THE EFFECTS OF COUNTRY-OF-ORIGIN ON THE SERVICE SECTOR: A MULTIDIMENSIONAL APPROACH

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ABSTRACT

Purpose: This study aims to present an original framework to investigate how the country-of-origin influences the quality perception of a service by breaking down this construct in three sub-dimensions and further verifying their impact both, individually and collectively.

Originality/Value: Despite the growing importance of the service sector, both the research in international services marketing and the studies on the Country-of-origin are very limited if compared with those performed on the manufacturing sector and, to our knowledge, none of them used this construct multidimensionally. The development of an original framework with three sub-dimensions: Country-of-Know-How (COK); Country-of-Personnel (COP); and, Country-of-Tangibles aims to fulfill these gaps.

Design/methodology/approach: Our framework was empirically tested with four experiments and a survey. Data were gathered from 718 Brazilian students in three Universities located in two different states in Brazil.

Findings: The results obtained indicate that COO can significantly affect consumers’ evaluation of perceived service quality and that this construct can be segmented since we have indeed verified clear effects of all sub-dimensions.

KEYWORDS

1. INTRODUCTION

Despite the growing importance of the service sector and the unique challenges facing multinational service providers, research in international service marketing is still very restricted. Similarly, we observe that even though research on Country-of-origin (COO) effects is extensive for tangible goods, a very limited number of studies address this cue for services. Therefore, in this study we intend to develop a completely new and more fine-grained framework to investigate the COO effects on the service sector.

It is widely known that consumers rely on extrinsic cues such as brand, country-of-origin and price to assess quality perceptions (Dodds, Monroe, & Grewal, 1991; Hamzaoui, Merunka, & Bartikowski, 2011; Lazzari & Slongo, 2015; Teas & Agarwal, 2000). Additionally, consumers from different cultures tend to assess information regarding products/services in distinctive ways (Hofstede & Steenkamp, 1999). Research also suggests that developed nations tend to enjoy more favorable evaluations than less developed nations and that consumers are willing to pay extra premium price for products/services from these countries (Kaynak, Kucukemiroglu, & Hyder, 2000), therefore the correct manipulation of the COO information can help leverage a company’s positive image or neutralize a negative one.

Although the degree in which the COO cue is applied on the evaluation of a certain product/service varies from place to place and according to the consumer level of expertise with a product/service (Chao, 1989) its relevance is undeniable. According to some authors, COO can even be the most important factor when consumers are selecting certain categories of products (Keown & Casey, 1995). An underlying assumption of this study is that COO can be even more relevant for services since due to their peculiar characteristics such as intangibility, heterogeneity, and perishability consumers tend to rely much more on extrinsic cues in their quality assessments of services (Lovelock & Wirtz, 2016).

In order to build up our framework for services we will first go through a theoretical review on the COO and its effects, which will help us to present and justify our hypotheses. We will then explain our method and present and discuss our results. This paper will be concluded with our main findings, the limitations of our study, and recommendations for future researches.
2. LITERATURE REVIEW

The Country-of-origin influence has been widely studied (e.g. Guilhoto, 2001; Magnusson, Westjohn, & Zdravkovic, 2011; Peterson & Jolibert, 1995; Verlegh & Steenkamp, 1999). Overall, COO can be defined as the total of all descriptive, inferential, and informational beliefs one has about a particular country and has consistently been treated as a construct that includes several facets explained by political, economic, technological or social domains of a country (Olsen & Olsson, 2002).

Research shows that consumers tend to hold either positive or negative perceptions of countries based on stereotypic beliefs and that these perceptions are transferred to products/services that originate in these nations affecting a buyer’s perceptions and behavior (e.g. Andehn, Nordin, & Nilsson, 2016; Gurhan-Canli & Maheswaran, 2000).

Schooler and Sunoo (1969) were the first to postulate that COO was composed by a cognitive dimension, which emphasizes perceived characteristics of a country, and an affective one, which reflects attitudes and feelings towards a country and its people. Since then a number of researchers have identified various effects of the COO construct.

