

AN INVESTIGATION OF CONSUMER EXTERNAL INFORMATION SEARCH FOR PROFESSIONAL SERVICES

MICHAEL T. ELLIOTT, *University of Missouri - St. Louis*

The present study proposed and evaluated a model of consumer information search for professional services (legal, medical, dental, and accounting). A national sample of 338 "new residents" revealed that personal search (i.e., referrals, interpersonal) was the predominant information source used while media search contributed best to the formation of evoked sets. In addition, several search determinants - age, service knowledge, perceived risk, purchase involvement, and city size - were successful in explaining variation in external search effort. Managerial implications and future research directions are provided for this area of investigation.

INTRODUCTION

Providers of consumer professional services (e.g., physicians, lawyers, dentists, accountants) are becoming more aware of the critical need to adopt aggressive marketing approaches when conducting their business activities. In recent years, the restrictions on advertising by professional associations have been lifted and the increased level of competition has forced professional service providers to rely increasingly on marketing techniques such as awareness programs, networking, and specialization of services (Fisher 1989).

These marketplace changes have also spurred research interest in the pre-purchase information search process as it relates to the acquisition of professional services (Frieden and Goldsmith 1988; Frieden and Goldsmith 1989; Dawes, Dowling, and Patterson 1993). The large body of research related to consumer information gathering has focussed on a variety of durable and nondurable goods as well as some services (Newman and Staelin 1972; Beatty and Smith 1987; Kiel and Layton 1981; Furse, Punj and Stewart 1984; Swartz and Stephens 1984). Yet, the same extent of theoretical development has not been evident in the professional services area. Further, the services marketing literature suggests that because of inherent differences in the nature of professional services (e.g., intangibility, variability) and the scarcity of marketplace information often accompanying their acquisition, extensive re-

search is needed to understand how these affect both the intensity and direction of search behavior.

The present study was designed to consolidate and extend previous efforts in three way:

1. First, this paper attempts to develop a more comprehensive measure of external search effort by considering both the direction of search (source usage) and the degree of search (search effort) for professional services. While studies of durable and nondurable goods have implicitly considered effort in measuring information search, the limited empirical work in professional services has not addressed this distinction.
2. Second, this study focuses more extensively on the psychological and situational determinants of external search effort for professional services. Previous studies of professional services, relying primarily on demographic variables, have not considered the impact or risk, involvement, knowledge, and situational factors in accounting for differences in search behavior.
3. Third, this study utilizes a national sample of new resident consumers who represent those consumers most likely to participate in extensive search behavior for new professional service providers. Because their life patterns are disrupted by relocation, new residents must re-establish numerous transactional relationships including retailers and service providers (Wilkie 1986). Also, the extent of internal search activity for this population should be considerably

less than others, thus allowing a better assessment of external search.

PROFESSIONAL SERVICES MARKETING

With more than three-fourths of the U. S. Labor force being employed in service industries and approximately 47 percent of each consumer dollar being spent on services (U.S. Department of Commerce 1992), the importance of this sector of the economy is unmistakable. Moreover, services marketing is becoming a recognized area of the marketing discipline. Strategically, the characteristics of services which distinguish them from tangible goods - inseparability, heterogeneity (high variability of performance), inseparability of production and consumption, and perishability - often require marketers to place customer interaction in a different light (Zeithmal, Parasuraman, and Berry 1985).

Substantial differences exist among services as well. Gronross (1979) offered several factors which distinguish "professional" services (e.g., lawyers, dentist, management consultants) from "other" services (e.g., cleaning and maintenance, personal care). He suggests the following unique features of professional services: the service is often provided by professionally qualified personnel; these professionals have an identity such as a "lawyer" or "financial consultant"; the services are advisory and focus on problem solving; and they are generally commissioned on an assignment basis.

Berry (1975) contends that consumer search for traditional goods and services differ markedly and that product-based strategies are often ineffective for services. Moreover, Hill and Neeley (1988) argue that there are significant differences in the search processes for professional services as opposed to generic (other) services. First, professional services consumers often experience higher levels of perceived risk due to time pressures and a lack of guarantees of performance. Second, the technical nature of most professional services and the scarcity of marketplace information (i.e., advertising) often make consumer evaluation difficult. Third, there is a lack of neutral, public information sources (e.g., *Consumer Reports*) when consumers select professional providers. As a result, individuals tend to depend heavily on personal sources of information such as family or friends, professional referrals, or other experienced consumers (Zeithmal 1981).

INFORMATION SEARCH

Research on prepurchase information search has traversed a wide variety of goods and services focusing on

such questions as the length of time spent on information search (Newman and Staelin 1972), the number of stores visited (Katona and Mueller 1955; Beatty and Smith 1987), and the number of ads recalled (Kiel and Layton 1981). However, these search measures which were often collected many months after the completed purchase, suffer from selective retention and forgetting by respondents. Further, they have often been operationalized as single measures of search which precludes the development of reliable multiple indicators.

The validity of past search measures has also been criticized on the grounds that it ignores the inherent complexity in such behavior (Kiel and Layton 1981). Instead of simply aggregating measures into a single measure of search activity, partitioning information sources into separate search sub-indices or categories seems to be useful from both a theoretical and managerial perspective. Past studies have shown that total search can be divided into several sub-indices such as media search, interpersonal search, neutral sources search, retailer search, and physical search (Beatty and Smith 1987; Kiel and Layton 1981; Freiden and Goldsmith 1989). It is quite conceivable that differences in goods and services might also be reflected in the relative search effort for each sub-indices of search (e.g., higher media search for selecting accountants than for purchasing lawn mowers).

The limited research in the professional services area supports the view that consumers rely substantially more on personal sources (i.e., friends, relatives, co-workers) than on media-dominated or public sources when selecting a professional service (Frieden and Goldsmith 1989). In many situations, however, it is unclear to what extent the use of personal sources reflect a bona fide *effort* in gathering information. For instance, while a casual discussion with a co-worker about his or her accountant may constitute search behavior, a more extensive inquiry to the Chamber of Commerce or direct contact (phone call) to the provider may require substantially more commitment in terms of time and cognitive effort. Several product studies (Bennett and Mandell 1969; Duncan and Olshavsky 1982; Beatty and Smith 1987) derived effort weights that tend to support the view that personal sources require substantially less effort than media, retailer, or neutral (public) sources. More recently in a study of management consulting services, Dawes, Dowling, and Patterson (1993) developed a "total search effort" index by summing the usage/nonusage of each information sources by the amount of "perceived effort" in using that source.

