Role of Women in Consumption Behaviour : A Comparison of Working and Non Working Wives in Shimla Town

* Kapil Kathuria ** Poonam Rana

Abstract

Women have a significant role in the consumption processes of a family and are an influential marketing segment. The objective of this paper was to compare the roles played by working wives (WW) and non working wives (NWW) of Shimla in consumption of different kind of products the families used. The study is based on a sample of 60 respondents of which 30 were working wives and 30 were non-working wives. The data was collected by using a structured questionnaire dealing with roles played by women in purchase of non durables, durables, and high value products. It was observed that working wives were more active in consumption related roles of high involvement products, while non-working wives were more active in consumption related roles in connection with low involvement products.

Key words: role in family consumption, working married women, non-working married women, durables, non-durables, and high value purchases

Paper Submission Date : August 6, 2015; Paper sent back for Revision : November 27, 2015; Paper Acceptance Date : January 4, 2016

omen's economic and social role has been changing in urban India since the 1980s. It is seen that adjusted Labour Force Participation Rate (LFPR) for women in 2004-05 was 36% up from 31% in 1983 (Bhalla & Kaur 2011). They already wielded high influence on the consumer market as family purchase agents (Davis, 1971; Wilkes, 1975 as cited in Guha, 2013). Some authors ascribed 80% control of the family purchases to women (Srinivas & Babu 2008). Sharma (2013) also supported this contention by stating that women have a free hand in purchase of groceries and personal products. They play an important role in purchase decisions pertaining to household goods like washing machines and refrigerators, which they use often (Chithra, 2012).

All of this consumption experience results in making women consummate buyers, who are concerned with both the price and quality of their purchases and tend to buy products that are reasonably priced instead of being high priced or low priced (Subrahmanian, 2011). This influence has probably gained even more strength of late. The role of wives within the urban family is witnessing a significant change as a result of this increased exposure to the outside world, to the extent, they are known to create challenges for advertisers regarding how women should be portrayed in advertisements (Prakash, 2008). Bina (2005) also affirmed this flux by stating that the role of wives in the family has undergone a sea change. Women provide a traditional and potential market for a wide variety of products (e.g. credit cards, cars, cosmetics, clothes, accessories, electronics, durables, non-durables, etc).

Market managers are aware of the huge size of the market that is influenced by married women, so they design their products according to the choice and interest of the married women and focus their efforts on them. They also recognize that married women who work outside of the home (working wives) are a growing market segment.

^{*} Associate Professor; Department of Business Management, Dr. Y S Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh - 173 230. Email: kapiluhf@yahoo.com

^{**}Assistant Manager, Punjab National Bank, Khudda Lahora, Chandigarh - 160 014. Email: poonam02rana@gmail.com

Their needs, wants, preferences, and so forth differ from the wives who do not work outside the home (non-working wives).

It is assumed by many that working wives are more empowered and relaxed when taking the purchase decisions, for example, in the case of FMCG products (Chaudhary 2013), they have less time for shopping and perhaps, for this reason, they shop only when there is a need and not for recreation (Lakshmi & Rengarajan 2013). Jackson, McDaniel, and Rao (1985) too attested to the working wives' dislike for food shopping and cooking. McCall (1977) also found working wives to be actually shopping for food less frequently. They were perceived to be generally brand and store loyal (Guha, 2013). McCall (1977), on the other hand, found working wives to be more convenience oriented in their choice of stores for groceries. Guha (2013) reported them to be more price and quality conscious and more influenced by views of others. They generally have a very busy schedule, so they prefer different services like childcare, day nurseries, house cleaning (Boylu & Terzioğlu, 2008). To save time and energy, families of women who are employed in high-status occupations are known to dine out more frequently (Joag, Gentry, and Hopper, 1984). Yen (1993) concurred with this and added that families with working wives and higher income are likely to consume more food away from home, more frequently.

However, some studies point to the constructs like role overload and family income being the intervening variables between working status of the women on the one hand, use of convenience foods and ownership of consumer durables on the other (Reilly,1982). Bellante and Foster (1984) also concurred with the influence of higher family income being reflected in higher expenditure on all services, however, they also found that families with full-time working wives spent more on food away from home, child care, and all services combined. Given that working wives are more often in a social setting, it is presumed that they are regular customers of products of conspicuous consumption like cosmetics, shoes, clothes, electronics, and so forth, and this seems to find support in Vickery's (1979) study, who found that working wives spent more on clothing care as compared to non working wives. Working wives are thought to be more educated and can collect product information from wider means like magazines, Internet, and so forth, which makes them more informed, demanding, and consummate consumers.