It has been shown that COO influences consumers’ perceptions of product quality (e.g. Gurhan-Canli & Maheswaran, 2000; Kaynak et al., 2000), the evaluation of product attributes (Johnson, Tian, & Lee, 2016), product attitudes (Lee & Ganesh, 1999), the perceptions of purchase risk (Tan & Leong, 1999), the perceived product value (Ahmed et al., 2002), product preferences (Knight & Calantone, 2000), and the purchase intentions (Kim & Pysarchik, 2000). COO effects have been observed with products in general (Kaynak et al., 2000) as well as with specific product categories (Silva, Lazzari, Milan, & Eberle, 2015). A large number of studies reported COO effects both on consumer attitudes and on product evaluations (Peterson & Jolibert, 1995), although these effects are not absolute for all categories of products (Kaynak & Cavusgil, 1983), meaning that a country might rank high in a consumer’s mind for one product category and low for another. This is what Roth and Romeo (1992) and Johnson et al. (2016) called fit/match between country images and product category images. Their findings showed that a positive product-country match would exist when a country is perceived as being very strong in an area (e.g. design) that is also an important feature for a product category (e.g. fashion).

While country-of-origin effects have been studied for decades, most of the research is confined to products involving a single country-of-origin
The globalization of businesses, however, has led to the proliferation of hybrid products, that is, products with components sourced from many countries or with foreign-made components but a domestic brand name (Ahmed & D’Astous, 2004). According to Etterson and Gaeth (1991), hybrid products blurred the image of a product pressuring marketers to understand how consumers process different pieces of information and how they use these attributes interactively. As a consequence, products started being categorized according to four COO subdimensions that act as key cues in the process of quality evaluation: Country-of-Parts (COP), Country-of-Assembly (COA), Country-of-Design (COD), and Country-of-Manufacture (COM) (Al-Aali, Randheer, & Hasin, 2015; Chao, 1993; Hamzaoui et al., 2011; Ha-Brookshire, 2012; Insch & McBride, 1998). While it is not clear that consumers always know where a product was assembled or designed, they do appear to react differently to distinct dimensions (Magnusson et al., 2011). Kien-Quoc (2006) investigated the dimensions of the COO cue in four different categories and verified that the importance of the dimensions varied across them. For instance, he found that Country-of-Design was critical for clothes but did not have the same impact on personal computers. Additionally, while developed countries are better perceived than less developed ones, the differences seem to be significantly less important for assembly than for design capabilities (Roth & Romeo, 1992).

The deep understanding of the trade-off mechanism among different dimensions of the COO became increasingly critical to define marketing strategies, because with this information companies can try to strategically develop an optimal product mix, combining countries in terms of their perceived competencies for design, innovation, and prestige to enhance their competitive position (Chao, 2001). When Country-of-Assembly has a negative image and Country-of-Design has a positive one, for instance, firms should emphasize the latter on their promotional and labeling efforts (Tan & Leong, 1999).

3. PRESENTING THE MULTIDIMENSIONALITY OF THE COO CONSTRUCT ON THE SERVICE SECTOR

Although literature is replete of studies on COO effects on consumers’ perceptions of manufactured goods, the study of the effect of COO on services is very recent. Bilkey and Nes (1982) and Peterson and Jolibert
(1995), in their extensive reviews of literature, did not find any study on services. In later reviews, Al-Sulaiti and Baker (1998) found seven studies that involved services out of a total of 99 COO studies, and Javalgi, Cutler and Winans (2001) located only 19 papers comparing services by COO. Up to this point, the results obtained on services seem to be similar to those obtained on products, that is, in most studies consumers preferred services from their own country, from an economically developed country or from a culturally similar country. Nevertheless, no study, so far, uses a multidimensional approach to the COO construct in the service sector and this is a gap that our research intends to fulfill.

In the framework developed for our research, COO is broken down in three different sub-dimensions: Country-of-Know-How (COK), Country-of-Personnel (COP), and Country-of-Tangibles (COT).

