nature of audience and media effects. Selective exposure implies a stubborn public that shuts itself off from opposing messages; two-step flow portrays a group of lazy citizens who rely on some opinion leaders to screen the information on their behalf; but message competition sees careful information seekers who pay attention to all sides of a debate in the media, and form or change their opinions after weighing pros AND cons. 'Selective exposure' and 'two-step flow' speculate limited effects; but 'message competition' distinguishes the 'total effect' from the 'net effect'—while 'the net effect is usually quite small ... the total effect is often large' (Chaffee and Hochheimer, 1985, p. 85).

The message competition theory has yet to make an impact in the field, but it would be quite a challenge to design an empirical test with traditional survey techniques. The easily measurable 'net effect' (the correlation between overall media use and overall attitude or attitude change) cannot help here because all three theories predict the same result—no net effect. The 'total effect' is more difficult to determine. Measurement error of the independent variable would be large, because we would have to measure exposure to the messages of EACH argument, based on respondents' self-assessment and memory. It would be even more difficult to assess which part of the input message is responsible for which part of the attitude.

The differences between the media systems in China and in the USA—one being one of the most tightly controlled and another among the freest (Yu, 1971; Barnett, 1979; Liu, 1981; Howkins, 1982; Rogers *et al.*, 1987; Chaffee and Chu, 1992)—present an opportunity for researchers. While all three theories make the same prediction regarding net effect under message competition, they predict differently if such competition is significantly restricted.

Message competition theory sees competition as the major cause of the observed small correlation, which indicates small net effects. Therefore, as the competition decreases, the net effect should increase. In fact, the net effect becomes total effect as media control approaches total monopoly. In a totalitarian state, competing messages are banned or seriously restricted, so media messages that advocate the ruling party's views would appear simpler, more coherent, and therefore more memorable. Although media use in the West has been found to be correlated with audience *knowledge*, under a totalitarian system the correlation should be even higher. Further, the audience of a controlled media would also find its messages more reasonable, unchallenged, or even unchallengeable. This allows a government-produced message a greater opportunity to persuade those people who, under media competition, would find such messages less persuasive. Although minimal correlation has been found between media use and attitude in the West, under a totalitarian system some correlation is expected to emerge.

According to selective exposure theory, however, messages simply cannot penetrate the minds of people with opposing views. Subsequently, when messages are tightly controlled by the government, audience members with dissident views would not attend, process, or retain any media messages. Therefore, the media would be less efficient than competitive media in helping people become aware of government views. Also, because media can only reinforce favorable pre-existing attitudes, media effects on attitudes would be as small under monopoly as under competition.

The two-step flow theory emphasizes interpersonal channels and de-emphasizes mass media. So it would not predict any different media effects due to an increase or decrease in the degree of media control—the mass media would be as ineffective under monopoly as they are under competition. If we are to agree with some Western scholars' observation that the interpersonal channels were even more important in China (Liu, 1981; Howkins, 1982), the two-step flow theory should predict even less impact for the Chinese mass media.

Of course, the processes described by the three theories are not necessarily mutually exclusive—it may be more reasonable to expect all three to operate simultaneously in a society. The question is, which process dominates? That is, which of the three theories may best explain the minimal correlation between media use and attitudes found in the West?

Media Effects in China

Scholars in the West once believed that Chinese (PRC) government propaganda was effective and powerful (Yu, 1971; Berger, 1974; Chu *et al.*, 1976; Parish and Whyte, 1978; Rogers, 1979; Bishop, 1989). This picture has changed gradually since the late 1970s as newly emigrated Chinese abroad and foreign correspondents in China reported that government propaganda has had little impact (Parish, 1979; Nathan, 1985) or has failed completely (*NYT*, 1990). Even Li Ruihuan (1991, p. 2), the powerful Politburo Standing Committee member overseeing propaganda, publicly suggested that Chinese mass propaganda was 'far less' effective than even 'the propaganda of Chinese feudal rulers'.

The bases of those assertions are personal observation, Chinese government publications, and accounts of refugees and travelers. Sampling surveys or psychological experiments were practically prohibited in China until the mid-1980s (Schramm and Roberts, 1971; Lampton *et al.*, 1986; Wong, 1979; Rosen and Chu, 1987; Rosen, 1989*b*). The prevailing methodology has been limited in terms of validity and reliability. It also limits our understanding largely to the societal level, e.g., 'how the propaganda campaigns affect Chinese society as a whole', as opposed to the individual level, e.g., 'whether heavy media users and non-users differ in opinions'.