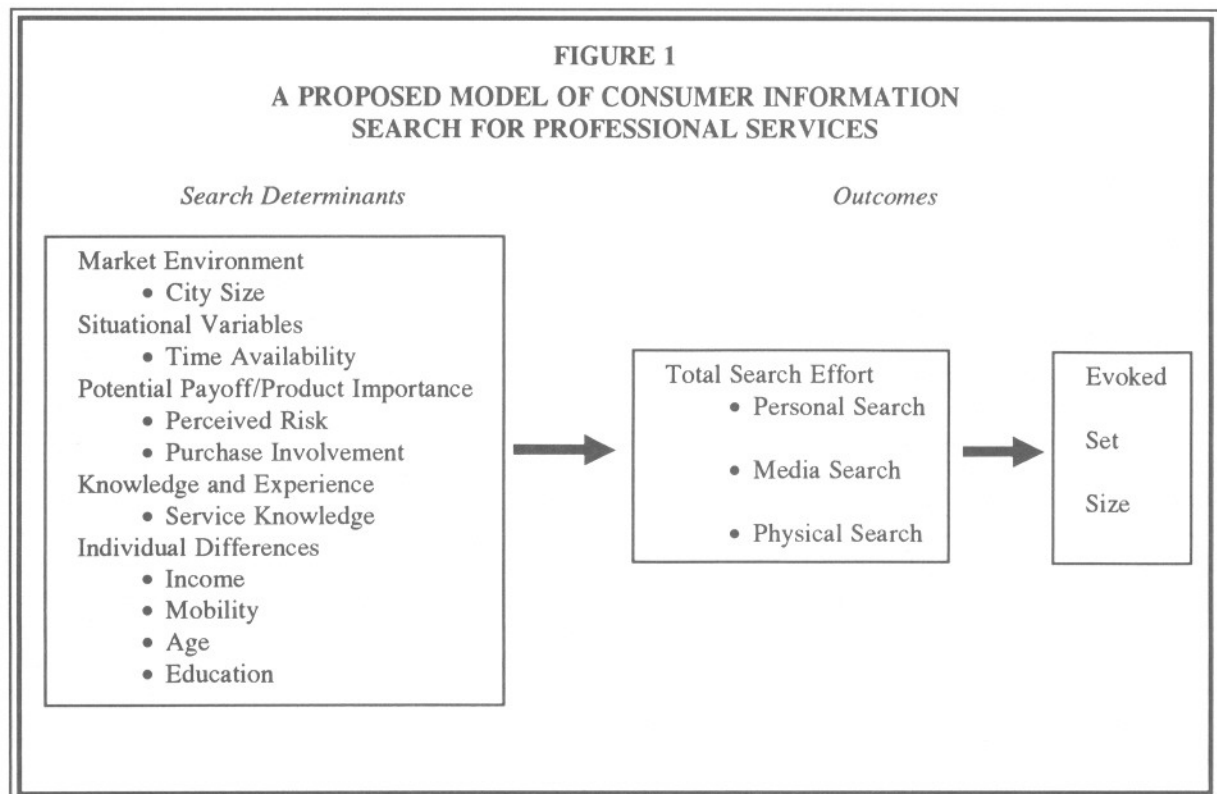
SEARCH DETERMINANTS

All statistics on prepurchase search show that some consumers do much more investigating than others. This diversity is not surprising. However, the failure of past research to explain large proportions of the variance in search or to obtain higher correlations between search and variables hypothesized to be related to search, and the observation of large individual differences in the extent of search, suggest that one or more consumer variables yet to be identified have a significant influence on search.

This problem is substantially more pronounced in the case of professional services research where only demographic variables have been investigated. For example, one study by Freiden and Goldsmith (1989) concluded that information seekers tend to be younger, more education, and have more mobility. These findings fail to take into account the uniqueness of the professional service encounter (e.g., performance variability, lack of marketplace information), psychological factors (involvement, risk), or situation-specific factors (time pressures, etc) that may influence search behavior. The conceptual model proposed in the next section is designed to begin to address this gap in the literature.

CONCEPTUAL FRAMEWORK

A number of variables have been identified in past research as having an impact on external search (Bettman 1979; Katona and Mueller 1955; Brucks 1985). In order to give dimensionality to these variables, Moore and Lehmann (1980) developed a classification of search determinants based on an earlier taxonomy by Bettman (1979). Given the unique nature of the professional service encounter, this study proposes a model of information search for professional services in which a number of variables within each search determinant category are explored. As shown in Figure 1, these determinants consist of: market environment (city size of residence); (2) purchase situation (time availability); (3) potential payoff/product importance (perceived risk, purchase involvement); (4) knowledge and experience (service knowledge); and (5) individual differences (age, education, mobility, income, gender, marital status). These search antecedents are posited to be associated with total search effort as well as its sub-indices (personal search, media search, and physical search). In addition, the model suggests that the three search sub-indices are associated with evoked set size (i.e., the number of professional service providers under consideration).



Though not comprising an exhaustive list of determinants, this framework does provide a preliminary examination of those variables likely to influence search behavior in the context of professional services purchases. In the next section, each of the major categories of search determinants is discussed relative to their potential impact on information search.

Market Environment Factors

Since population density has a direct effect on the number of alternatives available to the professional services client, this variable should be a significant market environment factor that ultimately impacts the amount of information seeking. As evidence, Newman and Staelin (1972) found a positive relationship between information seeking and city size of residence for buyers of cars but not appliances. The accessibility and close proximity of professional services providers in larger cities should enhance consumer choice and, as a result, increased search.

- H₁: City size of residence is positively related to the amount of external search effort of consumers across categories of professional services.