3.1. Exploring Country-of-Know-How

Each service provider is based in one country where it first establishes its operations and develops its know-how. Once a provider grows, it may decide to expand its business abroad through subsidiaries, affiliates or franchises. Whatever form it may assume, a foreign arm will be at the same time an integrated part of its parent company in that its core procedures are transferred from it and a local firm in that it utilizes local resources, competes with indigenous providers, and complies with local laws and regulations (Ghemavat, 2003).

In this context, the Country-of-Know-How (COK) can be defined as the country where all the core aspects of a service and all the procedures to its delivery are developed. We here assume that idea generation, screening, and procedure development are performed mainly in the country where the provider was first established. This assumption is built on prior research, according to which the core knowledge of international firms is in its great majority originated within the parent companies (Birkinshaw, 1997; Prahalad & Hamel, 1990), mainly because in this stage companies tend to centralize their efforts due to its relevance for their competitive survival and growth (Cooper, Edgett, & Kleinschmidt, 1999).

According to Johne and Storey (1998) and Lovelock and Wirtz (2016), there are two main parts in the development of a service. The first is the definition of the core service attributes (activity performed at the COK); and the other is the definition of the service delivery system, which comprises trained employees (this will be discussed at the COP dimension) and the development of tangibles to offer the services (which will be discussed at
the COT dimension). Needless to say, close coordination between all these functions is of major relevance for the success of a service provider.

3.2. Exploring Country-of-Personnel

Marketing literature has reported that characteristics of personnel and their relationship with customers play an important role on consumers’ purchasing decisions. It has been shown that consumers use personnel to learn more about goods, to get recommendations, and to be reassured that they are making the right decision (Kirmani & Campbell, 2004). Additionally, research suggests that frontline personnel can directly impact consumers’ perceptions on service quality (e.g. John & Storey, 1998). According to McLaughlin and Fitzsimmons (1996), the intensity of human involvement in services and the degree of customer contact are critical factors that can ultimately be responsible for a company’s success, especially when a service is complex or highly customized.

The Country-of-Personnel (COP) would reflect, then, how a consumer categorizes a certain professional that offers a service relatively to the fit of his nation’s reputation and the task he performs. Since we consider COP a stereotype-driven attribute connecting the service to positive or negative emotional associations (Verlegh & Steemkamp, 1999), we can expect that this, in fact, will influence either positively or negatively the judgments of the service quality. While it is true that stereotypes might disrupt harmonious relations, some studies suggest that pre-established expectations can also simplify personal interactions (Taifel, 1978).

3.3. Exploring Country-of-Tangibles

Due to the intangibility of services, the provision of evidences such as facilities, equipment, stationery, decoration, and more recently, websites, can help consumers to get more information about the service and to form their quality evaluations (Day, 1994). Tangibles allow the service offering to be more effective because they make services more concrete (Stafford, 1996), save consumers’ time and effort in evaluating a service, and reduce the risk of post-purchase dissatisfaction (Kolesar & Galbraith, 2002). Moreover, physical environment influences a consumer’s emotional state and his likelihood of returning to the service provider (Donovan & Rossiter, 1982).

The COT dimension relates, then, to these tangible aspects of the international service offer. The importance of adding such a dimension refers to
the fact that it would be unfeasible to offer any service without a minimum level of tangibility. Even Internet companies have their websites to present the company’s image to their consumers.

4. RESEARCH HYPOTHESES

Services depend heavily on personal interaction between consumer and staff, and the quality of this interaction can ultimately influence the outcome of the service (Lovelock & Wirtz, 2016). Although technology and knowledge are important, the service sector is mainly about people (Clark & Rajaratnam, 1999), hence, personnel would represent not only the most important part of a service but also the most evident difference between the manufacturing and service sectors. This comes from the assumption that for services it is not the “what” but the “how” that matters, meaning that the quality of service interaction can be more important to the customer than the service per se. Thus:

H1: Consumers’ overall evaluation of the quality of a service provider will depend more on their perception of the COP than on their perception of COK or COT.