The lack of reliable evidence has troubled Western China watchers. They often spoke about the need for 'careful public opinion studies' (Houn, 1961, p. 2) and 'audience research' (Briggs, in foreword to Howkins, 1982) on the basis of 'reliable statistics' and 'detailed facts' gathered through 'on-the-spot observation', 'intensive, direct interviewing', and 'deeper analysis' (Yu, 1964, p. 9; Barnett, 1979, p. 395).

In response, we will join a few researchers (Zhao, 1989; Chaffee and Chu, 1992) to 'blend' the 'American technical wizardry' with the 'Chinese subtle appreciation', an effort that Rossi (1985, p. 132) predicted will lead to 'an exponential intellectual growth' in 'explanatory power of social science'.

DATA COLLECTION

Our study is based on a secondary analysis of survey data collected in the spring of 1986 under the name of the China Economic System Reform Research Institute (CESRRI) to investigate public response to the reform. It was founded by former Premier and Party General Secretary Zhao Ziyang in 1984 as a think-tank to guide strategic planning. It was regarded as the leading social research institute in China for its methodological sophistication and its closeness to the power center (Rosen, 1989*b*). According to Rosen (1989*b*, p. 159), '(CESRRI's) extensive research project on the effects of urban industrial reform became the crucial impetus for public opinion work based on scientific sampling (in China).'

The respondents to this particular survey were a stratified random sample of all the permanent adult legal residents of Beijing Municipality, which is one of China's 30 provinces/municipalities/autonomous regions and which includes ten urban districts and nine rural counties.

A total of 870 interviews were completed with a high (90 percent) response rate. After comparing them with the statistics of gender, occupation, and place of residence reported by the 1982 census and the official *Statistical Yearbooks of P. R. China* (State Statistical Bureau of People's Republic of China (SSBPRC), 1983, 1984, 1985, 1986, 1987; Domschke and Goyer, 1986), we found no reason to question the quality of this sample.

To reduce response bias from those who might perceive interview pressures, the literate respondents (95 percent of the sample) completed the questionnaires with no interviewers present. Completed questionnaires were thrown in a pile or a box, to be picked up later. Also, in the cover-page instructions, respondents were told that 'neither your name nor your unit will be recorded', that 'we are interested in *your* situation and *your* opinion—there are no right or wrong answers.' Further reducing the chance of response bias was the fact that interviewers were university students and teachers—who enjoy more trust than reporters and much more than officials (see Zhao and Yu, 1993).[1]

MEASUREMENT

Dependent Variable: Knowledge

Seven matching questions and six multiple choice questions measured respondents' knowledge about the major events, figures, and policy changes related to economic reform (see Appendix 1). The internal reliability (Cronbach Alpha) is .85. In U.S. media effect studies, knowledge has been considered an indicator of a citizen's ability to perform various civic duties and has been considered an important dependent variable (e.g. Patterson and McClure, 1976; Chaffee and Schleuder, 1986; McLeod and McDonald, 1986; Drew and Weaver, 1991). In the present study, knowledge is measured in terms of policy awareness, and it is seen as a preliminary indicator of campaign effectiveness. To ease interpretation in regression analysis, the knowledge variable was transformed to a scale from 0 to 100, indicating percent of questions answered correctly.

[1] We have to recognize that Beijing residents hardly represent the Chinese population. An area of 10 million people, the municipality is the political, cultural, economic, and communication center of China and the birthplace of several earthshaking movements, including May 4th, the Cultural Revolution, and the 1989 Democratic Movement. Beijing residents are on average more educated and more politically active. Beijing's importance, however, makes it an excellent starting point to understand the whole nation.

Dependent Variables: Attitudes

Thirteen questions measured respondents' attitudes on a five-point Likert scale (see Table 1). The results of a factor analysis met our expectations, both in terms of the number of factors extracted, and in terms of the specific items loaded on each of three factors (see Table 2): 'Attitude Toward Reasons for Reform' (the logic of reform), 'Attitude Toward Reform' (policy), and 'Attitude Toward the Communist Party.' The Cronbach Alpha for each of the three ranges from .52 to .75. The three attitude variables were formed by taking the average weighted by factor loadings. To ease interpretation in regression analysis, all three attitude variables were transformed to a scale from 0 to 100, where 100 indicates strongest support for the party or reform and 0 indicates strongest opposition.