Non - working wives have a significant impact on purchases too. They generally play the role of the purchaser of household goods like groceries, durables, and so forth. They are highly concerned about the family and what impression their purchase decision will create among them, and hence, are particularly influenced by their husbands and children (Chaudhary, 2013). Non-working wives are assumed to consider the opinions of other people and suggestions as they may not be as well informed or self-reliant as working wives. However, they are considered to have enough time to analyze the market, and this provides them good knowledge of the market.

The differences in the circumstances of the working and non-working women are likely to result in the differences in the roles that they play in family purchases. Extant literature has focused on actual consumption and shopping behaviour of working wives and non working wives; whereas, the differences in the roles enacted by them in the consumption process of different products have not been examined. Studies have found that women are not happy with the stereotypical portrayal of the roles they play as homemakers and modern girls, and would like a change in it (Raychaudhuri, 2014). Hence, the present study examines the actual roles played by working and non-working women in family consumption of goods. Schiffman and Kanuk (2008) enumerated eight roles that are enacted by family members in the context of consumption, which provide the conceptual underpinning for this study. These roles are described in the Table 1.

Objectives of the Study

Women have traditionally played an important role in making purchase decisions within the family. However, this role may change in the case of working wives. Marketers have traditionally viewed working women as a good market for workplace clothes, cosmetics, and so forth. Juyal and Singh (2009) examined the effect of female role orientation on role structure in the family decision making, and found that female purchase roles and decision

Table 1. Consumption Related Roles in a Family The Eight Roles in The Family Consumption Process

Role	Description			
Influencer	Family members who provide information to other members about a product or service.			
Gatekeepers	Family members who control the flow of information about a product or service into the family.			
Deciders	Family members with the power to determine unilaterally or jointly whether to stop for, purchase, use, consume, or dispose of a specific product or service.			
Buyers	Family members who make the actual purchase of a particular product or service.			
Preparers	Family members who transform the product into a form suitable for consumption by other family members.			
Users	Family members who use or consume a particular product or service.			
Maintainers	Family members who service or repair the product so that it will provide continued satisfaction.			
Disposers	Family members who initiate or carry out the disposal or discontinuation of a particular product or service.			

Source: Reproduced from Schiffman and Kanuk (2008), p. 339

making ability is affected by their family type (joint or nuclear), educational level, age, and occupation & income levels. Thus, it needs to be seen how the role that wives play in the household consumption is affected by their occupational status, that is, being employed outside the house, as is an increasing trend in urban India. In light of these observations, the objective of the study is to examine and compare the roles played by working and non-working wives in the consumption of different consumer product categories.

Methodology

The study was conducted in Shimla town in 2014 and was designed to be an exploratory study limited to comparing the roles played by working and non-working wives in household consumption of different product categories. Conscious decision was to limit the scope to a town as this would minimize variations due to extraneous reasons like culture differences. Thus, a survey of 30 working and 30 non-working married women was conducted by using a structured questionnaire. This quota was assigned to the categories of working and non-working women in the sample design, as the study required comparison in these two categories and facilitated application of the t-test. The sample size was considered adequate as the focus of the study was more on comparison and the study is generalizable to Shimla town only. As per the Census of 2011 (Census Organization of India, 2011), female population of Shimla above the age of 6 years was 69,969. Given that the population frame of the study is only wives, the population size is bound to be less than 69,969. The sample size of 60 gives a standard error of 0.065 at a confidence level of 95%, assuming a population of 69,969, and the actual standard error is likely to be slightly less than 0.065 as the population of married females in Shimla town is bound to be less than 69,969, which is an acceptable standard error, and makes the sample size of 60 robust.

As per the age of the respondents, the sample comprised of four women below the age of 25 years, 28 in the age group of 25-45 years, 26 in the age group of 45 – 60 years, and two respondents above the age of 60 years. In terms of education, five respondents had an educational level of less than secondary school level, 11 respondents were educated upto the secondary school level, 32 respondents were college graduates, and 12 respondents were postgraduates. Two respondents had an income of less than INR 10,000 per month, 14 respondents had an income in the range of INR 10,000-20,000, 26 respondents had an income between INR 20,000 and 40,000 per month, and 18 respondents had an income of above INR 40,000 per month.

