Global branding, country of origin and expertise
An experimental evaluation

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Abstract
Purpose – The globalisation of markets combined with the paradoxical rise of nationalism has created an increased concern about the importance of the interaction of global brands with other cues such as the country of origin (COO) of products and services. The purpose of this paper is to evaluate the decision-making processes of experts and novices with respect to international brand names, COO and intrinsic quality differences.

Design/methodology/approach – Within subject experimental design, quantitative study analysis of variance.

Findings – Results of a series of experiments with personal computers as a product with strong COO effects supported this argument. Experts or highly knowledgeable consumers were found to use COO in a circumspect manner or as a limited summary construct, only when such information was consistent with a linked brand name or a particular level of physical quality. Novices, for both products used COO as a halo regardless of brand name and physical quality.

Research limitations/implications – International brand names are used in a more analytical manner by experts, with respect to quality, whilst novices based their decision-making on extrinsic cues. This was a controlled experimental design and results could be evaluated further by more realistic design using actual products in a more market setting. Although the use of product description as used as experimental treatments in this study is not an unusual manner in which personal computers are purchased by consumers, especially when they are purchased online.

Practical implications – International marketers must carefully consider the quality, brand and COO information carefully when marketing to consumers of varying product knowledge as it appears different decision-making styles are used by experts and novices.

Originality/value – This is one of the few studies to experimentally manipulate brand, quality and COO information amongst different groups of consumers with varying product knowledge (experts and novices). The experimental treatments were also carefully chosen so that differences due to the use of a global brand IBM could be evaluated against a lesser known local brand name.

Keywords Brands, Country of origin, Quality, Marketing, International marketing, Customer satisfaction

Paper type Research paper

Introduction
Globalisation of trade has been a striking feature of the modern economic landscape. In this seemingly much smaller world it is reasonable for buyers, in different nations, to wish to purchase the highest quality brands, at the cheapest price, from the best location. Paradoxically, at the same time, nationalism forms the basis of a powerful appeal that appears too strong for firms to disregard (Anderson, 1991;
We use the term nationalism to describe the so-called “imagined communities” which at the extreme, lead consumers to place the interests of one nation, ethnic group or faith higher than all others (Anderson, 1991, pp. 5-7). In the international marketing context these two conflicting forces are most clearly manifested in the research on global branding in a multi-cue situation (signals that guide or cue behaviour) including country of origin (COO) (Alashban et al., 2002; Audhesh et al., 2003; Clarke et al., 2000; Coulter et al., 2003; Dinnie, 2004, 2002; Douglas et al., 2001; Lim and O’Cass, 2001; Lin and Kao, 2004; Loeffler, 2002; Lwin et al., 2006; van Mesdag, 2000; Pecotich and Shultz, 2006; Ramsay, 2003; Zafar et al., 2002). While the emphasis of COO research is on buying products made in the home nation or where the products are made, “globalization” of world markets implies a research focus on global or international brands spanning countries and cultures. Global brands may be produced in a number of locations so that manufacturers can take advantages of lower costs and/or greater access to foreign markets. It is thus important for managers to know whether consumers believe the brand name to contain a unique message or be simply the carrier of the COO effect (for example, Air France, and Qantas – Australia).

Brand and COO may be viewed as cues in a multi-cue consumer decision-making context (Hong et al., 2002; Liu and Johnson, 2005; Miyazaki et al., 2005; Paswan and Sharma, 2004; Speece and Nguyen, 2005; Teas and Sanjeev, 2000). The nature of its use by consumers in the presence of other information has, therefore, been of vital interest to marketing scholars and practitioners. Unfortunately, the research has failed to clearly distinguish between the various conceptualizations and the interactions with other cues. Particular imprecision is associated with the brand name as a carrier of COO connotations. The notion of the COO as an overall image across product classes may be contrasted with the possibility of a more limited application to a particular product class. Further, the interplay between COO, branding and quality has not been fully enumerated. COO and any linked brand names have been shown to have both broad and specific effects on consumer behaviour (Agbonifoh and Elimimian, 1999; d’Astous and Ahmed, 1999; Han, 1989; Hong et al., 2002). It is believed, but yet to be determined, that consumer knowledge and expertise play a central role as to which type of generalisation may be formed on the basis of this information. More knowledgeable or expert consumers may use brand name and COO in a conditional fashion whilst less knowledgeable consumers are considered to use this information in a more general manner (Choe and Cho, 2000; Clarke et al., 2000; d’Astous and Ahmed, 1999; Gurhan-Canli and Maheswaran, 2000; Han, 1989; Hong et al., 2002; Maheswaran, 1994). In the price/quality and psychology literature similar issues have been debated but have not yet been resolved (Monroe, 1973; Monroe and Krishnan, 1985; Thakor and Lavack, 2003). In order to understand the nature of the brand and the COO, and their effects it is necessary to enumerate their possible manifestations and conceptualize their aetiology in the multi-cue consumer behaviour context.

The conceptual structure that forms the framework for this study places the brand, COO and quality within a controlled multi-cue consumer judgment situation. The informational cues of physical quality and brand name, along with COO make up the independent variables, while consumer evaluations (perceived quality, price perception, perceived value and purchase intent) form the dependent variables. This model is consistent with the extant literature (Peterson and Jolibert, 1995) and will be used to guide the discussion necessary to develop systematically related hypotheses.
It is the purpose of this study to describe a series of critical experiments designed to demonstrate the operation of the COO effect.

**Brand**

Although consumer behaviour is a rich and evolving discipline and there exist many different points of view (Ekstrom and Brembeck, 2004; Ekstrom and Brembeck, 2005; Jacoby *et al.*, 1998; Ratneshwar and Mick, 2005), the traditional position is that cues form the basis for consumer information processing, and lead to judgment and choice. The brand name along with, for example, COO may be regarded as extrinsic cues (related to but not part of the physical product) while other cues are termed intrinsic (a part of the physical product) including observed physical product differences and product attributes. Consumer research suggests that, in the assessment of perceived quality for utilitarian products, the use of intrinsic cues by consumers has had a greater influence than extrinsic cues (Agbonifoh and Elimimian, 1999; d’Astous and Ahmed, 1999; Hong *et al.*, 2002; Jacoby *et al.*, 1971; Leclerc *et al.*, 1994). For more image-based products, where actual physical differences are hard to discern, the reverse is true and extrinsic cues become more important (Holbrook *et al.*, 1986).

It is a long held truism in marketing that brand is the most visible extrinsic cue that provides identification and continuity in the marketplace. Although recent studies suggest similar conclusions it was Olson (1977) in a major review of the price/quality literature who first suggested that the influence of brand name in determining product quality is clearly linked to its familiarity, i.e. the more familiar the brand, the greater its effect on product evaluation (Audhesh *et al.*, 2003; Brucks *et al.*, 2000; Hong *et al.*, 2002; Jacoby *et al.*, 1998; Kotabe *et al.*, 2005; Miyazaki *et al.*, 2005; Rao and Monroe, 1989). This he suggests is due to “information chunking” or use of brand as a summary construct, i.e. the brand acts as a cohesive grouping factor for all the information. Indeed, the summary construct ideas essentially suggests that people recode and abstract individual elements of information into higher order units around the brand because information chunks are easier to store and retrieve from long-term memory. As the familiarity with the brand increases it is argued (Olson, 1977; Monroe and Krishnan, 1985) that consumers are less likely to use other extrinsic cues such as price or COO, since the information “chunked” or retrieved in the brand name becomes more useful. A familiar brand is a powerful cue that may even overcome or enhance the COO effect particularly where there is a strong association of a brand name with a country (Hong *et al.*, 2002; Pecotich and Rosenthal, 2001; Sadrudin and d’Astous, 2004; Sadrudin *et al.*, 1993). It is particularly useful to consumers with prior knowledge as a means of retrieving information about the product. Han (1989, p. 223) suggests that “information chunking may evolve around a brand” and that the brand name may be even a more powerful summary construct than the COO. There is also evidence that a strong brand name may counteract the negative effect of shifting production to an unfavourable country, such as a developing nation (Johansson and Nebenzahl, 1986).