The seven questions associated with the variable 'Attitude Toward Reasons for Reform' are based on statements that indicate neither agreement with economic reform policies nor opposition. Instead, these questions captured respondents' attitudes toward various logical arguments surrounding economic reform, issues over which many Chinese disagreed. The three 'policy' statements, comprising the 'Attitude Toward Reform' variable, reflected abstract ideas supported by most Chinese: improvement of people's lives, government policy should reflect the people's will, and modernization. The three concepts had been used by the government so often that they became well-known slogans in support of reform. To agree with the slogans was to agree with reform policy itself.

Independent Variable: Media Use

As shown in the Appendix, media use was measured by asking respondents how often they read the newspaper, listened to the radio, or watched television for news. In regression runs, we may (1) enter the three variables as one block, or (2) enter three variables alternately, or (3) form a new variable (*media-use*) by taking the average of the three. To benefit from the strength of all and to avoid the weakness of each, we will report statistics from all three approaches (see Table 3). To ease interpretation in regression analysis, all media-use variables were transformed to units indicating the number of days per week a respondent used the media.

Control Variable: Dependence of Opinion

In a Leninist state, some respondents may report what they think to be the party's opinion instead of their own opinions (Welsh, 1981; Chaffee and Chu, 1992). This is particularly a problem if 'yielding to the party line' is associated with media use, and such yielding affects attitudes, leading to spurious

TABLE 1 **Chinese Attitudes Toward the Logic of Reform, Reform Policies, and the Communist Party**
Question 23: Do you agree with the following statements?

		D	*SD*	*N*	*SA*	*A*	*M**
				percent			
A-REASON, Attitudes toward reasons for reform (Logic of reform)							
1	If the reform goes on, it's hard to say that our country is still socialist.	52	27	1	11	8	0
2	The current situation of our nation's economic development (under reform) is worrisome.	37	29	1	18	14	0
3	Reform will inevitably create a society in which everyone is only after money.	44	32	1	11	13	0
4	If it was all right to reform, it has gone too far by now.	37	39	2	15	8	0
5	The open door policy has brought in so many negative things that the gain is not worth the harm.	43	36	2	11	9	0
6	Whether the reform will be successful or not does not have much to do with my personal interests.	62	22	1	8	7	0
7	The level of people's thoughts (ethics and morality) will naturally advance when their lives prosper.	23	14	2	13	39	0
A-REFORM, Attitudes toward reform policies:							
8	No reform, no hope for socialist modernization.	5	8	1	28	59	0
9	People's lives can be significantly improved ONLY if we reform.	3	8	1	32	57	0
10	In the past ten years, the direction (of reform) along which our society is developing is where people wish to go.	3	8	1	41	48	0
A-PARTY, Attitudes toward party:							
11	It is possible that the wild spread of disgusting behavior within the Party will be corrected within two years.	13	29	1	35	21	<1
12	No matter what problems arise in the reform, the Party and the government can eventually overcome them all.	3	11	1	33	53	<1
13	The Party's policy of reform in the recent several years is a success.	2	11	1	50	37	0

*$N = 870$; D: Disagree, SD: Somewhat Disagree, N: Neutral, SA: Somewhat Agree, A: Agree, M: Missing/no response, etc.

Note: in data analysis, all negatively worded questions are recoded to pro-party, pro-reform direction.

TABLE 2 Factor Analysis for Attitude Variables

Factor Loadings adapted from structure Matrix (Oblique rotation)

	A-REASON	*A-REFORM*	*A-PARTY*
1	.705	.187	.128
2	.691	.204	.259
3	.687	.109	.151
4	.662	.194	.061
5	.592	.274	−.104
6	.579	.193	.045
7	.484	−.114	−.305
8	.097	.816	.036
9	.285	.756	.285
10	.348	.420	.390
11	−.054	.067	.740
12	.067	.099	.730
13	.230	.368	.596
Cronbach Alpha	.75 (7 items)	.52 (3 items)	.54 (3 items)

Criterion for factor extraction: eigen value > 1.
Total variance accounted for by 1 factor: 25.5 percent; by 2 factors: 39.3 percent; by 3 factors: 47.9 percent.
Numbers in bold were also used as weights in constructing the three attitude variables.

independent–dependent relations. To address this concern, respondents were asked what they would do if they found their opinions different from the media's. In the variable *opinion–dependence*, categories 1 to 7 were treated as an ordinal scale, with 1 (those who 'never change own opinion') being the most independent, and 7 (those who report no differences with the media—and therefore are assumed to have no opinion of their own) being the most dependent. Two types of answers do not fit into this ordinal scale: 'it's hard to say' or no valid answer. A dummy variable (*dependence dummy*) was created for such respondents (1 if in one of the two categories, 0 otherwise; see Cohen and Cohen, 1983, p. 284–6).