The questionnaire was predicated on different categories of purchases made by a family, that is, non-durables, durables, and high value goods. Non-durables, durables, and high-value products coincide with the definition of convenience goods, shopping goods, and speciality goods. This categorization and conceptual framework was

chosen as it is well known that consumption processes are 'best studied in relation to the types of products,' with the efforts and energy expended on consumption related activities increasing as the value of the product increases from non-durable products through durable products to high value products (Ramaswamy & Namakumari, 2002). This categorization was chosen as it is also related to the concept of purchase involvement. It is known that the purchase processes vary with the changes in purchase involvement, with consumers exhibiting extensive problem solving in case of high involvement purchases, and limited information processing in case of low involvement purchases (Schiffman & Kanuk, 2008).

For each of these categories, the respondents were to indicate on a 5 point scale how frequently (Always, Very frequently, Frequently, Not so frequently, Not at all) they played each of the roles involved in family consumption as given in the Table 1. The analysis of the primary data collected was done by way t-test to compare the roles of working and non-working wives in buying behaviour. The test is used to test hypotheses based on mean scores of a variable when the number of observations is small and the population standard deviation is unknown. To use the ttest for comparing the difference of means, it was assumed that the two samples are drawn from normal distributions. Because σ is unknown, we assume the variance of the two populations or groups is equal.

Given two independent random samples of size n_1 and n_2 with means X_1 and X_2 and standard deviation S_1 and S_2 for testing the hypotheses that the samples come from the same normal population, the t - statistic is calculated by using the *t*-test as follows:

$$t = \underbrace{X_1 - X_2}_{S} \times \underbrace{\sqrt{n_1 n_2}}_{n_1 + n_2}$$

 X_1 = mean of the first sample,

 X_2 = mean of the second sample,

 n_1 = number of observation in the first sample,

 n_2 = number of observation in the second sample,

S =combined standard deviation.

The value of *S* is calculated by the following formula:

$$S = \frac{\sqrt{\Sigma(X_1 - X_1)^2 + \Sigma(X_2 - X_2)^2}}{n_1 + n_2 - 2}$$

The hypotheses to be tested were formulated as follows:

HO: There is no significant difference between the role played by working and non-working wives.

Ha: There is a significant difference between the role played by working and non-working wives.

Analysis, Results, and Discussion

The results of the analysis are presented in the Tables 2, 3, and 4.

(1) Role of Working and Non-Working Women in Consumption of Non-Durable Products: As per the Table 2, the tabulated value of t-statistic is greater than the calculated value of t - statistic in case of the roles of gatekeeper, buyer, user, maintainer, and disposer at the 5% level of significance; so, the null -hypothesis, that is, there is no

Table 2. Role Differences in Non-Durable Product Consumption

	Working Women		Non-Working Women		t -Statistic
	Mean	S.D.	Mean	S.D.	
Influencer	3.4	1.07	3.97	0.93	2.54
Gatekeeper	3.03	1.3	3.1	1.21	0.21
Decider	3.87	0.90	4.57	0.57	4.03
Preparer	4.03	1.03	4.63	0.61	2.76
Buyer	4.17	0.87	4.4	0.72	1.42
User	4.20	1.00	4.47	0.73	1.19
Maintainer	3.20	1.13	2.87	1.17	-1.00
Disposer	2.83	1.15	2.93	1.18	0.37

Tabulated value of t - test at the 5% level of significance =1.699

Table 3. Role Differences in Durable Product Consumption

	Working Women		Non-Working Women		t -Statistic
	Mean	S.D.	Mean	S.D.	
Influencer	3.47	0.973	3.90	0.99	1.51
Gatekeeper	2.77	1.43	3.00	1.17	0.62
Decider	3.70	0.92	3.53	0.94	-0.62
Preparer	3.10	1.18	2.73	1.34	-1.30
Buyer	3.70	0.84	3.57	0.97	-0.57
User	3.57	1.07	4.37	0.72	4.4
Maintainer	3.43	1.25	3.9	1.06	1.54
Disposer	3.17	1.12	3.43	1.17	1.02

Tabulated value of t - test at the 5% level of significance =1.699

significant difference between working and non-working wives in playing these roles is accepted. Thus, it can be seen that in the case of non-durable products, both working and non-working wives play the roles of gatekeeper, maintainer, and disposer frequently; whereas, they play the roles of buyer and user very frequently. These findings may be related to the nature of non-durable products that are most of the times 'fast moving consumer goods' like groceries which do not need disposing after use or maintaining like consumer durables. The primacy of women in purchase and consumption of non-durable products is aligned with the results obtained by Sharma (2013), who stated that women have a free hand in purchase of groceries and personal products.