**Country of origin as a cue**

There are many parallels between the conclusions drawn from research in the broader consumer behaviour context and those specifically concerned with COO (Coulter *et al.*, 2003; Holbrook *et al.*, 1986; Jacoby *et al.*, 1971; Leclerc *et al.*, 1994; Maheswaran, 1994). Unfortunately this research, even in the multi-cue context, has confounded elements of
country image as a broad, global concept and its applications in the specific product class situation and has, consequently, failed to clearly demonstrate its importance as a cue in the decision-making process (Peterson and Jolibert, 1995). It is therefore necessary to explicate and differentiate the various conceptualizations of country image and its interactions with other cues.

Image is a general cognitive concept representing a “mental picture” of such elements as organisation, store, product or a country among many others (Audhesh et al., 2003; Brucks et al., 2000; Hong et al., 2002; Jacoby et al., 1998; Kotabe et al., 2005; Miyazaki et al., 2005; Rao and Monroe, 1989). It is interpretive rather than objective with information about the referent object being classified and simplified into a general stereotype (Jacoby and Mazursky, 1985). Country of origin image (COI) may also be considered as part of stereotyping or classifying process that helps to simplify judgements when information is lacking or when there is an overload of information.

The research on country image as a broad, global concept has resulted in the conclusions:

- that there exists an overall preference for domestic goods and services;
- that foreign countries may be ordered in terms of their overall expected competence in producing products and services; and
- that the images of countries are multi dimensional (Hong et al., 2002; Kotabe et al., 2005; Peterson and Jolibert, 1995).

The evidence indicates that consumers form an overall hierarchy of countries based on general global image considerations. It is critical that the basis of this order be clearly delineated before research investigation. The first element that consumers use in global image evaluation is domestic preference. The theoretical foundation for domestic preference may be found in patriotism or more formally in ethnocentrism (Pecotich and Rosenthal, 2001; Shimp and Sharma, 1987). Consumers may favour domestic goods for many reasons including familiarity, and because of the belief that it helps the economy and provide jobs as well as bolstering national pride. Logically, this leads to the expectation that consumers will demonstrate a preference for domestic products. Given the postulated domestic preference the remaining issue involves the image of non-domestic nations. Research support for the notion that a hierarchy of foreign countries in terms of consumer response variables exists (Agbonifoh and Elimimian, 1999; Audhesh et al., 2003; Hong et al., 2002; Papadopulos and Heslop, 1993; Pecotich et al., 1996; Pecotich and Rosenthal, 2001; Peterson and Jolibert, 1995). Developed countries such as Japan, Germany and the USA are associated with high quality products whereas newly developing nations such as Korea, China and the Philippines are associated with poorer quality products. Countries with the lowest reputation are those about which consumers know very little such as, for example, the Eastern European countries. Indeed, research suggests that the reputation of an unknown country may be lower than that of even a developing nation (Pecotich et al., 1996).

The narrower conceptualisation of country/product image “deals with the referent image which consumers are assumed to conjure up when exposed to information about where a product was made, assembled, designed or conceived” (Papadopulos and Heslop, 1993, p. 2). Its measurement, therefore, must be anchored to the referent product class and the basis for a critical comparison emanates from the existence of countries that may posses, for example, a poor overall image but nonetheless have a
good reputation for the production of a particular class of products. It can therefore be concluded that the study of COO as an image has shown some broad ordering effects to occur, while the study of COO as country/product image has shown these effects to be more specific or limited to referent product class associated with the country. It is necessary to specify the theoretical conditions under which these conceptions may differentially operate.

Physical quality
Physical or “objective” quality (an intrinsic cue) refers to “measurable and verifiable superiority on some predetermined ideal standard” (Zeithaml, 1988, p. 3). Research evidence suggests that objective quality rather than extrinsic cues such as price and brand name have the largest effect on the perception of quality (Jacob and Mazursky, 1985; Jacoby et al., 1971; Zeithaml, 1988). Given that brand and COO are extrinsic cues it is anticipated that their effects will also be influenced by quality differences in a multi-cue context. A crucial issue in COO research has to do with the extent to which consumers are willing to make sacrifices and accept inferior quality for patriotic reasons. In this regard, the most acceptable position is that when physical or objective quality is hard to assess or the product is based on fashion or style, extrinsic cues such as COO, become more important (Han, 1989; Holbrook et al., 1986). The critical issue therefore concerns consumer expertise in the evaluation of quality differences. The response to COO as a cue will depend on the extent to which consumers are able to evaluate quality and are willing to make sacrifices for their country.

The COO, brands and quality as cues: halo or summary construct with novices and experts
Han (1989) has provided the most promising explanation of how brands and their COO’s may affect consumer perceptions of goods and services. He suggested that COO (or a brand) operate in either of two ways. First, it may serve as a halo to infer beliefs about attributes that make up the attitude towards a product or service, i.e. consumer evaluations of products and services are based on their perception of the country (e.g. overall the Japanese make good quality products, this is a camera from Japan, therefore it must be good quality). Second, it may be used as a means of abstracting previous beliefs about attributes of products and services from a particular country into a chunk of information called the summary construct, which is in turn used to infer product attitude (e.g. I know, from experience that the Japanese make poor quality wine, this is a wine from Japan, therefore I would expect it to be of poor quality). The use of brand or COO as a halo to directly infer product beliefs may be based on a consumer’s limited ability to infer quality before purchase. This may occur because actual quality differences are hard to detect, or because consumers lack familiarity with the product and/or country of manufacture. The use of COO or brand as a summary construct occurs when consumers have greater knowledge about products and service classes from a particular country, this knowledge is then generalised only to that specific product class. This process is analogous to stereotyping and is similar to that found in the price/quality literature (Jacoby et al., 1971; Olson, 1977).

The first point, therefore, is that the halo process involves the use of country image which extends across different products or services, while the summary construct encompasses the use of the country/product image that is represented by the reputation
of the country as a producer of particular classes of goods (Heslop and Papadopoulos, 1993). Thus, there is a need to create critical test conditions to examine the use of COO as a halo for countries with an overall good or poor reputation across product categories, contrasted to a carefully chosen product class, brand level and quality conditions that encapsulate the summary construct explanations. The second critical factor that distinguishes the processing strategies of the COO (or brand) cue is the extent of consumer knowledge. In terms of information processing this is a selective and analytical use of cues. It is a selective process because the more expert and knowledgeable the consumer, the more likely COO will only be of importance if it is consistent with past experience of a product from a relevant country. It is an analytical decision-making process in as much as it is only of relevance to more knowledgeable consumers when actual quality matches past experience. This will be the case for more knowledgeable consumers even when differences in quality are difficult to determine.

It is, therefore, expected that consumers lacking in knowledge will use COO as a halo because they are unlikely to be able to judge quality where differences are not obviously apparent. These “novice” consumers do not have extensive knowledge of countries, brands, products from a particular countries or general product class knowledge from which to form a summary construct (information file) about a product or service they are evaluating. They will rely more on the overall image of a country when rating products and services along with information contained in extrinsic cues. More knowledgeable consumers, on the other hand are heuristic processors using COO only when it is relevant to a product and consistent with a level of detected quality. Given these postulated differential effects, the most extreme case where these strategies may be placed in a critical test is in a situation involving novices and experts.