CONTROL VARIABLES: PARTY MEMBERSHIP AND YOUTH LEAGUE MEMBERSHIP

Another possible confounding factor is political party affiliation. The Chinese Communist Party and Communist Youth League constitute politically privileged groups that have no counterparts in Western countries. Party or League members may feel more obligated than others to support the party and to seek and read government publications, leading to a misleading correlation between

media use and attitudes. This concern is addressed by including two dummy variables (*Party* and *League*: 1 if, respectively, Party member or League member, 0 otherwise) in the regression analysis.

Control Variables: Education, Gender, and Age

Another confounding factor is education: it may affect the time spent with media and also affect attitudes. *Education* is therefore included. Also included are *Gender* and *Age*, variables that often are controlled for in media and public opinion research in Western countries.

REGRESSION ANALYSIS AND FINDINGS

Effects of Control Variables

As shown in Table 3, most of the seven control variables make strong contributions even when all the others are controlled for. As expected, the opinion-dependent people tend to support the party line on every issue, and party members tend to be more understanding of the reasons for reform and to be more supportive of the reform policy. Also as expected, the educated are more knowledgeable, and their attitudes are more favorable toward all aspects of reform. Those who were unwilling or unable to answer the opinion–dependence question are less knowledgeable and less supportive of the reasons for reform. Interestingly, the Communist Party members have no more confidence in their own party than others do, and the educated are more likely to distrust the party. Education is by far the strongest predictor of knowledge, attitude toward reform logic, and attitude toward reform policy. It is also the second best predictor of attitude toward the Party.

Although the two opinion dependence variables have clear impact on four dependent variables, a comparison between the single correlation matrix and the results of multiple regression suggests that these two variables did not hinder or distort the relationship between other variables.

The total variances in the dependent variables explained by the control variables are 39 percent for knowledge about the reform, 25 percent for attitude toward reasons for reform, 5.7 percent for attitude toward the reform policy, and 8.4 percent for attitude toward the Communist Party. These are stringent controls when compared with similar studies in the USA (e.g., O'Keefe, 1980; Chaffee and Schleuder, 1986; Culbertson and Stempel, 1986; McLeod and McDonald, 1986; Pettey, 1988; Neuwirth *et al.*, 1989). The O'Keefe (1980) study, which according to McLeod and McDonald (1986) has 'the most stringent controls' among U.S. studies, has three control variables and three media variables that together account for 1 to 9 percent of the variances in 11

TABLE 3 Media Effects on Knowledge and Attitudes

Dependent Variables	*Equation 1* *Knowledge*	*Equation 2* *Attd-Reason*	*Equation 3* *Attd-Reform*	*Equation 4* *Attd-Party*
Control block[a]				
Opinion dependence	0.28 (.01)	1.7 (.09)***	1.1 (.07)*	3.2 (.19)***
Dependence dummy	−11 (−.14)***	−5.4 (−.08)**	−2.9 (−.05)	−2.6 (−.04)
Party member	14 (.21)***	9.1 (.17)***	4.5 (.09)*	2.0 (.04)
League member	3.8 (.05)	5.1 (.09)**	2.4 (.05)	−3.1 (−.06)
Education	13 (.48)***	7.4 (.35)***	2.1 (.11)**	−3.5 (−.17)***
Gender (male = 1)	1.7 (.03)	3.5 (.08)**	3.2 (.08)*	−0.68 (−.02)
Age	0.17 (.07)*	0.29 (.16)***	0.12 (.08)	0.09 (.05)
Media use (indiv.)[b]				
Newspaper reading	3.8 (.34)***	1.2 (.14)***	0.75 (.10)*	−0.09 (−.01)
Radio listening	1.8 (.17)***	1.0 (.12)***	0.92 (.12)***	0.26 (.03)
TV watching	1.4 (.12)***	−0.02 (−.00)	0.29 (.04)	0.26 (.03)
Media use (block)[c]				
Newspaper reading	3.4 (.31)***	1.0 (.12)**	0.43 (.06)	−0.27 (−.03)
Radio listening	0.51 (.05)	0.81 (.09)**	0.78 (.10)**	0.28 (.03)
TV watching	0.45 (.04)	−0.51 (−.06)	0.04 (−.01)	0.25 (.03)
R^2 due to controls (in percent)	39.0***	25.0***	5.7***	8.4***
Inc. R^2 due to media use block (in percent)	9.1***	2.2***	1.4**	0.2

*$p < 0.05$ **$p < 0.01$ ***$p < 0.001$.