Additionally, it is expected that service quality assessment will be more favorable if, controlling for their actual expertise, personnel offering a certain service match the stereotype that consumers have about them. Stereotypes are rather well-articulated conceptions, consisting of diverse attributes that are likely to permit extensive inferences to help categorization (Anderson, 1983) and, while stereotyping may lead to judgmental bias or to selective processing of stereotype-consistent information (Bodenhausen, 1988), it does not necessarily bring a negative effect in consumers’ minds, serving, actually, to legitimize professional roles and facilitate decision making processes. Additionally, stereotypes can be activated and used outside conscious awareness (Greenwald & Banaji, 1995), which points out that people might use national stereotyping unconsciously as a shortcut in their evaluations even in an increasingly open society. It is important to point out that even if stereotypes are often triggered automatically they are not unchangeable and can be attenuated by changes either in a perceiver’s intentions or in his social environment (Blair, 2002).

In our context, consumers’ quest for a service’s Country-of-Personnel stereotypical match would occur when the perceived country image (e.g.
Indian technological skills) is related to desirable service characteristics (e.g. software development).

Previous researches have already shown that consumers expect counter-stereotypical service providers to supply poor service (Matta & Folkes, 2005) or to be differently evaluated from stereotypical providers (Iacobucci & Ostrom, 1993); nevertheless, empirical evidence is still needed to address whether international services delivered by a person that is in some aspect different from the occupational stereotype influences services’ evaluations negatively or not. Therefore:

**H2:** Controlling for actual expertise, a stereotypical COP regarding professional roles in services, as compared to a counter-stereotypical COP, will result in more favorable perceptions of service quality.

In order to assess the influence of the COT sub-dimension, we decided to analyze the effect of congruence between a company’s tangibles and its image worldwide. Congruence was recurrently studied and results showed that congruent information can create product differentiation (Amis, Slack, & Berrett, 1999) and increase market share (Chandon, Wansink, & Gilles, 2000), whereas incongruent information slows image transfer (Meenaghan, 2001). In this sense, the use of different tangibles in different countries could reduce attitude accessibility (Bassili, 1998) and have an adverse effect on a consumer’s behavior.

Hence, we expect that consumers will feel more comfortable when they use a service provider that maintains a consistent visual image and, consequently, provides some assurance of service quality in all locations where the service is offered. Thus:

**H3:** Consumers’ evaluation of a service will be lower when the COT is adapted across different countries, as compared to when it is standardized.

Even if a country has a predominantly positive image, its reputation varies among product/service categories since consumers associate countries with certain fields of excellence. In their study, Roth and Romeo (1992), for instance, indicated that consumers had high perceptions of quality for Japanese cars but mediocre quality ratings for Japanese leather shoes and crystal.

It is not unreasonable to think that also for services there must be a logical connection or fit between a country and a certain service category and a lack of fit with other categories. Italy, for instance, is well-known for its excellence on design, but it is not considered a reference in software
development, so we can say that there is a fit between Italy and Design and a lack of fit between Italy and Technology. Therefore:

\[ H_4: \] Perceived service quality will be higher when consumers perceive a fit between COK and a service category and lower when consumers perceive a lack of fit between COK and a service category.

Up to this point, our hypotheses dealt with all the sub-dimensions of the COO construct for the service sector (COK, COP and COT), both together and individually. To enrich this study, we decided to verify how a service’s quality perception would be affected if other cues were taken into consideration; thus, we added another extrinsic cue (price) into the picture.

Research suggests that price is often used by consumers as a cue to infer quality (e.g. Dodds, Monroe, & Grewal, 1991; Lichtenstein, Ridgway, & Netemeyer, 1993). This comes from the rationale that high-quality products/services generally cost more to produce and that competitive pressures limit firms’ opportunities to charge high prices for low-quality products/services (Teas & Agarwal, 2000).