Novices and experts may be primarily differentiated on the basis of the knowledge they possess about countries or brands and may, therefore, use differing information processing strategies (Alba and Hutchinson, 1987; Allwood, 1984; Maheswaran, 1994; Papadopulos and Heslop, 1993; Peterson and Jolibert, 1995). Alba and Hutchinson (1987) provide a number of possible reasons for the existence of differences in the use of COO. The use of COO as a halo for quality or price perceptions represents use of a holistic classification based on apparent differences between objects. The summary construct approach involves classification using analytic inferences based on attributes of the object, which is summarised into a chunk of information, such as a brand name (Olson, 1977) or possibly COO. Novices, lacking knowledge about product attributes, are more likely to use the COO cue to construct product inferences rather than more technical attributes (Maheswaran, 1994).

Experts are also more able than novices to recall, reorganised meaningful stimulus or analytic stereotypes, which are often organised as a “chunk of information” representing feature configurations of the object. Novices, on the other hand, search the environment for simple, surface apparent differences since their knowledge is fragmentary and complex in its organisation, which makes its recall, use for generalisation and analysis of the object, difficult. These differences in knowledge and perception are directly analogous to the use of a halo (apparent differences) or summary construct (stereotyped stimulus, or chunk of information about the features of the object). It is, therefore, expected that novices will use COO information purely as an image in the halo context regardless of whether it is consistent with actual product quality. While “experienced” experts will use the COO information with direct reference to the country/product
configuration in the summary construct manner. Brand use is anticipated to follow a similar pattern. Novices, being unable to accurately detect quality differences will simply use the halo of the country origin as a noticeable holistic, i.e. “this represents quality” rather than an analytic cue (Maheswaran, 1994).

It is expected that the process followed by novices in the use of COO will be that of a halo under all country/product conditions. This is expected to occur because novices use COO as a holistic, non-analytic means of evaluation, and they are not likely to be able to notice quality differences. In experimental circumstances where countries, products, brands and quality are systematically varied product evaluations are expected to occur as follows:

**H1.** For novices, a significant country effect will be demonstrated.
**H2.** For novices, a significant brand effect will be demonstrated.
**H3.** For novices, no significant quality effect will be demonstrated.
**H4.** For novices the significant country effect will be based on the use COO image as a halo. The order of the product evaluation means will occur regardless of actual quality differences and be based on image order and domestic preference.

**H5.** For novices, a significant interaction between COO and brand will be demonstrated.

Experts use of COO and/or brand name is expected to be as predicted by the summary construct process under theoretically justified and empirically selected product/country conditions expected to induce this effect. To summarize more directly, experts will use COO as a summary construct when product evaluations are consistent with the image or reputation of the COO in producing or supplying that particular type of goods and services, but only if the country’s reputation is consistent with quality. This will be manifested by interactions. Under product conditions where the use of COO or brand is expected to be that of halo, experts will simply base their judgments on physical quality differences.

**H6.** For experts, a significant quality effect will be demonstrated.
**H7.** For experts, there will be a significant interaction between country/product image and brand.
**H8.** For experts, there will be a significant interaction between country/product image and quality.
**H9.** For experts, there will be a significant interaction between brand and quality.
**H10.** For experts, there will be a significant interaction between country/product image, brand and quality.

An implication of these hypotheses is that the use of COO by experts is product specific and that expert decision-making is considered to be limited to a product class. Novice use of COO is image based on the halo format and is expected to be broadly consistent across product classes.
In order to adequately test the enumerated theoretical hypotheses it was a prerequisite to select and create experimental conditions that formed a valid basis for an empirical assessment. The choices of the experimental circumstances and stimuli had to be systematic, relevant and interdependent so as to allow the valid demonstration of the effects if they existed. It was, therefore, necessary to identify and select:

- the general product class that was meaningful for the experimental context and allowed clear quality manipulation;
- countries that captured the necessary global image and specific country/product image distinctions, provided the necessary separation and were sufficiently realistic to provide a high degree of external validity;
- brand names linked to the domestic and foreign countries given each country’s overall or product specific reputation;
- experimental quality levels that in physical terms were sufficiently discernible to be clearly detectable; and
- a clear valid basis for the definition and identification of the novices and experts who are to form the samples.

The research design consisted of two interrelated stages. In the first stage, preliminary surveys were undertaken in order to provide the stimuli combinations necessary for the experimental treatments. The second stage involved the implementation of a series of experiments designed to provide a test of the research propositions. The objective of the first stage, that is to identify and select the experimental conditions, was a prerequisite for the second stage. This derivation of the experimental conditions from empirical sources as well as the literature increased the external validity of the experiments and supplied a strong realistic basis for the structure of the study. Two questionnaires were used to provide information concerning consumer:

- knowledge of various countries;
- perceptions of the extent of similarity between various countries;
- views about the quality of products from the countries;
- specific conceptions of country/product linkages; and
- knowledge and perceptions of quality about domestic and international brands.

Totally 17 of the top importers (collectively accounting for 89 per cent of total imports) into Australia (the domestic country in the study) comprised the list of 18 countries that formed the basis of the questionnaires. This list was considered adequate although the burden on the respondents was still heavy and, accordingly, it was decided to conduct two separate surveys to collect the necessary information. The first questionnaire (Questionnaire A), was designed to collect information on items which could be measured by scale values. These included; knowledge of countries (measured on a five point scale ranging from (1) “know nothing about” to five (5) “know all about”), similarity judgments of various countries (again from (1) “exactly the same as Australia” to five (5) “completely different to Australia”), general quality of products and services of those countries (response categories ranging from one (1)
“very poor quality” to five (5) “Very good quality”), knowledge of domestic and international brands and the opinions of quality of such brands (respondents were asked to list Australian and foreign brand names that they could recall and to rate the quality of each brand on a five point quality scale as described above). The second questionnaire (Questionnaire B) was used to collect a list of products or services each country was perceived as good or poor at producing. This was collected by unprompted recall, and thus recorded in open-ended format. Both the questionnaires concluded with the usual demographic items that were useful in describing the nature of the sample. The data were collected by telephone interviews with the sample frame for both surveys emanating from the telephone directory of a major regional and metropolitan area. The sample size for Questionnaire A was 258 and for Questionnaire B, 282. Response rate were similar being 21 per cent for A and 20 per cent for B which although not high was considered adequate for telephone surveys (Groves, 1990). The samples had similar gender proportions (e.g. women were 51.6 and 56.7 per cent) and average ages (36 years for A and 39 for B) suggesting that the differences were due to sampling variations.

The first purpose of this preliminary part of the study was to select a general product class that was relevant for the context, and would allow a valid test of the theory. The product had to allow a degree of generalisation and yet at the same time permit the use of reasoned COO, brand and quality manipulations, and also be such that readily available samples of experts and novices existed. Preliminary results for computers (discussed below), suggested that global image, country/product image, and brand distinctions and linkages existed that made them suitable stimuli for use in the experimentation. Personal computers are for most consumers a complex product for which a true trial may not be possible (Han, 1989).