Purchase Situation

Among the situational factors discussed in the information search literature, time availability (or its converse, time pressures) has been consistently related to external search for goods (Katona and Mueller 1955; Moore and Lehmann 1980; Beatty and Smith 1987). If one has more time available, one will be motivated to search more, all other things being equal. This logic, however, may not apply to professional services. First, product purchases are often characterized by ongoing search (Bloch, Sherrell, and Ridgway 1986), while professional services purchases are often unplanned. This suggests that the ratio of search activity to time availability becomes smaller as time passes. Second, the very nature of the professional service encounter suggests that lack of time availability could severely limit the extent of external search. Often the urgency associated with a sudden illness or the closeness of an income tax deadline facilitates the immediate selection of a provider. A review of the services literature reveals no studies documenting the relationship between time availability and information search.

- H₂: Time availability is inversely related to the amount of external search effort across categories of professional services.

Potential payoff/product importance

The issue of risk inherent in any purchase should warrant special attention in professional services marketing. Perceived risk, defined by Cox (1967, p. 5) as "the amount that would be lost (i.e., that which is at stake) if the consequences of the act were not favorable," is especially prevalent in the selection of professional services. Several researchers contend that while some degree of perceived risk probably accompanies all purchase transactions, more risk would appear to be involved in the purchase of services because of their intangibility, lack of standardization and absence of guarantees or warranties (Bauer 1960).

Several of the risk components - financial, physical, psychological, performance and time - identified by Jacoby and Kaplan (1972) are reflected in the selection of an attorney or a medical specialist. Of these risk components, many professional services might involve some degree of *performance* risk, but *financial* risk may be relatively more important for some professional services such as accounting or legal. Not only is the consumer's perception of risk a possible stimulus to external information search, but presumably the nature of this risk affects the intensity and direction of search.

Empirical investigations of the relationship between perceived risk and external search have produced somewhat mixed results. Perry and Hamm (1969) found a positive relationship between search and socioeconomic risk. However, Swartz and Stephens (1984) found no relationship between perceived social risk and the amount of information search for any of the services categories (i.e., financial institutions, physicians, and barber/beauty shops). Hence, an extension of this unresolved issue to professional services is warranted.

- H₃: Perceived risk is positively related to the amount of external search effort across categories of professional services.

Kassarjian (1981) related search behavior to the notion of consumer involvement. He states that it is undeniable that there are differences between individuals which, regardless of the product or situation, make some people more interested, concerned, or involved in the consumer decision process. Several product categories (i.e., calculators, automobiles) have been shown to be high in involvement (Zaichkowsky 1985). Similarly, Webster (1988) reported that purchasing professional services was either a medium (accounting, dental and legal) or high (medical) involvement task. Since professional services tend to possess more perceived risk than products (Murray 1991), it is expected that a direct

relationship exists between purchase involvement and search for professional services.

- H4: Purchase involvement is positively related to the amount of external search of consumers across categories of professional services.

Knowledge

Do consumers search more when they feel they know a lot about a particular professional service and have clear decision criteria in making a selection of providers? While this hypothesis is intuitively appealing, measurement and conceptualization of knowledge has not been consistent. For example, Kiel and Layton (1981) found a positive relationship between knowledge (measured in terms of reading of product-related magazines) and search but a negative relationship between experience (including number of previous car purchases and satisfaction with previous purchases) and search.

In the case of professional services, assessing a consumer's subjective knowledge of that service seems most appropriate. This study uses a definition of services knowledge which is adapted from Beatty and Smith (1987, p. 88), who suggest that service knowledge is "an individual's perceived knowledge and understanding of services within a particular service category. It includes experience with the service class." In this context, services knowledge is viewed as a supplement to external search and should be inversely related. Greater knowledge of professional services is likely to be reflected in soliciting initial consultations, seeking referrals for specialists, comparing fee structures, and assessing provider qualifications.

- H5: Service knowledge is positively related to the amount of external search effort of consumers across categories of professional services.

Individual Differences

Several individual difference variables such as age, education level, income, and mobility have been linked to information search (Kassarjian 1981; Frieden and Goldsmith 1989; Beatty and Smith 1987; Westbrook and Fornell 1979). Frieden and Goldsmith (1988), for example, found a positive relationship between information search and mobility, education, and age within selected professional service categories (i.e., medical, legal, dental and veterinary).

- H6: Age is positively related to the amount of external search effort of consumers across categories of professional services.

- H7: Education level is positively related to the amount of external search effort of consumers across categories of professional services.

- H8: Mobility is positively related to the amount of external search effort of consumers across categories of professional services.

- H9: Income is inversely related to the amount of external search effort of consumers across categories of professional services.

Relationship Among Outcomes

The evoked set has been defined as "that limited group of alternatives actively considered by the decision makers" (Howard and Sheth 1969, p. 26). Information seeking and evoked set size have been linked empirically. Both product (e.g., Maddox et al. 1978) and services studies (e.g., Swartz and Stephens 1984) have reported a direct relationship between the amount of search effort and the size of the evoked set. The creation of evoked (consideration) sets is likely to be dominated by media search in that yellow page and referral service listings are frequently consulted when limited information is available or the professional service is urgently needed. Individuals may use personal search to serve a dual purpose: to develop evaluative criteria and to a lesser extent increase the number of providers under consideration. Lastly, consumers engaged in physical search (i.e., phone calls, office visits) are likely gathering information such as appointment times, brochures, or insurance procedures and similarly increase the number of providers in the evoked set. Therefore, it is proposed that:

- H10_a: Media search is positively related to evoked set size across categories of professional services

- H10_b: Personal search is positively related to evoked set size across categories of professional services

- H10_c: Physical search is positively related to evoked set size across categories of professional services

METHOD

Selection of Professional Services

To enhance generalizability, four professional services - medical, dental, legal, and accounting - were chosen for the present study. These professional services categories were chosen because they: (1) tend to be associated with medium to high-involvement decision making (Webster 1988), (2) represent important consumer-oriented rather than business-to-business (e.g., consulting, engineering) purchase decisions, and (3) are often sought by new resident consumers which precludes the use of internal memory for information search.