It is observed that the calculated *t*-statistic is greater than the tabulated *t*-statistic at the 5% level of significance for the roles of influencer, decider, and preparer, that is, the null hypothesis is not accepted. It means that the difference in the means of two samples is significant in the case of these roles.

On the basis of the mean scores, it can be said that the non-working wives tend to play the roles of preparer (M=4.63) and decider (M=4.57) nearly all the time; whereas, working women play these roles very frequently but not all the time. Jackson et al. (1985) too attested to the working wives' dislike for food shopping and cooking. Non-working wives enacted the role of the influencer very frequently (M=3.97), while working wives did so only frequently (M=3.40), this may be related to the findings of McCall (1977), who also found working wives to be actually shopping for food less frequently. Thus, they need to exercise influence in what may be seen as their key realm of domestic responsibility. The differences probably reflect the role change in case of working wives, who

Table 4. Role Differences in High Value Product Consumption

	Working Women		Non-Working Women		t - Statistic
	Mean	S.D.	Mean	S.D.	
Influencer	3.13	0.90	3.03	1.22	-0.34
Gatekeeper	2.43	1.14	2.40	1.20	-0.12
Decider	3.00	1.20	2.53	1.33	-1.63
Preparer	2.40	1.22	1.87	1.11	-2.04
Buyer	3.17	0.95	2.30	0.95	-3.50
User	2.93	1.31	2.83	1.21	-0.34
Maintainer	2.57	1.07	2.20	1.13	-1.34
Disposer	2.27	0.89	1.70	0.95	-2.60

Tabulated value of t - test at the 5% level of significance =1.699

are perhaps ceding some roles like preparing food in the kitchen all the time to a small extent to others within the family or to housekeeping services. The findings appear to be in line with those of obtained by Joag et al. (1984) and Yen (1993), who found that to save time and energy, families of women who are employed in high-status occupations are known to dine out more frequently.

(2) Role of Working and Non- Working Women in Consumption of Durable Products: In case of roles of influencer, gatekeeper, decider, preparer, buyer, maintainer, and disposer, the calculated value of t - test is smaller than the tabulated value of t -test; hence, we accept the null hypothesis. It means that there was no difference between the roles played by working and non-working wives in consumption processes of durable products (furniture, fridge, TV, etc). A perusal of the Table 3 shows that both working and non-working married women play these roles frequently or very frequently. The finding is similar to those of Chithra (2012), who stated that women play an important role in purchase decisions pertaining to household goods like washing machines and refrigerators, which they use often.

However, in case of the role of the user, the calculated value of t statistic is greater than the tabulated value of t statistic, therefore, the null hypothesis is not accepted. From here, we infer that the difference of means of the two samples is significant. It means non-working women were very frequent (M=4.36) in playing the role of a user than working women (M=3.56), who were frequently using the durable products, but not as frequently as the nonworking married women. This is probably due to non-working wives being at home more, which results in their making more use of the durables like TV, washing machine, microwave oven, vacuum cleaner; while, the working wives are engaged in the formal workplace. The finding in a way relates to the findings of Joag et al.(1984) and Yen (1993), who pointed to reduced role of working wives in cooking. Similarly, it appears that working wives are ceding some of the user related roles in connection with durables either to domestic helps or members of the family.

(3) Role of Working and Non-Working Women in Consumption of High Value Products: From the Table 4, it is observed that the calculated t-statistic is less than the tabulated t - value for the roles of influencer, gatekeeper, decider, user, and maintainer, that is, we accept the null-hypothesis that there is no difference in these roles when enacted by working and non-working wives in case of high-value purchases. In case of consumption of highvalue products, both working and non-working women act as influencers, deciders, and users frequently; whereas, they play the role of gatekeepers and maintainers at times, but not frequently.