The countries which were to be used as stimuli had to meet the global country image criteria as well as to fit the country/product dimensions and allow for the brand and quality manipulations. It is necessary to emphasise that although the description of the process is, for reasons of clarity, linear the decisions were interdependent and iterative. Australia was included because it was the domestic nation with a high overall image rating (quality mean 4.00) and, as expected, the highest knowledge level (mean rating 3.96). Australia was unrated as a computer producer. USA was included as a well-known nation (mean knowledge 3.93) with a strong overall rating of quality (mean = 4.12), a high similarity rating (mean 2.76) and a strongly positive country/product image for computers. To provide a clear contrast to the USA, France was included as a country with a positive global image (quality rating of 3.57, knowledge 2.41 and similarity 3.53) with a negative or no reputation for producing computers. China was selected as the country with an overall poor image (unfavourable halo) with a very low rating of quality (mean = 2.75), intermediate level of knowledge (mean 2.34) and very low level of similarity to Australia (mean = 4.46). China also was regarded as a poor producer of computers. Morocco was selected as unknown country for both experiments, since this country unlike the lesser-known countries examined in the survey was perceived as a possible computer producer. This decision was confirmed by two pilot experiments the details of which are available from the authors.

Following the price/quality literature two types of brand name treatments were used – a well known brand with a high rating of quality and an unknown brand, with
a low rating of quality. This approach to the use of familiar and unfamiliar brand name treatments has also been used in COO research (Bennett and Zhao, 2004; Pecotich et al., 1996; Pecotich and Rosenthal, 2001; Peterson and Jolibert, 1995; Sadrudin and d’Astous, 2004). Each type of brand name treatment was linked to either a domestic country or a foreign country. The brand names selection was on the basis of their mention in the survey, sales figures and pre-testing. The main brands of personal computers recalled were USA (IBM by 5.2 per cent respondents) or Japanese (Sharp, 1.2 per cent). These figures seem very low but it must be remembered they were the result of asking for foreign brand names in general rather than brands of a particular category. IBM had a strong association with the USA (92.3 per cent of responses mentioning IBM linked it with the USA). The prominence of IBM, was influential for the inclusion of USA as country treatment in experiments. Though not mentioned in the survey results, the most popular Australian brand of personal computers in terms of sales was Osborne Computers, which had a market share of 7.8 per cent and sold 85,700 computers in 1994 (Head, 1995). There were thus two brand names per set of computer experiment, one a familiar well-known global brand (in this case a foreign brand, IBM) the other a not so familiar (Osborne Computers, a domestic brand).

The critical experiments
Two “within subject” experiments were conducted in order to examine the hypotheses of this study. The set of experiments were designed to investigate the COO effects on the perceptions and judgments of computers with two subject groups, experts and novices. The manipulations here involved basic written materials, and pencil and paper responses typical of laboratory experiments. The design for each individual experiment consisted of $5 \times 2 \times 2$ within subject factorial for each novice or expert group. Owing to space requirements the experiments will be described very briefly, however the full documentation is available from the authors upon request.

Experiment 1a – computer novices
The sample of 44 novice computer users was selected from first year university students who were not enrolled and had never been enrolled in a computer or information technology course of any kind. The average age of those interviewed was 21 years and 58 per cent were male. To further ensure that these respondents had significantly lower levels of knowledge compared to experts, their extent of expertise was determined by the extent of product class knowledge. Using similar measures and cut-off rules to Maheswaran (1994) participants scoring above the median were eliminated from the novice experiment and those below from the expert. The final test results indicated clear knowledge differences between novices and experts. The mean level of perceived knowledge being 4.2 for experts as opposed to 2.8 for novices ($t = 5.50, p < 0.01$); for objective knowledge experts had a mean score of 5.70 (out of a possible six), compared to novices 2.97 ($t = 8.51, p < 0.01$); and for shopping knowledge experts were 12.32 (out of a possible 15) while the novices were 3.61 ($t = 8.92, p < 0.01$). Post-experimental debriefing indicated that 34.1 per cent of the participants had correctly guessed the purpose of this study. However, the evidence suggested that there were no significant differences between the guess and the non-guess groups.
The design was a $5 \times 2 \times 2$ within subject factorial. Factor 1 consisted of the five levels of countries of origin (Australia – domestic country with poor country/product image for computers; USA – positive country image and positive country/product image; France – positive country image and poor country/product image; China – poor country image and poor country/product image; and Morocco – unknown country image and unknown country/product image). Factor 2 was the two level brand manipulation comprising of IBM a well-known, positive image global brand and Osborne Computers a not so well known, poor image domestic brand. Factor 3 consisted of the two level quality manipulation (32 bit/low quality and 64 bit/high quality). The attribute chosen for the objective quality manipulation was known to be associated with the physical quality of computers Maheswaran (1994). In the high quality treatment this attribute was described as having “64 bit processing chip”. In the poor quality treatment this was described as a “32 bit processing chip”. Each computer was also described in terms of seven other attributes including; coprocessing chip type, memory capacity, software provisions, monitor, compatibility, data storage and ease of operation (Maheswaran, 1994). The purpose of these attributes was to disguise the true nature of the study and to make the quality differences not immediately obvious to the respondents. A pre-test with ten expert subjects (who were not a part of the main experiment) confirmed the quality difference at a statistically significant level ($t = 2.45, p < 0.01$).

Perceived quality was measured as a multi item construct with five components:

1. a reliability perception, “the likelihood of reliability of this product is” (five point scale ranging from very high to very low);
2. an item that required the rating of the workmanship of the product, (rated on a five point scale from very high to very low);
3. an assessment of the likelihood of dependability of the product rated on a five point scale from very high to very low;
4. an assessment of the durability of the product on a five point agree/disagree scale; and
5. an overall judgment of quality (also rated on a five point scale from very good to very poor quality).

This instrument was similar to that used in recent price/quality studies where it has been found to have adequate psychometric properties with a coefficient $\alpha$ of around 0.95 and satisfactory unidimensionality (Chang and Wildt, 1994; Dodds et al., 1991). It appeared to work very well in this experiment with a coefficient $\alpha$ of 0.92.

The measurement of price perceptions involved procedures similar to that described in the price/quality literature (Chang and Wildt, 1994; Dodds et al., 1991; Zeithaml, 1988). Each respondent was first required to express the price they would be willing to pay for each product and then to express if they considered the market price (winning bid price) as expensive or cheap on a five point rating scale. A fuller description is provided in the procedure section. Perceived value was measured by a combination of four items (value for money, economical, good buy, appears to be a bargain) each using a five point Likert scale. To measure purchase intentions a graphic ratings scale was used, with polar labels of 0-100 to represent respondent certainty of purchasing the
particular product. This is a variant of measures is frequently used in marketing research (Morwitz and Schmittlein, 1992).

The experimental procedures were pilot tested with a naive group of ten subjects who were debriefed and eliminated from the study. The pilot test appeared to work and no inconsistencies between the experimental manipulations were found and the subjects indicated adequate comprehension of the experimental tasks. The experiment proper was conducted in group circumstances. Upon entering the experimental setting the participants were placed two seats apart and were presented with the experimental materials that included: a cover letter; the questionnaire; an overall guide to the experimental procedures; a set of product descriptions labelled product 1-20, each with a series of dependent measures; and a series of measurements of the independent variables and manipulation checks. The cover letter stated that the purpose of the study was to test advertising copy for computers and included the usual guarantees of confidentiality. The participants first read the overall guide to experimental procedure and then answered three questions to ensure they understood the required experimental tasks. At this time any difficulties were resolved by the monitor. The experiment did not proceed till the monitor was confident that all respondents had answered these questions correctly. The sequence of presentation of the within subject factors was random to minimise the degree of possible order bias. The presentation was standardised, except for the rotation of COO, product type and quality. The method of elicitation of true values was used since it was believed it would make respondents think more about what their true perceptions of quality, price, value and commitment to purchase at a prevailing market price. The response concerning the extent of quality, value and commitment to purchase were recorded on the set of scales provided in the questionnaire. This procedure was then repeated for the remaining treatments. This continued until all sets of treatments had been experienced by the respondent. Finally, manipulation checks were conducted and information was collected on each respondent’s background. At the conclusion of the experiment subjects were debriefed and the nature of study was explained to them. Ethical guidelines for human experimentation endorsed by the university were followed.