[a] The following seven rows are regression coefficients and standardized betas (the latter are in parentheses) when the seven control variables are entered as a block.

[b] The following three rows are regression coefficients and standardized betas when each of the three media-use variables is added separately and alternatively on top of the seven control variables.

[c] The following three rows are regression coefficients and standardized betas when all three media-use variables are added simultaneously as one block on top of the seven control variables.

dependent variables (the contribution of control variables alone should be much smaller because O'Keefe reported significant media effects). In the McLeod and McDonald (1986) study, which used variables similar to ours, two control variables accounted for 15.2 percent of the variance in economic knowledge and 2.2 percent of the variance in economic attitude.

If any media effect is to emerge despite our strong controls, it should be powerful.

Effects of Media Use

Entered separately and alternately, the three media use variables display clear impact on the respondents' knowledge, which for regression was scored on a scale of 0 to 100 percent correct. An additional day (per week) of reading newspapers is associated with an increase of 3.8 percentage points in knowledge score. Each day of listening to the radio or watching TV is associated with a knowledge gain of 1.8 and 1.4 percentage points, respectively.

Both newspaper reading and radio listening, but not TV watching, display moderate impact on attitudes toward reform logic and the reform policy—an additional day of reading or listening per week is associated with an attitude change of about 1 point (ranging from .75 to 1.2, on the constructed scale of 0 to 100) in favor of reform. None of the media-use variables appears to have a clear impact on respondents' attitudes toward the Communist Party.

Entered simultaneously as a block, three media variables display a considerable impact on knowledge ($\Delta R^2 = 9.1$ percent), a moderate impact on attitude toward reform arguments ($\Delta R^2 = 2.2$ percent), and a modest impact on attitudes toward the reform policy ($\Delta R^2 = 1.4$ percent). But the variables had little impact on attitude toward the party ($\Delta R^2 = 0.2$ percent, NS).

Comparison

In general, the changes in R^2 for media exposure are much higher than those reported by studies conducted in the USA analyzing similar variables with similar models (e.g., O'Keefe, 1980; Patterson, 1980; Chaffee and Schleuder, 1986; Culbertson and Stempel, 1986; McLeod and McDonald, 1986; Pettey, 1988; Neuwirth *et al.*, 1989; Zhao and Xie, 1992), even though this study has much stronger controls. In predicting economic knowledge, for example, our test is based on 38.3 percent variance due to controls, while the often-cited McLeod and McDonald (1986) study had 15.2 percent due to controls. Yet, the R^2 increase due to media exposure in China is 9.1 percent as compared with 2.9 percent due to the two media-use variables in the U.S. study.

McLeod and McDonald (1986) also reported effects of media use on economic attitudes of the U.S. audience. Their findings are comparable to our results

regarding attitude toward reasons for reform and reform policies. Again, our test is based on more stringent controls (24.5 and 5.7 percent variances explained in our equations versus 2.2 percent in theirs). The change in R-squares due to media use in our study is 2.5 and 1.4 percent as compared with a statistically non-significant 0.3 percent due to two media variables in their study.

In a cross-study comparison, it would be desirable to examine the non-standardized regression coefficients because they are, in theory, not affected by measurement errors and they can be interpreted with less technical language. We are unable to perform such comparisons here because media studies in the West typically do not report raw coefficients but only standardized beta and R^2. We report all three of ours in Tables 3, hoping to aid future comparisons.

In part the differences in R^2s may be explained by the lack of message competition in China. By their nature, monopoly messages are clearer and more cohesive, therefore easier to learn and remember, leading to a higher correlation between exposure to the official media and a respondent's knowledge of what the media are saying. The lack of counter arguments also makes the media messages appear more reasonable and persuasive, leading to a higher correlation between media use and attitudes in support of the government policy.