In the case of high value purchases, it is observed that there is a difference in the roles played by working and non-working women so far as the roles of preparer, buyer, and disposer are concerned and the null hypothesis is not rejected in the case of these roles, as the calculated t-statistic is higher than the tabulated t-statistic. Both working and non-working women enact the role of preparer in case of high-value purchases at times, but working women (M=2.40) tend to play this role more frequently than non-working women (M=1.87). Working women (M=3.17) are frequently the buyers of high-value purchases as compared to non-working women (M=2.30) who do so at times only. While both working and non-working women are disposers of high-value products only at times, working women (M=2.27) tend to do it more often than non-working women (M=1.70). It appears that the financial resources which are accessible to the working wives facilitate them to own, prepare, and dispose of high-value products more frequently than non-working wives, who may be dependent upon their partners in these matters. The slightly more active role of working wives in high value products seems aligned to the opinion of Chaudhary (2013) that non-working wives are assumed to consider the opinions and suggestions of other people as they may not be as well informed or self-reliant as working wives.

Managerial Implications

Primacy of wives in the realm of low and medium involvement products, that is, non-durable and durable consumer products remains unchallenged. Though, it is true that there is a distinction in some of the roles that working and non-working wives play, the changes are still incipient in nature so far as the Indian urban households are concerned. However, in case of non-durables, when targeting households with working wives, it will be appropriate to start addressing communications to other people in the household who have started filling in the roles being vacated by wives. Marketers of consumer durables will be better served if they considered the needs of non-working wives, who probably are the single largest segment of consumer durables in the country. The greatest opportunity seems to be opening up for the marketers of high-value products, who would be best served by opening communication channels with working wives, who are appearing to be more active buyers of such products.

Conclusion

In case of non-durable products, both working and non-working wives are active to a considerable extent, with the non-working wives being more active in the roles of decider and preparer as they play these roles all the time, and are also more active in playing the role of the influencer by playing it very frequently as compared to working wives who play it only frequently.

Both working and non-working wives were active to a considerable extent in the consumption roles of durable products. There is a considerable similarity in the roles played by working and non-working married wives in the case of durable products, where they are involved heavily in the consumption roles enacting them either frequently or very frequently. The only difference is the degree to which they are very frequent users of durable products, with non-working wives using them even more frequently than working wives. The role of working wives in consumption of high-value products is more dominant than that of non-working wives. Though wives as such are less active in consumption processes related roles of high-value products, which can be assumed to mean that the men of the family are more active in consumption roles associated with these products. More activity of working wives is seen in the roles of buyer, preparer, and disposer in case of high-value products.

It can be seen that role of working wives in the consumption process is increasing with the value of the products; they are less active than non-working women in the consumption roles associated with products of lower value and are more involved when the product is of high value, while both categories of women are active to a nearly equal extent in the case of medium value durable products. It can thus be seen that higher involvement consumption engages working wives more than the non-working wives, which is probably due to more exposure of these

women to the outside world, and also probably due to their higher education and thus higher analytical ability.

On comparing the findings of the study with the extant literature from the West, it is found that behaviour patterns of the working wives in India is very akin to that displayed by working wives in the West, which is a reflection of a possible mono-culture evolving in urban areas of the world.

Limitations of the Study and Scope for Further Research

The limitations of the study arise from the choice of Shimla as the locale, which has rather high Market Intensity Index as per RK Swamy BBDO. This makes application of the results of the study limited to similar high Market Intensity Index markets. The questionnaire used was not a standardized instrument, and hence, the results are more indicative than definitive. It will be apt to follow up this study with a qualitative study to examine the reasons for the differences observed in this study. This study compared only the roles enacted by working and non-working wives; it will be of value to examine the roles played by wives in context of the three-way occupational status scheme given by Schaninger and Allen (1981) for added depth. A follow-up study that uses the frame of this study will be apt in establishing trends. Replicating the present study in other cities will help in establishing whether the differences identified in this study are present to other urban centres also and whether the same are generalizable across the country. Similarities and differences in the roles played by working wives in India and more developed Western world need to be explored, as there is a possibility of convergence between the two.