The general analytical procedure followed involved:

- an evaluation of the measurement properties of the scales (reported in the measurement section) and descriptive statistics;
- exploratory data analysis and residual examination; and
- the specific statistical analysis pertaining to the hypotheses and manipulation checks.

Because the experiment involved multiple correlated dependent variables it was necessary to use MANOVA for the third component of the statistical analysis. The procedure used involved the exploratory data analyses, fitting of the overall model and conducting an omnibus test followed by full univariate evaluation for the significant results (Barker and Barker, 1984; Hummel and Sligo, 1971; Tabachnick and Fidell, 1989).

The correlations between the dependent variables were all found to be significantly greater than zero (Table I, $p < 0.01$, quality – price $= 0.46$; quality – value $= 0.24$; quality – intent $= 0.32$; price – value $= 0.48$; price – intent $= 0.42$; value – intent $= 0.78$). This was consistent with previous research (Zeithaml, 1988) with the...
exception of price which was found to have a positive correlation with value and intent, contrary to past research. However, in this experiment the judgments were made in relation to a market price that appears to have acted as an indicator of quality so explaining this result. This finding should be of interest to both researchers and practitioners because in the real world purchase decisions are made at the prevailing market price.

The results of the multivariate tests are shown in Table II – Experiment 1A. The results were consistent across the three multivariate criteria, and all the main effects and interactions were significant. There was, therefore, preliminary support for H1, H2 and H5, i.e. COO and brand name appeared to impact on the dependent variables and there was a significant interaction between COO and brand name. However, contrary to H3 a significant quality effect was discovered as well as three unhypothesized interactions.

### Table I.
Correlations between dependent variables (computer novice and expert experiments)

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>Wilks Lambda</th>
<th>Pillai Trace</th>
<th>Hotelling – Lawley</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiment 1A – computer novice</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td>0.65**</td>
<td>0.37**</td>
<td>0.50**</td>
</tr>
<tr>
<td>Price</td>
<td>2,487</td>
<td>0.65**</td>
<td>0.37**</td>
<td>0.50**</td>
</tr>
<tr>
<td>Value</td>
<td>814</td>
<td>0.55**</td>
<td>0.45**</td>
<td>0.81**</td>
</tr>
<tr>
<td>Intent</td>
<td>814</td>
<td>0.85**</td>
<td>0.14**</td>
<td>0.17**</td>
</tr>
<tr>
<td><strong>Experiment 1B – computer expert</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>2,487</td>
<td>0.83**</td>
<td>0.20**</td>
<td>0.18**</td>
</tr>
<tr>
<td>Price</td>
<td>814</td>
<td>0.92**</td>
<td>0.08**</td>
<td>0.08**</td>
</tr>
<tr>
<td>Value</td>
<td>814</td>
<td>0.98**</td>
<td>0.01**</td>
<td>0.01**</td>
</tr>
<tr>
<td>Intent</td>
<td>814</td>
<td>0.94**</td>
<td>0.06**</td>
<td>0.06**</td>
</tr>
</tbody>
</table>

**Notes:** *p < 0.05, **p < 0.01.

### Table II.
MANOVA results for the computer novice and expert experiments

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>Wilks Lambda</th>
<th>Pillai Trace</th>
<th>Hotelling – Lawley</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiment 1A – computer novice</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>2,487</td>
<td>0.69**</td>
<td>0.31**</td>
<td>0.42**</td>
</tr>
<tr>
<td>Brand (B)</td>
<td>358</td>
<td>0.77**</td>
<td>0.23**</td>
<td>0.29**</td>
</tr>
<tr>
<td>Quality (Q)</td>
<td>358</td>
<td>0.85**</td>
<td>0.15**</td>
<td>0.17**</td>
</tr>
<tr>
<td>Country × brand</td>
<td>1,094</td>
<td>0.87**</td>
<td>0.13**</td>
<td>0.15**</td>
</tr>
<tr>
<td>Country × quality</td>
<td>1,094</td>
<td>0.91**</td>
<td>0.09**</td>
<td>0.09**</td>
</tr>
<tr>
<td>Brand × quality</td>
<td>358</td>
<td>0.98**</td>
<td>0.01**</td>
<td>0.01</td>
</tr>
<tr>
<td>Country × brand × quality</td>
<td>1,094</td>
<td>0.91**</td>
<td>0.09**</td>
<td>0.09**</td>
</tr>
</tbody>
</table>

**Notes:** *p < 0.05, **p < 0.01. Degrees of freedom varied slightly but are not included so avoiding clutter.
It should however, be noted that the highest proportion of variance explained was due to brand ($\eta^2 = 0.45$) followed by COO ($\eta^2 = 0.35$), country × brand ($\eta^2 = 0.17$), quality ($\eta^2 = 0.15$), country × quality ($\eta^2 = 0.08$), country × brand × quality ($\eta^2 = 0.06$) and brand × quality ($\eta^2 = 0.06$).

Following the strategy recommended by Hummel and Sligo (1971) to fully comprehend the significant effects it is necessary to explore their nature further by the use of univariate procedures. The results shown in Table III – Experiment 1A provide additional support for H1, H2 and H5 (i.e. there are a significant main effects for country, brand and the country × brand interaction) across all the dependent variables. However, the evidence although not as clear (intent is not significant) appears, at this stage, to contradict H3. There is also evidence for two un-hypothesised interactions, i.e. country × quality is significant for price, value and intent and brand × quality is significant for intent only. Using the guidelines provided by Cohen (1977) who proposed that in the social sciences $\eta^2$ greater than 0.15 indicated a large effect size while those above 0.06 were of medium and above 0.01 of small size the data suggested that the strongest effects were due to country ($\eta^2 = 0.28$ – dependent quality, $\eta^2 = 0.14$ – price, $\eta^2 = 0.03$ – value and $\eta^2 = 0.06$ for intent) and brand ($\eta^2 = 0.14$ – dependent quality, $\eta^2 = 0.25$ – price, $\eta^2 = 0.04$ – value and $\eta^2 = 0.01$ for intent). $\eta^2$ for physical quality were relatively small (0.01, 0.06, 0.02 and 0.01 for dependent quality, price, value and intent, respectively). The significant interaction effect sizes were also relatively more substantive for country × brand (0.03, 0.06, 0.02 and 0.01) than for country × quality (0.00, 0.02, 0.04 and 0.03) and brand × quality.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Quality</th>
<th>Price</th>
<th>Value</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiment 1A – computer novice</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>4</td>
<td>78.59 **</td>
<td>33.09 **</td>
<td>5.23 **</td>
<td>11.87 **</td>
</tr>
<tr>
<td>Brand</td>
<td>1</td>
<td>116.90 **</td>
<td>276.04 **</td>
<td>31.43 **</td>
<td>18.34 **</td>
</tr>
<tr>
<td>Quality</td>
<td>1</td>
<td>9.24 **</td>
<td>52.6 **</td>
<td>15.3 **</td>
<td>3.71</td>
</tr>
<tr>
<td><strong>2 way interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country × brand</td>
<td>4</td>
<td>5.76 **</td>
<td>12.31 **</td>
<td>4.17 **</td>
<td>3.25 **</td>
</tr>
<tr>
<td>Country × quality</td>
<td>4</td>
<td>2.87</td>
<td>4.05 **</td>
<td>7.67 **</td>
<td>5.71 **</td>
</tr>
<tr>
<td>Brand × quality</td>
<td>1</td>
<td>1.82</td>
<td>1.60</td>
<td>0.69</td>
<td>4.46 *</td>
</tr>
<tr>
<td><strong>3 way interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country × brand × quality</td>
<td>4</td>
<td>1.32</td>
<td>6.44 **</td>
<td>1.79</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Experiment 1B – computer expert</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>4</td>
<td>5.25 **</td>
<td>15.56 **</td>
<td>0.43</td>
<td>7.09 **</td>
</tr>
<tr>
<td>Brand</td>
<td>1</td>
<td>16.35 **</td>
<td>22.52 **</td>
<td>7.84 **</td>
<td>5.39 *</td>
</tr>
<tr>
<td>Quality</td>
<td>1</td>
<td>0.92</td>
<td>34.57 **</td>
<td>9.14 **</td>
<td>0.13</td>
</tr>
<tr>
<td><strong>2 way interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country × brand</td>
<td>4</td>
<td>4.22 **</td>
<td>2.73 *</td>
<td>2.15</td>
<td>0.81</td>
</tr>
<tr>
<td>Country × quality</td>
<td>4</td>
<td>0.60</td>
<td>2.08</td>
<td>1.80</td>
<td>4.75 **</td>
</tr>
<tr>
<td>Brand × quality</td>
<td>1</td>
<td>0.45</td>
<td>0.20</td>
<td>1.41</td>
<td>1.45</td>
</tr>
<tr>
<td><strong>3 way interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country × brand × quality</td>
<td>4</td>
<td>0.58</td>
<td>2.92 *</td>
<td>1.40</td>
<td>0.59</td>
</tr>
</tbody>
</table>