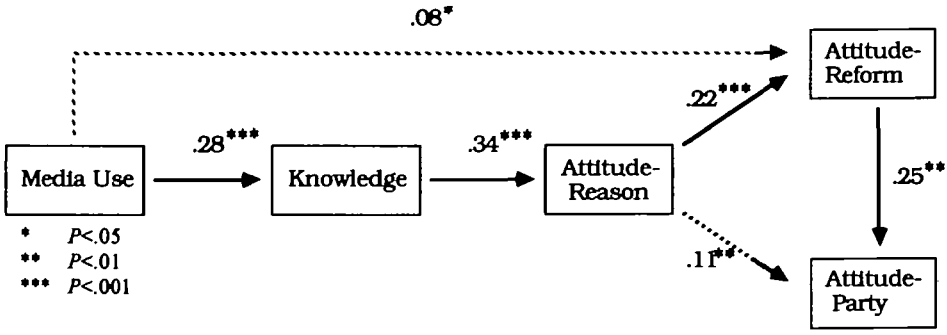
But the government media, even though controlled, have their limit. There is little detectable effect on attitudes toward the Party. The media effect on attitudes toward the government policy is moderate at most, even though the policy itself was quite popular.

A PATH MODEL

The pattern of changes in variance explained (see Table 3) has led us to a *post hoc* analysis of the data by using a classical marketing theory. The effect of media use is strongest for knowledge and monotonically decreases from left to right until it becomes a non-significant close-to-zero for attitude toward the Party. The pattern may be explained by a chain relationship—media use affects knowledge, which affects attitude toward arguments for reform, which affects attitude toward the reform campaign, which affects attitude toward the Communist Party (the four relations are represented in Figure 1 by four arrows with solid lines). Because there must be some effect losses in each link, the cumulative loss increases along the chain, and therefore the overall media effect (as indicated by ΔR^2 due to media use) decreases along the chain.

There is some theoretical support for this suspected chain relationship. First, it coincides with the Party's propaganda strategy at the time—Deng Xiaoping and his allies encouraged some reporting about past problems and the unsatisfactory present of Chinese society, hoping that (1) those facts might justify reform for a better future; and (2) popular support for reform might lead to

FIGURE 1 Media effects on knowledge and attitudes (path model) after controlling for demographic and psychological variables



renewed support for 'the proposer and the leader of the reform', the Party, whose credibility had become intolerably low after the Cultural Revolution (see Hu, 1985; Li, 1990; Zhu, 1989; Zhuang, 1989).

Second, the chain coincides with learning theory (Lavidge and Steiner, 1961; Ray, 1973; Chaffee and Roser, 1986), which portrays a thinking, rational audience whose knowledge acquisition precedes reasoning, which precedes attitude change, which precedes behavior change. Ray (1973) concluded that the learning model should be used when product (issue) involvement is high, and differences between alternative actions are clear. Such was the case in Chinese economic reform. The involvement was high—economic reform policy was often regarded as the most important Chinese government policy in the 1980s as it affected the daily life of almost every person (Vogel, 1989; Chen, 1990). Opinion polls based on sampling surveys, as well as personal observations by Chinese and foreign correspondents/scholars, reported that ordinary Chinese paid close attention to the events related to reform (e.g. *People's Daily*, 1988; Nathan, 1990; Vogel, 1989; Chen, 1990). The differences between alternatives were clear. To most Chinese, reform meant to move China forward; no-reform or pseudo-reform meant to let China stay where it was, or move it backward to the 1950s (Vogel, 1989; Chen, 1990).

To test this chain relationship, a linear path analysis was completed using multiple regression analysis and is reported in Figure 1 using standardized beta coefficients to indicate the strengths of the paths. To simplify the graph, the seven control variables have been omitted. Also omitted are those paths that failed the conventional significance test ($p = .05$).

All four hypothesized paths found strong support. Two unexpected paths (represented in Figure 1 by two arrows with dotted lines) also survived the .05 significance test. They are, however, by far the two weakest paths in the model (.08 and .11, versus the next smallest beta: .22).

In the West, learning theory has been used mainly in the context of consumer behavior research, but not political communication, partly because of the measurement difficulties in the face of message competition. For example, although knowledge may indeed affect people's attitudes, different kinds of knowledge have different effects, which may cancel each other to produce little observable net effect. The fact that the link between knowledge and attitude appears strong in this data set indicates that the kind of knowledge the Chinese people can learn from the media is largely one-sided, a result that is consistent with message competition assumptions.