Sample

The data were collected from the Consumer Mail Panel (CMP) which maintains a sample of 400,000 households nationwide and is well-balanced in terms of demographic and geographic characteristics (i.e., proportional to U. S. Census data). After an initial screening procedure, six thousand individuals were identified who had relocated to a new city within the past six months. From this sampling frame, a random sample of 1000 "new resident" panelists was drawn. This sampling procedure is an attractive alternative to the single retailer/single city samples of previous information search studies (Beatty and Smith 1987; Frieden and Goldsmith 1989).

A cover letter with the questionnaire explicitly requested responses for only those professional services used within the past six months (to minimize respondent forgetting and selective retention). Of the 1000 questionnaires mailed, 719 were returned, resulting in a response rate of 71.9%. However, only 361 of the respondents indicated that they had used at least one of the four professional services within the time period. After removing 23 unusables, 338 cases were retained for analysis. As expected, medical services was cited as the most frequently used professional service. Two hundred forty-nine (73.6%) respondents indicated usage of medical services, while 150 (44.4%) used dental services. In addition, 50 (14.8%) respondents used accounting services and 70 (21.9%) indicated using legal services.

Among the 338 "new resident" panel members, more than three-fourth were female (79%), the mean age was 39 years, approximately one-half were married (48%), and the overwhelming majority of the respondents were white (93%). Moreover, the sample was well educated

(60% at least attended college), earned an above average household income (\$30,500), and resided in diverse population centers. These demographic and socioeconomic data tend to confirm previous reported descriptions of geographic mobiles as relatively young and upscale professionals (Darden, French, Howell 1979). The potential problem of nonresponse bias appears minimal except for age, where respondents were older than nonrespondents ($t = 1.97, p \leq .05$).

Measures

External search effort was measured by asking respondents which of nine sources of information - advertising, yellow pages, professional associations, direct contact, interpersonal sources, referrals, brochures, and noticing at random - they had used when making the purchase decision. A yes/no answer was all that was required. These sources were generated from pretest results and relevant past research findings (Freiden and Goldsmith 1989). For each source used, the respondent was asked to rate how much time they had spent obtaining and evaluating information from that particular source. A 5-point scale (with '1' being very little time and '5' being a lot of time) was used for this procedure. A time measure of search effort was used as prior researchers in consumer behavior (e.g., Furse, Punj, and Stewart 1984) have argued that the amount of time spent is a good measure of search effort. Moreover, this weighting approach has been used in past studies of durable goods (Beatty and Smith 1987) and consulting services (Dawes, Dowling, and Patterson 1993). On the basis of the responses to each time question, a "total search effort" index was computed by summing the scores of the nine sources. (A value of zero was imputed if a particular source was not consulted.)

The use of a single index approach to measuring information seeking behavior has been criticized on the grounds that it ignores the inherent complexity in such behavior (Kiel and Layton 1981). Past research on search behavior for professional services (e.g., Freiden and Goldsmith 1989) suggests three general sources of information: *personal* (referrals, interpersonal sources, welcome wagon, and real estate agents); *physical search* (direct contacts, noticed at random); and *media search* (advertising, yellow pages, professional associations). Separate search effort indices were created for each of these search categories by summing their respective items. Lastly, evoked set size was assessed by the statement, "Including your selected professional, how many different (professional service) did you consider before selecting your current one?"

The measures for the independent variables were developed through an examination of the relevant literature (see Table 1). Two measurement issues are worth noting at this point. Due to questionnaire length considerations, measures of purchase involvement and knowledge were assessed with only two items, thereby prohibiting a valid measure of internal consistency. Also, time availability is actually a measure of "perceived" time availability because of the self-report nature of this study.

RESULTS

Information Source Usage. Overall, the findings support the notion that consumers consult few information sources when selecting goods and services. The mean number of sources used by consumers in the present study was 1.82 with 93% of respondents utilizing 1-3 information sources. This is similar to the number of sources reported for a range of consumer professional services where 90% of consumers used 1-3 sources (Freiden and Goldsmith 1989).

TABLE 1
EXPLANATORY VARIABLES^a

Operationalization	
<i>Time availability</i> (Beatty and Smith 1987) (alpha = .62)	•When I chose my (professional service), I had little time to search for information. •I received considerable pressure from other family members to select a (professional service) quickly. •Because I was concerned about (my worsening condition or situation), I had little time to search for a (professional service).
<i>Perceived Risk</i> (Beatty and Smith 1987)	•When choosing a (professional service), I am concerned about the economic consequences of making (alpha = .75) a poor or incorrect choice. •For expensive service such as those offered by (professional service), I spend both time and effort since it is important to get the best deal. •I am willing to spend extra time searching in order to get the best possible fee for (professional service) of similar quality.
<i>Purchase Involvement</i> (Slama and Tashchian 1985) (r = .49)	•The process of selecting a (professional services) is important to me. •Being a smart consumer is worth the extra time it takes when choosing a (professional service).
<i>Knowledge</i> (Beatty and Smith 1987) (r = .53)	•I felt quite knowledgeable about selecting a (professional service) before I began searching. •I believe I could be quite helpful to friends who are having difficulty choosing a (professional service).
<i>Age</i>	•Measured on six-point ordinal scale
<i>City size of residence</i>	•Measured on a six-point ordinal scale (ranging from under 20,000 to over two million)
<i>Education</i>	•Measured on a six-point ordinal scale
<i>Mobility</i>	•Number of relocations in past 10 years
<i>Income</i>	•Household income measured on six-point ordinal scale.

^a Attitudinal variables measured on a 7-point likert scale (1 = strongly disagree; 7 = strongly agree).

Table 2 exhibits that personal sources (i.e., friends, relatives, co-workers) were the most frequently used information source (over 60 percent of the respondents used personal sources for each professional service). The use of referrals (i.e., other doctors or referral services) was prevalent in medical services (41.4%), while consumers frequently used direct contacts (i.e., phone calls and office visits) in selecting dental services (32.7%). Conversely, consumers used the yellow pages (25.7%) in selecting legal services and local advertising (32.0%) for accounting services. However, the data clearly suggests that personal sources are the predominant source of information for purchasers of professional services.