**Notes:** *p < 0.05, **p < 0.01
(0.00, 0.00, 0.00 and 0.01). These findings are interesting not only because of the light they throw on the hypothesized relationships, but also because they appear to indicate that despite the positive correlations between the dependent variables, consumers may use them differentially in product evaluations.

To complete the evaluation of the hypotheses it is necessary to examine the means by conducting multiple comparisons and assess the implications of the interactions. The conservative Scheffé procedure was used to compare the means and the full enumeration of the descriptive statistics is shown in Table IV. The results with regard to the COO manipulation provided evidence first for the existence of domestic preference. Despite the fact that Australia — the domestic nation — has a poor product/country image for computers it is rated second only to the USA in terms of perceived quality and price, and above that nation for value and intent. This finding is interesting as it suggests that novice consumers will respond differently for distinct dependent variables and may be willing to make a sacrifice for the domestic nation despite perceived quality differences. Second, there is evidence for both halo and summary construct effects. In terms of perceived quality the USA the nation with both a positive country image and positive country/product image has a significantly higher mean (22.45) to all the other nations which are significantly different from each other ($p < 0.05$) with the exception of Australia (20.82) and France (20.94). As these two countries both have a poor country/product image and are differentiated because Australia is the domestic nation and France has a positive overall country image, the findings indicate the role of halo and domestic enhancement.

The means of the other dependent variables, although not as distinctly clear cut, appear to indicate the same pattern. Third, the consistent pattern across all the dependent variables appears to endorse the image divisions between the developed nations (USA, France and Australia), and the underdeveloped nation China (poor country image and poor country/product image) and Morocco (unknown country image and unknown country/product image) that are significantly rated lower ($p < 0.05$). Finally, with regard to $H4$ the evidence although not easy to evaluate appears to be mixed. The critical comparison is between USA (positive country image and positive country/product image) and France (positive country image and poor country/product image), and the findings indicate the role of halo and domestic enhancement.

### Table IV.

<table>
<thead>
<tr>
<th>Quality</th>
<th>Price</th>
<th>Value</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>20.82</td>
<td>2,993.17</td>
<td>12.00</td>
</tr>
<tr>
<td>USA</td>
<td>22.45</td>
<td>2,995.36</td>
<td>11.59</td>
</tr>
<tr>
<td>France</td>
<td>20.94</td>
<td>2,884.04</td>
<td>11.85</td>
</tr>
<tr>
<td>China</td>
<td>17.33</td>
<td>2,487.12</td>
<td>11.13</td>
</tr>
<tr>
<td>Morocco</td>
<td>16.95</td>
<td>2,676.37</td>
<td>10.86</td>
</tr>
<tr>
<td><strong>Brand</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osborne (low)</td>
<td>18.38 (4.98)</td>
<td>2,523.93 (710.23)</td>
<td>12.04 (4.19)</td>
</tr>
<tr>
<td>IBM (high)</td>
<td>21.02 (4.38)</td>
<td>3,074.49 (851.49)</td>
<td>10.88 (4.39)</td>
</tr>
<tr>
<td><strong>Quality</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32 bit (low)</td>
<td>19.33 (5.02)</td>
<td>2,679.00 (799.74)</td>
<td>11.87 (4.45)</td>
</tr>
<tr>
<td>64 bit (high)</td>
<td>20.07 (4.69)</td>
<td>2,919.42 (844.29)</td>
<td>11.05 (4.16)</td>
</tr>
</tbody>
</table>

Global branding, COO and expertise
country/product image). Halo considerations imply no statistical difference between these two nations. This is refuted in the case of the dependent variable of perceived quality where there is a significant difference between the means (USA = 22.45 and France = 20.94, \( p < 0.05 \)) but not for the other dependent variables.

The brand effect is significant across all the dependent variables so supporting \( H2 \). However, an examination for the means (Table IV) reveals a differential effect across the dependent variables and additional evidence for the nature of domestic preference. The means for the positive image global brand (IBM) are significantly greater than for the poor image local brand (Osborne) only for judgements of quality and price, and the situation is reversed for value and purchase intent. An implication of this finding is that while novice subjects will be swayed by the halo of the global brand when making judgments of quality and price, the domestic preference dominates perceptions of value and purchase intent. The results in relation to the quality manipulation were significant so refuting \( H3 \). The averages (Table IV) were in the correct direction, i.e. the 64 bit high quality condition was rated higher than the 32 bit low quality condition, but only for perceived quality and price while the findings were reversed for value and intent. This reiterates the previous findings that consumer judgement strategies may vary across dependent variables, i.e. that quality and price may involve different processes than value and intent.

The plots for the significant country \( \times \) brand interactions (Table III) are shown as Figure 1. Generally these plots provide consistent additional insights for the multiple comparison results. First, the order and groupings of the marginal means is the same as discussed previously. Second, the upward sloping curves for perceived quality and price demonstrate the enhancing effects of the brand (IBM). Third, the non-parallelism suggests that this enhancement is greater for some nations than for others. In particular, the cross-over in the plot for price judgments suggests that the enhancement may be the least for the domestic nation (Australia). Fourth, the plots for value and intent judgments are downward sloping with the exception of Australia (the domestic nation) for which a slightly upward sloping trend may be detected. This implies that domestic preference may compensate the negative effect of a global international brand on judgments of value and intent. These findings support \( H3 \).