Chao (1993) pointed out, though, that consumers are less likely to use price as an indicator of quality if they have at their disposal the Country-of-Origin cue. We expect the same thing to occur in the service sector. That is, we expect that the influence of price as a predictor of service quality will be limited by the presence of the COK information. Specifically, we expect the COK cue to have a halo effect (Leclerc, Schmitt, & Laurette, 1994) overriding the effect of price on quality evaluation. Thus, we hypothesize that:

\[ H_{5a}: \] Perceived service quality will be high when COK has a good reputation in the offering of a service and low when COK has a bad reputation in the offering of a service, despite the level of price charged.

In addition, we expect COK to moderate the influence of price on quality assessments. We predict that, when consumers have positive COK information available, they will rely less on price for quality assessments than when they have negative COK information. In other words, we expect that when COK is negative, consumers will rely more on price to either reinforce a bad perceived quality if price is low or to diminish the negative impact of COK if price is high. Therefore:

\[ H_{5b}: \] Price will be perceived more as diagnostic of quality when the COK has a low reputation in a service than when the COK has a high reputation in a service.
5. METHOD AND ANALYSIS

5.1. Experiment 1: Checking the Existence of the Multidimensionality

A convenience sample of 120 undergraduate students (69 men and 51 women, with average age of 22 years) of the College of Business, Economics and Accountancy at University of São Paulo (FEA-USP) participated in Experiment 1, designed to test hypothesis 1. Participants were randomly assigned to one of four conditions (with a total of 30 participants per condition): high COK, high COP, high COT, and a baseline condition where all sub-dimensions were high. In the high COK condition, participants read a scenario where the COK was developed in a country with high reputation in sports, but COP and COT came from a country with low reputation in sports; in the high COP condition the COT was developed in a country with high reputation, but COK and COP in a country with low reputation; in the high COT condition, the COP was developed in a country with high reputation, whereas COK and COP were from one with low reputation. The baseline condition showed a scenario where all sub-dimensions came from a country with high reputation.

Once the scenarios were presented, participants were asked to answer a questionnaire which asked participants 9 questions assessing perceived quality of a sports gym. Participants were asked to rate on seven-point scales the likelihood of enrolling in the gym, the ability of the gym to offer good services, their willingness to pay a premium price, the level of appeal and reliability of the gym, the likelihood of the Gym to succeed in the market, their overall feeling towards the gym, and the perceived quality of the gym. Four questions were used as manipulation checks to test whether participants’ belief about the sport reputation and quality of fitness services of USA and Portugal were indeed consistent with those primed through an initial article that participants had read before answering the questions. Demographic questions were included at the end.

First, we conducted a series of paired t-tests and checked that US was indeed perceived as having significantly higher reputation than Portugal, both in sports (M_U = 6.21, SD= 1.06; M_Portugal = 2.99, SD= 1.48) (t(119) = 19.81, p<0.001) and in the offering of fitness services (M_U = 5.75, SD= 1.26; M_Portugal = 3.50, SD= 1.32) (t(119) = 13.48, p<0.001).

Nine items measured the construct of perceived quality. An exploratory factor analysis with Varimax rotation yielded a two-factor solution. These
measures were combined in two indexes labeled Perception (α=0.888) (Q2, Q5, Q7, Q8, Q9) and Predisposition (α=0.804) (Q1, Q3, Q4, Q6), which together explained 68.50% of the variance. The Perception measure assesses participants’ evaluation of a service’s quality, whereas the Predisposition measure refers to the motivation to take action as a result of the quality perceived.

The Shapiro-Wilk W statistical test of difference from a normal distribution was performed on the dependent variable measures Perception (p=0.091) and Predisposition (p=0.056). This test indicated that the data are normally distributed in both.

Next, we conducted a one-way ANOVA to test our hypothesis of a differential impact of the three sub-dimensions on both measures. This analysis revealed main effects for reputation on both Perception (F(3,116) = 17.04, p<0.001) and Predisposition (F(3,116) = 16.93, p<0.001).