External Search Effort. In an attempt to generalize the results of the study across professional services categories (i.e., medical, dental, legal, and accounting), separate analysis of variance tests were used to test for group differences in the number of sources used and external search effort. The ANOVAs revealed no differences in either number of sources used ($F = .06$, $p = .87$) or external search effort ($F = .22$, $p = .57$) among the four services. Thus, *all subsequent analyses were performed with the professional services categories combined.*

Table 3 provides the aggregated results of information sources usage and external search effort. Similar to source usage, search weights were highest for interper-

sonal sources (mean = 4.31), direct contacts (mean = 4.17), and referrals (mean = 4.12). In order to help establish the validity of the external search effort measure, a rank correlation between the search weight and the usage rate was utilized. This correlation equalled 0.73 (significant at $p = .01$) and shows that more effort was devoted to frequently used information sources. The major disparity in comparing the rankings occur for welcome wagon and real estate agents (i.e., brochures) which ranked substantially higher in search effort than source usage. Since the use of brochures (typically high in information content) is often accompanied by contacts with knowledgeable personal sources (agents, community leaders), the effort required is relatively higher.

The search effort index of individual information sources is in agreement with the relative search effort indexes of search sub-indices are consistent with their rankings (see Table 3). Again, interpersonal sources and referrals, along with direct contacts, demonstrate the largest impact on search effort. The relative search effort ratio indicates that personal search, physical and media search are weighted in a 5 : 3 : 2 ratio, respectively. Thus, personal search constitutes approximately 50 percent of the total search effort of consumers selecting professional services. These findings differ substantially from product-based studies (Duncan and Olshavsky 1982; Beatty and Smith 1987; Bennett and Mandell 1969). The personal search

TABLE 2
INFORMATION SOURCE USAGE FOR PROFESSIONAL SERVICES

Information Source	Type of Professional Service ^a							
	Medical		Dental		Legal		Accounting	
	n	%	n	%	n	%	n	%
Personal Sources	156	(62.7)	96	(64.0)	46	(62.2)	37	(74.0)
Advertising	24	(9.6)	23	(15.3)	8	(10.8)	16	(32.0)
Referrals ^b	117	(41.4)	38	(25.3)	12	(16.2)	10	(25.0)
Brochures (Welcome Wagon/Real estate)	12	(4.8)	9	(6.0)	9	(12.2)	7	(14.0)
Direct contacts	67	(26.9)	49	(32.7)	17	(23.0)	5	(10.0)
Yellow pages	47	(18.9)	38	(25.3)	19	(25.7)	8	(16.0)
Prof. Associations	20	(8.0)	9	(6.0)	13	(17.6)	3	(6.0)
Noticed at Random	11	(4.4)	12	(8.0)	7	(9.5)	6	(12.0)

^a Percentages represent proportion of usage for medical service, $n = 249$; dental services, $n = 150$; legal services, $n = 74$; and accounting services, $n = 50$.

^b Referrals include professional referral services, company benefit plans, and referrals from other professionals (i.e., doctors, lawyers).

TABLE 3
INFORMATION SOURCE USAGE AND SEARCH
EFFORT FOR PROFESSIONAL SERVICES^a

Information Source	Percent Usage	(Rank)	Mean Search Effort	Weight (Rank)	Search Effort Index ^b	Relative Search Effort ^c
Personal Search						.50
Interpersonal	64.1	1	4.31	1	2.761	
Referrals ^d	35.3	2	4.12	3	1.457	
Welcome Wagon	4.6	8	3.40	5	.147	
Real Estate Agents	2.9	9	4.00	4	.115	
Media Search						.21
Yellow pages	21.4	4	3.17	7	.679	
Advertising	13.7	5	3.01	8	.414	
Prof. associations	8.8	6	3.74	5	.328	
Physical Search						.29
Noticed at random	7.1	7	2.67	9	.189	
Direct contacts	26.4	3	4.17	2	1.100	

^a Percentages represent proportion of usage for medical services, n=249; dental services, n=150; legal service, n=74; and accounting services, n=50.

^b The search effort index was calculated by multiplying the mean search effort by the percent usage.

^c Relative search effort measures the contribution of each search sub-indices to total search effort.

^d Referrals include professional referral services, company benefit plans, and referrals from other professionals (i.e., doctors, lawyers).

weights documented in these studies (which ranged from 10% to 20% of total search) were substantially lower than that derived in the present study. This disparity suggests that consumers extend considerably more effort in utilizing personal sources when selecting professional services than for tangible products.

Results of Regression Analysis. Stepwise regression analysis was used to estimate the relationship between the independent variables and the measure of external search effort. One problem which can occur with this type of data analysis is multicollinearity - the situation where two or more of the independent variables are intercorrelated. As Table 4 reports, forty-one percent (15 of 36) of the correlations among the independent variables were significant at the .001 level. However, Mason and Perreault (1991) found that the effects of intercorrelations among predictors (even if extremely high) were largely offset when (1) the analysis was based on a large sample, (2) the model specification resulted in a high R^2 , or (3) a combination of the first two conditions occurs. Because our sample consists of

523 responses across the four professional services, which are large by Mason and Perreault's standards, the resultant high statistical power most likely produces reliable regression coefficient and standard errors.

Table 5 reports the standardized regression coefficients and the one-tailed p values for each statistically significant independent variable. Separate stepwise regression analyses (with F value to enter, $p < .10$) were performed on total external search and the three search effort indices. The predictor variables that remained in the equations are shown in order of their importance based on beta coefficients. R^2 's ranged from a high of .064 for total search to a low of 0.01 for physical search, with all equations significant at $p < .01$. Though the regression model is significant in explaining search for professional services, these percentages of explained variance are considerably lower than those reported by Dawes, Dowling, and Patterson (1993) in the industrial marketing area (.04 to .17) and Beatty and Smith (1987) in the consumer behavior area (.05 to .30).