Since the path model technique does not rule out reverse causality or the possibility that the data might fit a competing model, we performed a number of simultaneous equation tests. All the major paths in Figure 1 were supported by the results, and competing models, including those assuming reverse causality, rejected.[2] This result gives us more confidence in our regression results, although it should not be considered definitive—simultaneous equations with cross-sectional data could be affected by extraneous factors such as measurement error.

DISCUSSION

Despite the various measures we have taken, this study shares the methodological limitations of a one-time survey. We do not have the data to measure attitude change over time. In the search for theoretical explanation, we also share the limitations of most cross-national comparisons (and most cross-study comparisons): exact comparability is almost impossible. For example, it is tempting to attribute the stronger effectiveness (as indicated by the changes in explained variance) to the government's media control. But idiosyncracies relating to time, location, and content of the media messages may be responsible for the differences in effects.

To determine the impact of media control versus competition, a controlled field experiment would be desirable. When such an experiment is infeasible, one may reduce the effect of idiosyncracies by comparing several campaigns under government media control with several campaigns under competition. We are unable to conduct such a comparison now, because we cannot find another study from a Communist system that uses a multivariate approach to analyze variables similar to ours. Obviously, more studies of Communist systems are called for.

It is, however, unlikely that such idiosyncracies have played a significant role in our results. Our comparison would be invalid if the U.S. studies we discussed

[2] The theoretical justifications of the competing models and the technical details of the tests amount to a lengthy report, which is available upon request from the first author.

were unrepresentatively *in*effective or if the Chinese campaign were unrepresentatively effective. Neither is likely. Many Chinese and Western scholars and propagandists have observed that media propaganda in China has been far less effective in recent years than in the 1950s, 1960s, and 1970s (e.g., Rosen, 1989*a*,*b*, 1990; Li, 1991; Zhao and Shen, 1993). The U.S. studies were conducted by different researchers at different locations and times. There is no clear reason why those U.S. campaigns would be less effective than an average campaign. Indeed, they are probably more effective than average because a study reporting null effects would have less chance of appearing in an academic journal.

It is also unlikely that methodological differences have contributed to the magnitude of change in R^2s. The R^2s due to controls, which are negatively correlated with the additional explanatory power of the independent variables, are much higher in this study.

Much has been said about the difficulties in conducting public opinion research in Communist countries, including the concern that respondents may not reveal their true opinions. Our finding appears to suggest that such problems could be addressed with various techniques during data collection and analysis. As a result, there are still considerable variances in even quite sensitive attitude measures, and the possible measurement errors were small enough to allow the relationship between attitudes and other variables to be detected. While the tendency to go along with the Party line has a clear impact on Chinese respondents' expressed opinions, such a tendency did not appear to hinder or distort the observed relation between other variables.

Methodological cautions aside, this study suggests that the government media in the Beijing Municipality during the mid-1980s were very effective in disseminating information about economic reform, quite effective in persuading the audience to understand the reasons for the reform, somewhat effective in persuading the audience to support the policy of reform, but ineffective in rallying support for the Communist Party.

Several factors may have contributed to such phenomena. One may simply be the nature of a hierarchy—the original messages had to go through a series of cognitive stages before they could affect the attitude toward the Party. Although effect exists at every stage, the accumulated loss of effect at all stages makes it difficult to rally support for the Party. A second factor may be saturation, since rallying support for the Party has been a constant theme of government propaganda since the 1940s. Those Chinese who could be easily persuaded should have been converted a long time ago, and it may not be easy to produce any new converts some 40 years later. In contrast, reform was a new concept, and therefore it provided more opportunity for the media to have a significant effect.

A third factor may be the interaction between the *lack* of selective exposure and the audience distrust of the media. After the Cultural Revolution, the credibility of the government media was low (*NYT*, 1990; Rosen, 1989*a*,*c*; Zhao and Shen, 1993). But the audience *had to* rely on the media for certain information available mainly from the media, including facts about China's economic condition or government policies, so the low credibility was not a big barrier. At later stages of the learning hierarchy—where persuasion involves not only information acquisition, processing, and retention, but also attitude or behavior changes—the influence of low credibility increases, as does the competition from discontent and foreign voices through mass media and interpersonal channels. This reasoning is consistent with the findings (Zhu, 1990) that alternative information channels have a significant association with economic attitudes but not with knowledge.