The significant interactions for country \( \times \) quality, brand \( \times \) quality, and country \( \times \) brand \( \times \) quality were unexpected. The country \( \times \) quality interaction was significant for price, value and intent judgments. Again the positive slope for price indicated an enhancement that seemed greatest for the unknown country Morocco, while for value and intent the negative slope indicated a decrement but mostly for the well-developed nations. In this case, the crossover for the less well-developed nations suggested that increased quality enhanced their position. The two way interaction between brand and quality for intent appeared again to be a manifestation of domestic preference because the non-parallelism was due to a decrement for IBM. The three way interaction was significant for price only and is difficult to interpret but appears to indicate a general enhancement effect modified by domestic preference for brand and country.

The results provided support for \( H1 \) (there was a COO main effect for all dependent variables), \( H2 \) (the brand effect was significant) \( H4 \) (a broad COO hierarchy consistent with the halo was found), and \( H5 \) (the COO \( \times \) brand interaction was significant). Contrary to \( H3 \) a significant quality effect was discovered, however, this was only for dependent quality, price and value with value being in the opposite direction to
that expected, i.e. the lower quality computer was considered better value. Evidence was also found for the existence of the un-hypothesized interactions between COO and quality, and brand 

Global branding, COO and expertise

Figure 1. The interactions for experiment 1A – computer novices

Notes: (a) COO by brand name for quality; (b) COO by brand name for price; (c) COO by brand name for value; (d) COO by brand name for intent; (e) COO by quality for price; (f) COO by quality for value; (g) brand name by quality for intent; (h) COO by brand name by quality for price.
The results also provided evidence for the use of COO as a halo particularly in terms of quality and price. Evidence for a degree of consumer ethnocentrism was demonstrated by the rating of the poor domestic computer manufacturer (Australia) highly in terms of value and intent.

Experiment 1B – computer experts
This experiment was identical to experiment 1A but conducted with a group of “computer experts.” Only the participant portion of the description will therefore be provided prior to presenting the major findings. Computer experts were identified by their inclusion on an information technology mailing list compiled by central computing services departments at two major regional universities. The sample size for this study was 20, 95 per cent of who were male with an average age of 38 years. Their screening to qualify them as experts was described earlier (see experiment 1A). A large number of participants, 85 per cent (17) correctly guessed the purpose of the study. Although statistical testing revealed no significant difference between the two groups such a large proportion of hypothesis guessers does not entirely preclude the effects of demand artefacts.

The analytical procedure was identical to that used in experiment 1A so will not be re-described. The composite measures for quality and value were found to be highly reliable with coefficient as of 0.86 and 0.91. The plots of the data revealed no serious deviations. The correlations between the dependent variables were found to be significantly greater than zero ($p < 0.05$, Table I, Experiment 1B) (quality – price = 0.10; quality – intent = 0.17; price – value = 0.74; price – intent = 0.74; value – intent = 0.67) with the exception of quality-value which was not significant. This was consistent with the novice experiment excluding quality-value although in both cases this correlation was the lowest. Nonetheless, this suggests that a difference between novices and experts may involve judgments of value. Multivariate tests were again consistent across the three multivariate criteria, and the main effects and interactions were significant with the exception of the brand × quality interaction (Table II – Experiment 2A). This provided preliminary support for $H6$, $H7$, $H8$ and $H10$. Surprisingly, however, there were significant main effects for COO and brand so indicating that experts may also use these variables in making product choices. The proportions of variance explained was similar in magnitude to that found in the novice experiment 1A although slightly different in order, i.e. COO ($\eta^2 = 0.31$), brand ($\eta^2 = 0.23$), quality ($\eta^2 = 0.15$), country × brand ($\eta^2 = 0.13$), country × quality ($\eta^2 = 0.09$), brand × quality ($\eta^2 = 0.02$), and country × brand × quality ($\eta^2 = 0.09$). The main difference between the two experiments appears to be in the absence of the brand × quality interaction for experts.

The results shown in Table III – Experiment 1B indicate significant main effects for country (quality, price and intent), brand (quality, price, value and intent) and quality (price and value) as well as for the country × brand (quality and price) and country × quality (intent only) interactions. The $\eta^2$ (proportion of variance explained) were largest for country ($\eta^2 = 0.15$ – dependent quality, $\eta^2 = 0.15$ – price and $\eta^2 = 0.07$ for intent) and brand ($\eta^2 = 0.19$ – dependent quality, $\eta^2 = 0.06$ – price, $\eta^2 = 0.02$ – value and $\eta^2 = 0.02$ for intent). For physical quality they were small to medium (0.00, 0.09, 0.03 and 0.00 for dependent quality, price, value and intent, respectively) as they were also for the interaction effects (country × brand 0.05, 0.03,
0.02 and 0.01; and for country \times quality (0.01, 0.02, 0.02 and 0.05)). These findings support the experiment 1A findings that consumer responses may vary according to the dependent variable chosen. At this stage support for \textit{H6} is mixed – the quality manipulation was only significant for price ($F_{1,361} = 34.57, p < 0.01$) and for value ($F_{1,361} = 9.14, p < 0.01$). There was also mixed support for \textit{H7} and \textit{H8} because the country \times brand interaction was only significant for quality ($F_{4,361} = 4.22, p < 0.01$) and price ($F_{4,361} = 2.73, p < 0.05$), and country \times quality for intent only ($F_{4,361} = 4.75, p < 0.01$). \textit{H9} was not supported as the interaction between brand and quality was not significant. The un-hypothesized significant main effects for country (quality $F_{4,361} = 16.35, p < 0.01$; price $F_{4,361} = 15.56, p < 0.01$ and intent $F_{4,361} = 7.09, p < 0.01$) and brand (for quality $F_{1,361} = 83.81, p < 0.01$; price $F_{1,361} = 22.52, p < 0.01$, value $F_{1,361} = 7.84, p < 0.01$ and intent $F_{1,361} = 5.39, p < 0.05$) suggest that expert judgments may be very similar to that of novices at least when stimuli are clearly visible extrinsic descriptions.

The descriptive statistics that serve as the basis for multiple comparisons are shown in Table V. The results with regard to quality will be discussed first as they relate directly to \textit{H6}. In this case the only significant results are for price (mean for 32 bit = 1,987.80 and for 64 bit = 2,122.25) and for value (mean for 32 bit = 13.62 and for 64 bit = 12.94). The price means are in the expected direction, but the value means are not, with the higher quality computer being rated lower. The mixed nature of these findings is somewhat surprising because they suggest that the experts may use similar strategies to novices.

The existence of the un-hypothesised COO effect for experts suggests, with the exception of value, a very similar pattern of means to that shown by the novices in experiment 1A. Indeed, the results are so similar that they lead to virtually the same conclusions and will not be presented in detail. The over riding additional conclusion is that COO information appears to be of similar consequence to experts as to novice. Further, the un-hypothesized brand effect is significant across all the dependent variables and the global brand IBM is consistently rated higher than the domestic brand Osborne (Table V). It appears therefore that for experts the powerful force of the halo of the international brand (IBM) combined with the summary construct effects will overwhelm any domestic patriotic considerations.