### Table 1

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perception</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High COK</td>
<td>High COP</td>
<td>-.68000*</td>
<td>.24385</td>
</tr>
<tr>
<td></td>
<td>High COT</td>
<td>.78667*</td>
<td>.24385</td>
</tr>
<tr>
<td></td>
<td>High COP</td>
<td>.68000*</td>
<td>.24385</td>
</tr>
<tr>
<td></td>
<td>High COT</td>
<td>1.46667*</td>
<td>.24385</td>
</tr>
<tr>
<td></td>
<td>High COT</td>
<td>-.78667*</td>
<td>.24385</td>
</tr>
<tr>
<td></td>
<td>High COP</td>
<td>-1.46667*</td>
<td>.24385</td>
</tr>
<tr>
<td><strong>Predisposition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High COK</td>
<td>High COP</td>
<td>-.58889*</td>
<td>.24200</td>
</tr>
<tr>
<td></td>
<td>High COT</td>
<td>.88889*</td>
<td>.24200</td>
</tr>
<tr>
<td></td>
<td>High COP</td>
<td>.58889*</td>
<td>.24200</td>
</tr>
<tr>
<td></td>
<td>High COT</td>
<td>1.47778*</td>
<td>.24200</td>
</tr>
<tr>
<td></td>
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<td>-.88889*</td>
<td>.24200</td>
</tr>
<tr>
<td></td>
<td>High COP</td>
<td>-1.47778*</td>
<td>.24200</td>
</tr>
</tbody>
</table>

* The mean difference is significant at the .05 level.

Source: Elaborated by the author.
Tukey’s HSD test showed that each condition significantly differed from the others (see table 1). Specifically, confirming our hypothesis, participants’ Perception was higher in the COP (M=5.86, SD=.76) than in the COK (M=5.18, SD=.81) and in the COT (M=4.39, SD=1.20) conditions. When comparing these conditions with the baseline, we verified that the mean obtained in the baseline condition was directionally the highest (M=5.89, SD=.92). The difference between the baseline and the High COP condition (0.03) was, though, not statistically significant (p=0.999), whereas we found the baseline to be statistically different from both the High COK (p=0.020) and the High COT conditions (p<0.001). This result could sign that the COP sub-dimension had such an influence in participants’ perceptions that its average evaluation was as high as the situation where all the sub-dimensions came from a high reputation country. In addition, Perception was higher in the COK as compared to the COT condition. These results mirror those for Predisposition, where mean ratings were higher in the COP (M=5.52, SD=.78) than in the COK (M=4.93, SD=.93) and COT (M=4.04, SD=1.09) conditions, and COK was higher than COT. Also here, the mean obtained in the baseline condition was directionally the highest (M=5.55, SD=.95) and the difference between the COP condition (0.30) and the baseline was non-significant (p=0.999).

5.2. Experiment 2: The Power of People in Services

A convenience sample of 50 undergraduate students (27 men and 23 women, with average age of 23 years) of the College of Business, Economics and Accountancy at Federal University of Paraná participated in Experiment 2, designed to test hypothesis 2. The experiment involved the manipulation of one experimental factor: Country-of-Personnel (COP). Participants were randomly assigned to one of two conditions (with a total of 25 participants per condition): Stereotypical COP and Counter-stereotypical COP. In the stereotypical COP condition, participants read a scenario where there was a match between personnel and the service offered, whereas in the counter-stereotypical COP condition, participants read a scenario where there was a mismatch between personnel and the service offered. We selected a judo class as the service offered and Japanese and French as the nationalities of the professional to represent, respectively stereotypical and counter-stereotypical personnel.

Once the scenarios were presented, participants were asked to answer a questionnaire which asked participants 7 questions assessing perceived
quality. The questions followed a scale similar to the one used in Experiment 1 for perception of quality, replacing the gym for the judo class or for the instructor, depending on the case, in order to adapt the scale to the situation under study. Two more questions were added to this scale; in these questions participants were asked to rate on seven-point scales the likelihood of attending the class and the likelihood of the class being satisfactory. Next, two questions were used as manipulation checks to test whether participants’ belief about martial arts in Japan and France were indeed considered, respectively, as high and low reputation as intended. Finally, participants were asked to rate again the quality of the class but, this time, they were told that the instructor had already ten years of experience in teaching advanced classes. This question was added in order to control for the effect of expertise in both situations. Demographic questions were included at the end.