Despite the barriers, the media effect we report is substantive, as compared with media effects in the West. The Chinese government media may not be as effective as they used to be, or as some Western scholars thought they were, or as Communists want them to be. The media may not be effective enough to motivate the Chinese public to hail the 1989 Tiananmen crackdown, or to preserve the Leninist system forever, or to prevent democracy from eventually prevailing. But the gigantic machine was still powerful, at least in an important area at an important time during an important campaign.

The relatively large media effect in China is difficult to explain by the theories of selective exposure or two-step flow, which predict minimum effects or at least effects no larger under a monopoly than under competition. The theory of message competition appears more plausible—people do attend to, process, and retain all kinds of information from the mass media, consistent or inconsistent with their prior knowledge and attitudes. When the information flow is relatively free, people would be affected—they would make more informed decisions. But the effects would be difficult to detect, because different effects are at different and often opposite directions. When such competition is suppressed, people would hear and remember only the government side, and therefore would be more likely to be persuaded, leading to a clearer effect of the official media.

APPENDIX

KNOWLEDGE

Six knowledge items were multiple choice questions regarding who is the author of the short story *Bus Aria* (46 percent correct); which big plant recently started operation (61 percent); with whom did Central and provincial Party and government leaders hold direct talks about reform (27 percent); how many 'urgent problems' were identified in a recent Party document about corruption (23 percent); what resolution was discussed and

passed by a recent National Party Congress (56 percent); and what was the main theme of Vice Premier Tian's recent speech (23 percent)?

Seven knowledge items asked respondents to match names to titles. Names included: Ma Shenli (61 percent correctly identified); Sheng Qishan (64 percent); Tian Jiyun (72 percent); Ma Xueliang (37 percent); Zheng Changlu (10 percent) Qu Xiao (62 percent); Wen Yuankai (23 percent). Titles included; Vice Premier; Vice Chairman of China National Labor Union; Former director of Beijing Utility Bureau; Vice President of Yingkou College of Education; Associate Professor at China Science and Technology University; Chief Manager of Shijiazhuang Paper Mill; War Hero of Laoshan front; and the Party member from Jilin Province who led his fellows to prosperity.

Media Use

Media use was measured by asking respondents: (1) How often do you read newspapers? (2) Listen to news on the radio? and (3) Watch news on television? For each variable, respondents' choices were (1) Never (8 percent newspaper, 7 percent radio, 4 percent television); (2) Rarely, or at least once a month but less than once a week (10 percent, 11 percent, 7 percent); (3) Occasionally, or 1 to 3 times a week (21 percent, 30 percent, 17 percent); (4) Often, or more than 3 times a week but not every day (33 percent, 30 percent, 36 percent); and (5) Every day (27 percent, 29 percent, 35 percent).

Opinion Dependence

It was measured by asking respondents what they do when they find their opinion on current issues is different from the opinion expressed in the government media. Respondents' choices were: (1) I only trust my own observations and judgment, but not a different opinion (8 percent); (2) I am willing to listen to different opinions, but I rarely accept them (6 percent); (3) I am willing to accept a different opinion if it is very convincing (23 percent); (4) I will accept the opinion of the media if it is reasonable and will not accept it if it is unreasonable (34 percent); (5) I will first examine my own opinion and correct it if it is incorrect (6 percent); (6) I will accept the media's opinion and correct my own opinion (7 percent); (7) I never found a news story or commentary's opinion to be different from my own opinion (3 percent); (8) It's hard to say (8 percent); (9) No valid answer (5 percent).

Other control variables included: Party affiliation (Communist Party Member, 22 percent; Communist Youth League Member, 20 percent); Education (College, 20 percent; Senior High School, 35 percent; Junior High School, 32 percent; Primary School, 9 percent; Illiterate, 4 percent); Gender (Male, 50 percent; Female, 50 percent) and Age (Mean = 35, SD = 12, High = 83, Low = 18).

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BIOGRAPHICAL NOTES

Xinshu Zhao is an Assistant Professor of Journalism and Mass Communication at the University of North Carolina at Chapel Hill. His research interests include political communication and advertising in China and the USA.

Jian-Hua Zhu is an Assistant Professor of Communication Sciences at the University of Connecticut. His research interests include the impact of mass media on public opinion and political participation in democratic and non-democratic societies.

Hairong Li is a doctoral student at Michigan State University. He is completing his dissertation in advertising research.

Glen Bleske is an Assistant Professor at California State University, Chico.