TABLE 4
CORRELATION MATRIX: INDEPENDENT VARIABLES

	1	2	3	4	5	6	7	8
Variables								
1. Time availability								
2. Perceived Risk	.037							
3. Service Knowledge	-.194 ^a	.186 ^a						
4. Involvement	-.114 ^b	.375 ^a	.419 ^a					
5. Mobility	.012	-.119 ^b	-.110 ^b	-.070				
6. Education level	-.093	-.183 ^a	-.152 ^b	-.036	.190 ^a			
7. Income	-.030	-.125 ^b	-.040	.015	.077 ^b	.376 ^a		
8. Age	-.050	.100	.141 ^a	.175 ^a	-.275 ^a	-.137 ^a	.021	
9. City size	.032	.000	-.019	.033	-.047	.229 ^a	.211 ^a	-.114 ^a

^a $p < .001$

^b $p < .01$

TABLE 5
STEPWISE MULTIPLE REGRESSION ANALYSIS EXPLAINING TOTAL SEARCH EFFORT AND THE INDIVIDUAL SEARCH EFFORT INDICES

Search Index	R ²	F	Independent Variables ^c	Beta Coefficients	p value
Total Search	.064	3.76 ^a	Age	-.13	.00
			Service Knowledge	.10	.04
			Perceived Risk	.10	.04
			City Size	-.09	.05
			Purchase Involvement	.09	.07
Personal Search	.048	11.85 ^a	Service Knowledge	.19	.00
			Education level	.13	.00
Media Search	.013	6.32 ^b	Perceived Risk	.11	.01
Physical Search	.010	6.12 ^b	City Size	-.11	.01

^a $p < .01$

^b $p < .05$

^c Only those variables with significant beta coefficients ($p < .10$) are shown.

As Table 5 indicates, many of the hypothesized relationships between external search and the predictor variables were significant. The results indicate that age is the highest contributor in the total search regression (see Table 5). Thus, older new residents depend less on prepurchase information search and perhaps more on experience than younger consumers. Income, a socioeconomic characteristic often linked to new residents (e.g., Darden, French, and Howell 1979), was not associated with any of the search indices.

Surprisingly, city size was inversely related to total search and physical search. This may imply that there is an upper limit on the amount of effort consumers are willing to exert regardless of the size of the area in which they live or the availability of professional service firms.

Miyake and Norman (1979) put forth the proposition that "To ask a question, one must know enough to know what is not known." This would also seem to be the

case with the search process involving professional services. The overall pattern of results suggests indicates that higher level of perceived knowledge leads to greater amounts of aggregate search as well as personal search behavior. The positive coefficient for education level was similarly associated with the personal search indices gives credence to the notion that more educated, knowledgeable consumer are more likely to seek referrals and information from informed sources.

Perceived risk was found to be significantly associated with total search and media search. The relationship between perceived risk and media search is somewhat counterintuitive in that television commercials and yellow page ads tend to be low in risk reducing information (e.g., credentials, qualifications, performance records) about providers. On the other hand, the visual images (for example, display ads) associated with media-related sources may tend to reduce uncertainty and risk for some consumers.

As shown in Table 6, the hierarchical regression results indicate that the search sub-indices (media search, personal search, and physical search) explained 13 percent of the variation in evoked set size ($F = 8.07$, $p < .004$). Media search emerged as the best predictor of evoked set size ($R^2 = .089$) while personal search (R^2 change = .027) and physical search (R^2 change = .014) showed only marginal explanatory power. These findings are consistent with the notion that media search (yellow pages, advertising, brochures) is more important in creating evoked sets, while personal and physical search may play an important role in the evaluation and selection process.

DISCUSSION

The purpose of this research was to examine the nature and determinants of external information search for new resident consumers in selecting four commonly

used professional services (medical, dental, accounting, and legal). As expected, interpersonal sources (i.e., friends, neighbors, co-workers, and relatives) were the most frequently consulted information source among the four professional services categories. Moreover, the personal search sub-indices was shown to require considerably more *effort* than either media and physical search. This finding is a clear departure from past product studies (e.g., Beatty and Smith 1987; Duncan and Olshavsky 1982) which report that substantially less effort was expended when personal sources were used. This implies that the development of effective strategies to foster favorable word of mouth communication should be paramount to any professional providers.

Haywood (1989) comments that few service firms effectively manage this activity and that those service firms who do take action usually do it on an ad hoc basis. To address these concerns from the context of professional services, this study provide two suggestions. First, practitioners should focus on the postpurchase phase of the buying process by assessing customer satisfaction and future needs. For example, when dentists initiate followup programs (e.g., direct mailings each six months), clients are more likely to have better top-of-mind awareness and as a result spread more positive word of mouth. Second, specific messages (e.g., tax deadlines, new medical procedures, expanded hours of operation) targeted to selected client groups (e.g., new residents, past clients, retirees) enhance both the viability of a long term relationship with the client and the likelihood of increased information exchange between market segment members.

While conventional wisdom regarding the importance of cultivating word-of-mouth communication among consumers still holds true, marketers of professional services should also be aware of the need to cultivate

TABLE 6
SUMMARY OF MULTIPLE REGRESSION ANALYSIS
EXPLAINING EVOKED SET SIZE

Independent Variables	Beta	Model F	Model R^2	R^2 Change	Signif. of Change
Media Search	.299	50.45	.089	----	----
Personal Search	.165	15.46	.116	.027	.000
Physical Search	.120	8.07	.130	.014	.004

other information sources. This study revealed substantial differences among professional services with respect to secondary sources used to acquire them. Consumers tend to rely on referrals and direct contacts in selecting medical providers. Media-oriented sources such as advertising and yellow pages were used in selecting accountants and lawyers, respectively. At least for the new resident segment, this distinction may suggest that the search for medical care seems to be a consistent one, thus implying a form of enduring involvement. On the other hand, search for accountants

and lawyers tends to more situational driven. For this reason, these non-medical providers must strive to make information sources easily accessible and actionable. For example, since yellow pages are frequently consulted when selecting lawyers, legal services should develop larger and more informative yellow page ads that seek to uniquely position the firm.