<table>
<thead>
<tr>
<th></th>
<th>Quality</th>
<th>Price</th>
<th>Value</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{Country}</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>18.55 (2.57)</td>
<td>2,131.56 (620.17)</td>
<td>13.53 (5.53)</td>
<td>27.81 (24.20)</td>
</tr>
<tr>
<td>USA</td>
<td>19.58 (2.34)</td>
<td>2,179.75 (688.64)</td>
<td>13.31 (6.62)</td>
<td>27.79 (23.06)</td>
</tr>
<tr>
<td>France</td>
<td>18.36 (2.52)</td>
<td>2,049.75 (612.94)</td>
<td>13.10 (4.97)</td>
<td>22.85 (20.41)</td>
</tr>
<tr>
<td>China</td>
<td>17.43 (1.95)</td>
<td>1,909.44 (542.36)</td>
<td>13.29 (5.35)</td>
<td>21.90 (20.18)</td>
</tr>
<tr>
<td>Morocco</td>
<td>17.58 (2.16)</td>
<td>1,968.75 (539.54)</td>
<td>13.16 (5.39)</td>
<td>20.15 (20.39)</td>
</tr>
<tr>
<td>\textit{Brand}</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osborne (low)</td>
<td>17.47 (2.25)</td>
<td>1,987.80 (547.16)</td>
<td>12.97 (5.19)</td>
<td>22.73 (19.96)</td>
</tr>
<tr>
<td>IBM (high)</td>
<td>19.24 (2.29)</td>
<td>2,107.90 (620.58)</td>
<td>13.59 (5.51)</td>
<td>25.47 (23.52)</td>
</tr>
<tr>
<td>\textit{Quality}</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32 bit (low)</td>
<td>18.34 (2.51)</td>
<td>1,973.45 (519.87)</td>
<td>13.62 (5.43)</td>
<td>23.89 (22.42)</td>
</tr>
<tr>
<td>64 bit (high)</td>
<td>18.36 (2.38)</td>
<td>2,122.25 (640.60)</td>
<td>12.94 (5.27)</td>
<td>24.31 (21.28)</td>
</tr>
</tbody>
</table>

Table V. Experiment 1B – computer expert: descriptive statistics
The interaction plots (Figure 2) provide further evidence for the enhancing effect of the two variables. The upward sloping curves for perceived quality and price demonstrate the enhancing effects of the brand (IBM) in conjunction with the COO. The non-parallelism suggests that this enhancement is greater for some nations than for others. In particular, the plots suggest that the augmentation is the greatest for the developed nations and the brand does not add much value to the less developed nation such as China or the unknown nation Morocco. The plot for the significant country \times quality interaction for intent suggests that country was irrelevant at the higher level of quality. The three way interaction was significant for price only.

For experts support was found for $H_6$ and a significant quality effect was discovered, but only for price and value, and, opposite to the expected direction for value. There was also mixed support for $H_7$ (country \times brand interaction was only significant for quality and price), $H_8$ (country and quality was significant for value only) and $H_{10}$ (country \times brand \times quality for price only). There was no support for the brand \times quality interaction ($H_9$). The findings between the experts and novices were remarkably similar as experts also found the un-hypothesized COO and brand information to be an important basis of decision-making. This finding, although seemingly contrary to Maheswaran (1994) who found that experts and novices use COO information differently, may better be viewed as an extension of their research with more country conditions (5 versus 2) and the inclusion a brand manipulation.

A global brand name also strengthened a positive country and product/country image of western countries. This use of brand name may represent a more analytical decision-making process of experts. The limited impact of the COO by quality, and the brand by COO interaction points to the use of COO as a summary construct. Similarly to

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**Notes:**

- (a) COO by brand name for quality;
- (b) COO by brand name for price;
- (c) COO by quality for intent;
- (d) COO by brand name by quality for price

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**Figure 2:**
The interactions for experiment 1B – computer expert

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Han (1989) the use of COO as summary construct results from a familiar brand name associated to a country with a favourable product/country image. As part of their decision-making process experts, had a more limited role for physical quality than was the case with novices. The nature of the interaction between COO and quality though, suggested that for a higher quality (64 bit computer), experts believed COO to be less important. One explanation of this finding was revealed in post experiment interviews. Several experts commented on the similarity of many components within a computer and stressed the importance of quality testing and assembly. This would have supported the greater salience given to brand name and COO by experts over any differences in product attributes. A possible basis for the quality effect in the first experiment may have resulted from the ease with which novices are able to detect quality when viewing product descriptions rather than when actual products are considered.

Discussion and conclusion
The purpose of this study was to investigate the effects of COO and global branding in conjunction with a quality manipulation in a complex multi cue context involving novices and experts on multiple dependent variables. The results demonstrated the importance of the brand and the COO cues for both novice and experts. Although it appears that COO information may have greater relevance for price and quality evaluations rather than as a determinant of value or purchase intent. Other cues were also found to have varying degrees of influence on the dependent variables and the importance of these cues differed. This further highlighted that different decision-making processes (and therefore different uses of cues) occurred for different dependent variables. This should be of concern for consumer researchers because choice of a dependent variable is an important research decision both in the theoretical and applied context.

The first set of experiments provides some evidence that both novices and experts exhibited a degree of domestic preference. This was illustrated by a preference for Australian PCs, even-though this country was not seen as a quality producer of computers. Despite being able to detect quality differences novices still used COO as a halo and based their product evaluations of quality and price on the country hierarchy. Computer experts were also found to use a country hierarchy but placed a greater importance on brand name. The nature of the country by brand interaction for experts suggested that they used brand name only when it was consistent with a country/product image. It was argued that this process represented the use of COO as a summary construct (Han, 1989). The use of a familiar brand name (IBM) linked to a suitable country (the USA, France or Australia) thus represented the use country/product image by experts. This finding is also consistent with research, which suggests that experts use cues in a more analytical or circumspect manner (Alba and Hutchinson, 1987). Computer novices, on the other hand, relied more on COO as a halo and used the brand name to counteract a poor country image in a less analytical fashion as reported by Johansson and Nebenzahl (1986). Although differences in physical quality were detected by experts and unexpectedly by novices, it appeared that it only played a minor role in the decision-making of both groups. There are two possible explanations for this result. The first being that product descriptions have been shown so over simplifying respondent decision-making and making it easier for novices to detect any change in quality (Smead et al., 1981).
The second is that for computer experts, the similarity of many components within a computer implies that assembly and testing may be more important. Clearly brand name, and to a lesser extent, COO, may have been useful cues to the experts in this case.

Novices appeared to use COO as a halo while experts used this information as a summary construct through an associated brand name. This study suggests that the use of COO and brand may be more complex than previously theorised. The use of product descriptions and the difficulties associated with quality and brand manipulations leads to relatively simple even cross-sectional designs that although convenient and efficient, preclude the drawing of powerful generalizations. This study presents an attempt at complex, considered manipulations that should encourage future more finely honed research to resolve the enigmas associated with this important area of research.

There are a number of important implications for exporters, domestic companies and governments of these results. For exporters, the use of global brands may be more pertinent for less knowledgeable consumers. When marketing to novices, COO labelling could be stressed if the country image is favourable or a well-known global brand could be used to counter an unfavourable country image. However, for experts the types of product country image and brand associations need to be carefully considered. In terms of the physical quality of their products, exporters can be less concerned with novices than experts. Even if they detect quality, novices will still mainly rely on country image and brand name. Greater attention to physical quality needs to be made for experts, since there is some evidence that physical quality has a greater role in their decision-making. The consistency of quality standards and a country’s reputation should also be considered by exporters when marketing products to experts.

In conclusion it is important to emphasise that our study has limitations and raises more questions than it answers. It is a laboratory, controlled experimental study and although an effort was made to ensure realism questions of generalisability remain and further research is necessary in more realistic situations. A question emanating from the research design and one that plagues all of COO research is whether in a real purchase situation consumers are willing to make a sacrifice (i.e. pay a higher price) for the sake of their nation. Further research is needed to establish the nature and extent of the sacrifice. Many of the variables in the study have multidimensional implications (e.g. quality). It is difficult to take these implications into account in experimental studies as the complexities and the burden on the subjects become overwhelming. These and other issues provide the challenges for future research in this rich and evolving area.

References


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