References

- Bellante, D., & Foster, A. C. (1984). Working wives and expenditure on services. Journal of Consumer Research, 11 (2), 700-707. DOI: http://dx.doi.org/10.1086/209006.
- Bhalla, S. S., & Kaur, R. (2011). Labour force participation of women in India: Some facts, some queries (Asia Research Centre Working Paper 40). Retrieved from http://www.lse.ac.uk/asiaResearchCentre/ files/ARCWP40-BhallaKaur.pdf
- Bina, T. (2005). A case of emotional decision making [EDM]. *Indian Journal of Marketing*, 35 (2), 17-20.
- Boylu, A. A., & Terzioğlu, R. G. (2008). Investigating the effect of working wives on family expenditure. *International Journal of the Humanities*, 6(3), 141-147.
- Census Organization of India. (2011). Shimla city census 2011 data [Online]. Retrieved from http://www.lse.ac.uk/asiaResearchCentre/ files/ARCWP40-BhallaKaur.pdf
- Chaudhary, V. (2013). Role of women in decision making for purchasing FMCG products for the family. Research Journal of Commerce & Behavioural Science, 2 (12), 7 - 16.
- Chithra, J., (2012). Feminine Role and Family Purchasing Decisions. *International Journal of Management and Social Sciences Research*, 1 (3), 76-85.
- Guha, S. (2013). The changing perception and buying behaviour of women consumer in Urban India. *IOSR Journal of* Business and Management, 11 (6), 34-39.
- Jackson, R.W., McDaniel, S.W., & Rao, C.P. (1985). Food shopping and preparation: Psychographic differences of working wives and housewives. Journal of Consumer Research, 12 (1), 110-113. DOI: http://dx.doi.org/10.1086/209041

- Joag, S. G., Gentry, J. W., & Hopper, J. (1984). Explaining differences in consumption by working and nonworking wives. In E.C. Hirschman & M.B. Holbrook (eds), *NA Advances in consumer research* (Vol. 12, pp. 582-585). Provo, UT: Association for Consumer Research.
- Juyal, S. A., & Singh, M.P (2009). Role of females in family buying decision-making-A study among females of Uttarakhand. VISION: The Journal of Business Perspective, 13 (4), 15-23. doi: 10.1177/097226290901300402
- Laxmi, G., & Rengarajan, P. (2013). A study on women consumer decision making behaviour with special reference to purchase of durable goods in Udumalpet Town. *Journal of Research in Commerce & Management*, 2(8), 32-40.
- McCall, S. H. (1977). Meet the" Workwife". The Journal of Marketing, 41 (3), 55-65.
- Prakash, R. (2008). The role of women in advertisements. *Indian Journal of Marketing*, 38 (3), 3-6.
- Ramaswamy, V. S., & Namakumari, S. (2002). *Marketing management: Planning, implementation & control: Global perspective Indian context*. New Delhi: MacMillan.
- Raychaudhuri, P. S. (2014). Challenging the female stereotypes in Indian television advertisements: The women consumers' perspective. *Indian Journal of Marketing*, 44(5), 30-43.
- Reilly, M. D. (1982). Working wives and convenience consumption. *Journal of Consumer Research*, 8 (4), 407-418. DOI: http://dx.doi.org/10.1086/208881
- Schaninger, C. M., & Allen, C. T. (1981). Wife's occupational status as a consumer behavior construct. *Journal of Consumer Research*, 8 (September), 189-196.
- Schiffman, L.G., & Kanuk, L.L. (2008). *Consumer behaviour* (9th ed.). New Delhi : Prentice Hall of India Private Limited.
- Sharma, S. (2013). Impact of females in making a buying decision. *International Journal of Management and Social Sciences Research*, 2 (9), 63-64.
- Srinivas, T., & Babu, M.K. (2008). Retailing to women requires a holistic approach. *Indian Journal of Marketing*, 38(11), 22-36.
- Subrahmanian, M. (2011). Buying behaviour of the new aged Indian women. *Indian Journal of Commerce and Management Studies*, 11 (1), 143-147.
- Vickery, C. (1979). Women's economic contribution to the family. In, R. E. Smith (ed.), *The subtle revolution: Women at work* (pp. 159 200). Washington, D.C: The Urban Institute.
- Yen, S. T. (1993). Working wives and food away from home: The Box-Cox double hurdle model. *American Journal of Agricultural Economics*, 75 (4), 884-895. doi: 10.2307/1243976