Drawing from the Moore and Lehmann (1980) taxonomy, many of the search determinants were useful in describing the new residents segment likely to engage

TABLE 7
SUMMARY OF HYPOTHESES TESTS^a

H1:	Unsupported. City size was positively related to <i>total search</i> and <i>physical search</i> effort across professional service categories.
H2:	Unsupported. Time availability was not related to total search effort across professional service categories.
H3:	Supported. Perceived risk was positively related with <i>total search</i> and <i>media search</i> effort across professional service categories.
H4:	Supported. Purchase involvement was positively related to <i>total search</i> effort across professional service categories.
H5:	Supported. Service knowledge was positively related to the total search effort across professional service categories.
H6:	Supported. Age was inversely related to <i>total search</i> effort across professional service categories.
H7:	Partially supported. Education was inversely related to <i>personal search</i> effort across professional service categories.
H8:	Unsupported. Mobility was not related to total search effort across professional service categories.
H9:	Unsupported. Income was not related to total search effort across professional service categories.
H10 _a :	Supported. Media search was positively related to <i>evoked set size</i> across categories of professional services.
H10 _b :	Supported. Personal search was positively related to <i>evoked set size</i> across categories of professional services.
H10 _c :	Supported. Physical search was positively related to <i>evoked set size</i> across categories of professional services.

^a In those cases where the independent variable was related to one or more of the search sub-indices but not total search, the hypothesis is considered partially supported.

in extensive search for professional services (see Table 7). These consumers tend to be younger (H6 supported) and more educated (H7 supported for personal search). Interestingly, city size actually inhibited external search effort (H1 not supported). One explanation may be that in larger cities, many individual's choice of doctor or dentist is restricted by Managed Health Care plans in which only a limited number of health care professionals can be considered. For accounting and legal firms operating in larger urban areas, the advertising clutter found in the mass media (i.e., yellow pages and spot commercials) brings into question the cost effectiveness of this tactic.

Service knowledge (H5 supported) and perceived risk (H3 supported) were related to external search effort, but appear to suggest different strategies to marketers. In the case of service knowledge, which was also related to personal search effort, new residents may be effectively reached by carefully cultivating personal communication sources in local moving companies or health care referral services where word-of-mouth communication is available. On the other hand, new residents who experience more perceived risk and uncertainty tend to rely heavily on media sources such as professional associations, advertising, and yellow page ads. This suggests that lawyers, for example, should develop a strong relationship with the local bar association or provide service quality cues in yellow page ads (i.e., years of experience, educational background, business philosophy).

This study also reveals a direct relationship between purchase involvement and total search effort. H4 was supported. Due to the lack of marketplace information, and the importance of their decision, new resident consumers may exhibit purchase involvement through phone calls or office visits rather than shopping behaviors (e.g., browsing, reading *Consumer Reports*, attention to ads) documented in earlier product studies (Kassarjian 1981). As such, these consumers may seek information regarding qualifications, track records, references and procedures used, so an aura of mystery surrounding the services and its outcome can be alleviated. There is still a need to better define and operationalize what behaviors are indicative of high levels of consumer involvement in the context of purchasing professional services.

The summary shown in Table 7 indicates that each of the sub-indices were successful in explaining variation in evoked set size (H_{10a} , H_{10b} , H_{10c} were supported). In reaching the new resident segment, the fact that media search emerged as the best contributor of in-

creased evoked set size and was a major source of risk reduction adds credence to the importance of this information source. From this analysis, it appears that firms who developed effective display yellow page ads and/or attention-getting television commercials were more effective in getting their firms in the evoked sets of new residents. However, one may question if mass media sources, especially television, are really cost effective means to reach the desired target market and whether other media vehicles would be more efficient. Alternatively, more targeted media such as inserts into Welcome Wagon packages, ads in Shopper's Guides, direct mail or even telemarketing campaigns might be considered a better solution.

LIMITATIONS AND CONCLUSIONS

Certain limitations of this study are noteworthy. First, the generalizability of these results should be confined to the new residents population. While this group represents an attractive market segment for professional service firms, its demographic characteristics have been shown to differ from the general population in this study as well as other studies (Darden, French, and Howell 1979).

A second limitation lies with self-report measures. Newman and Lockeman (1975) ascertained that there was little or no correlation between an observation-based measure of search and a survey-based measurement of search. Though experiments or laboratory approaches have been attempted (Brucks 1985), self-report measures seem to be the most reasonable measures of external search activity available for "real" purchase decisions. Lastly, the psychometric properties of the search determinants (e.g., time availability) have not been well developed in past research. As research progresses in the professional services area, measures should be refined to better reflect the unique nature of this service encounter.

Clearly, more research about information seeking for professional services is needed. The relatively low R^2 's found in this study suggest that a good deal of variance is not explained by this set of search correlates. One avenue for future research would be to provide a multidimensional perspective on some of the predictor variables used in this study. For example, the measurement of perceived risk was confined to only one of its components, financial risk. Several of the other risk components - physical, psychological, performance, and time - appear promising in understanding how risk perceptions can best be handled by various types of professional services. Further, an investigation of the

role of internal search (experience and memory) in combination with external search is required to better understand their interaction and influence on search outcomes for professional services. Lastly, compari-

sons between distinct market segments (e.g., matures, "home alones") might be useful in uncovering patterns of information search and provide a more complete view of the behavioral processes.

REFERENCES

- Bauer, R. (1960), "Consumer Behavior as Risk Taking," in *Dynamic Marketing for a Changing World*, R. S. Hancock, ed. Chicago: American Marketing Association, 389-98.
- Beatty, Sharon E., and Scott M. Smith (1987), "External Search Effort: An Investigation Across Several Product Categories," *Journal of Consumer Research*, 14 (June), 83-95.
- Bennett, Peter D., and Robert M. Mandell (1969), "Prepurchase Information Seeking Behavior of New Car Purchasers - The Learning Hypothesis," *Journal of Marketing Research*, 6 (November), 430-433.
- Berry, Leonard L. (1975) "Service Marketing is Different," *Business*, 30 (May-June), 24-29.
- Bettman, James R. (1979), *An Information Processing Theory of Consumer Choice*. Reading, MA: Addison-Wesley.
- Bloch, Peter H., Daniel L. Sherrell, and Nancy M. Ridgeway (1986), "Consumer Search: An Extended Framework," *Journal of Consumer Research*, 13 (June), 119-126.
- Brucks, Merrie (1985), "The Effects of Product Class Knowledge on Information Search Behavior," *Journal of Consumer Research*, 12 (June), 1-16.
- Cox, Donald F. (1967), *Risk-Taking and Information Handling in Consumer Behavior*. Boston: Harvard University.
- Darden, William, Warren A. French, and Roy D. Howell (1979), "Mapping Market Mobility: Psychographic Profiles and Media Exposure," *Journal of Business Research*, 1 (January), 51-74.
- Dawes, Philip L., Graham R. Dowling, and Paul G. Patterson (1993), "Determinants of Pre-purchase Information Search Effort for Management Consulting Services," *Journal of Business-to-Business Marketing*, 1 (1), 31-61.
- Duncan, Calvin P. and Richard W. Olshavsky (1982), "External Search: The Role of Consumer Beliefs," *Journal of Marketing Research*, 19 (February), 32-43.
- Fisher, A. B. (1989), "The Ever-Bigger Boom in Consulting," *Fortune*, (April 24, 1989), 59-69.
- Frieden, Jon B., and Ronald E. Goldsmith (1988), "Correlates of Consumer Information Search for Professional Services," *Journal of Professional Services Marketing*, 4 (March), 15-29.
- Frieden, Jon B., and Ronald E. Goldsmith (1989), "Prepurchase Information-seeking for Professional Services," *Journal of Services Marketing*, 3 (Winter), 45-55.
- Furse, David H., Girish N. Punj, and David W. Stewart (1984), "A Topology of Individual Search Strategies Among Purchasers of New Automobile," *Journal of Consumer Research*, 10 (March), 417-431.
- Gronroos, C., (1979), "An Applied Theory of Marketing Industrial Services," *Industrial Marketing Management*, 8, 45-50.
- Jacoby, Jacob, and Leon B. Kaplan (1972), "The Components of Perceived Risk," in *Proceedings, Third Annual Conference of the Association for Consumer Research*. M. Venkatesan, ed. College Park, MD: Association for Consumer Research, 382-389.
- Kassarjian, Harold (1981), "Low Involvement: A Second Look," in *Advances in Consumer Research*. H. K. Hunt, ed. Ann Arbor, MI: Association for Consumer Research.
- Katona, George., and E. Mueller (1954), "A Study of Purchase Decisions," in *Consumer Behavior*. Lincoln H. Clark, ed. New York: New York University Press.
- Kiel, Geoffrey C., and Roger A. Layton (1981), "Dimensions of Consumer Information Seeking," *Journal of Marketing Research*, 18 (May), 233-239.
- Haywood, K. M. (1989), "Managing Word of Mouth Communications," *Journal of Services Marketing*, 3 (Spring), 55-67.
- Hill, Jeanne C., and Sue E. Neeley (1988), "Differences in the Consumer Decision Process for Professional Vs. Generic Services," *Journal of Services Marketing*, 6 (Winter), 17-23.
- Howard, John A., and Jagdish N. Sheth (1969), *The Theory of Buyer Behavior*. New York: John Wiley and Sons.
- Maddox, R. Neil, Kjell Gronhaug, Richard E. Homans, and Frederick E. May (1978), "Correlates of Information Gathering and Evoked Set Size for New Automobile Purchasers in Norway and the U.S." in *Association for Consumer Research*. Kent B. Monroe, ed. Provo, UT: Association for Consumer Research, 25-30.
- Mason, Charlotte H. and William D. Perreault, Jr. (1991), "Collinearity, Power, and the Interpretation of Multiple Regression Analysis," *Journal of Marketing Research*, 28 (August), 268-280.
- Moore, William L., and Donald R. Lehmann (1980), "Individual Differences in Search Behavior for a Nondurable," *Journal of Consumer Research*, 7 (December): 296-307.
- Murray, Keith B. (1991), "A Test of Services Marketing Theory: Consumer Information Acquisition Activities," *Journal of Marketing*, 55 (January), 10-25.
- Miyake, N. and D. A. Norman (1979), "To Ask a Question, One Must Know Enough to Know What is Not Known," *Journal of Verbal Learning and Verbal Behavior*, 18 (June), 357-364.
- Newman, Joseph W., and Richard Staelin (1972), "Prepurchase Information Seeking for New Cars and Major Household Appliances," *Journal of Marketing Research*, 6 (August), 249-257.

- Newman, Joseph, and B. D. Lockerman (1975), "Measuring Prepurchase Information Seeking," *Journal of Consumer Research*, 2 (December), 216-222.
- Perry, Michael and B. Curtis Hamm (1969), "Canonical Analysis of Relations Between Socioeconomic Risk & Personal Influence in Purchase Decisions," *Journal of Marketing Research*, 6 (August), 351-354.
- Swartz, Teresa A., and Nancy Stephens (1984), "Information Search for Services: The Maturity Segment," in *Advances in Consumer Research*. Thomas Kinnear, ed. Provo, Ut: Association for Consumer Research, 244-249.
- U. S. Department of Commerce (1992), *Statistical Abstract of the United States*. Washington, D.C.: U. S. Commerce Department.
- Webster, Cynthia (1988), "The Importance Consumers Place on Professional Services," *Journal of Services Marketing*, 2 (Winter), 59-70.
- Westbrook, Robert A., and Claes Fornell. (1979), "Patterns of Information Source Usage Among Durable Goods Buyers," *Journal of Marketing Research*, 16 (August), 303-312.
- Wilkie, William L. (1986), *Consumer Behavior*, New York: John Wiley.
- Zaichkowsky, Judith L. (1985), "Measuring the Involvement Construct," *Journal of Consumer Research*, 12 (December), 341-352.
- Zeithaml, Valarie (1981), "How Consumer Evaluation Processes Differ Between Goods and Services," in *Marketing of Services*. John H. Donnelly and W. R. George, eds. Chicago: American Marketing Association.
- Zeithaml, Valarie A., A. Parasuraman, and Leonard L. Berry (1985), "Problems and Strategies in Services Marketing," *Journal of Marketing*, 49 (Spring), 33-46.

ABOUT THE AUTHOR

Michael T. Elliott (DBA, Mississippi State University), is Assistant Professor of Marketing at the University of Missouri - St. Louis.