We conducted a paired t-test as manipulation check and verified that Japan was indeed perceived as having significantly higher reputation than France in Martial Arts ($M_{Japan}=6.36$, $SD=0.75$; $M_{France}=2.98$, $SD=1.17$) ($t (49) =16.42$, $p<0.001$).

Seven items measured the construct of perceived quality. An exploratory factor analysis with Principal Component yielded a one-factor solution. All items were combined in one index labeled Perception ($\alpha=0.880$), and were able to explain 60.27% of the variance of the data.

Next, we conducted a One-Way ANOVA (COP: Stereotypical versus Counter-stereotypical) to test our hypothesis that a stereotypical COP would lead to a higher quality perception than a counter-stereotypical COP. This analysis revealed the hypothesized main effect for COP on quality perception ($F(1,48)=11.28$, $p=0.002$). The main effect showed that the perception of quality in the stereotypical COP condition was 1.15 higher ($M=4.51$, $SD=1.39$) than in the counter-stereotypical condition ($M=3.35$, $SD=1.01$).

Further we wanted to verify what would happen if we increased the level of expertise of the instructor. We expected that the perceived quality would increase in both conditions when participants were asked to imagine that the instructor had ten years of experience teaching advanced classes, but we expected a higher difference (before and after a higher level of expertise was presented) for the counter-stereotypical instructor.

To verify if the difference of ratings indeed behaved in the way we expected, we ran some paired t-tests. Results showed that there was a statistically significant difference on the quality ratings of the Judo class when we increased the level of expertise. However, the stereotypical COP got the highest ratings both before and after modifying the level of expertise.
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(M\text{JapanBefore}=4.50; M\text{JapanAfter}=5.92), t(24)=5.03, p<0.001); (M\text{FranceBefore}=3.35; M\text{FranceAfter}=5.16), t(24)=7.74, p<0.001). These results sign that the stereotypical COP appeared as having higher quality, independently of the level of expertise. Previous researchers had already acknowledged that the country image construct could be influenced, not only by cognitive beliefs about products, but also by the image consumers hold of the people who produce them (Papadopoulos, Heslop, & Beracs, 1990; Papadopoulos, Heslop, & Bamossy, 1989). Our research seems to find similar results for the service category in our experiments.

5.3. Experiment 3: Adapt or Standardize?

A convenience sample of 48 graduate students (22 men and 26 women, with average age of 27 years) of the College of Business, Economics and Accounting at University of Paraná participated in Experiment 3, designed to test hypothesis 3. The experiment involved the manipulation of one experimental factor: Country-of-Tangibles (COT). Participants were randomly assigned to one of two conditions (with a total of 24 participants per condition): Standardized COT and Adapted COT. In the standardized COT condition participants read a scenario where design patterns, colors, uniforms, and equipment of a fictitious gym were standardized in the US and in Brazil; in the Adapted COT condition, participants read a scenario where these items were adapted in both countries.

Once the scenarios were presented, participants were asked to answer a questionnaire which asked participants 6 questions assessing perceived quality of the gym. The questions followed the same scale used in Experiment 1 for Perception of Quality, adding just one more question asking participants to rate on a seven-point scale the likelihood of the gym being a good place to exercise. Next, the same 4 questions of Experiment 1 were used as manipulation checks to test whether participants’ belief about the sport reputation and quality of fitness services of USA and Brazil. Demographic questions were included at the end.

We conducted a series of paired t-tests as manipulation checks and verified that US was perceived as having significantly higher reputation than Brazil both in sports (M\text{US}=5.81, SD=1.30; M\text{Brazil}=4.38, SD=1.30) (t(47)=5.99, p<0.001) and in the offering of services in the fitness sector (M\text{US}=5.63, SD=1.08; M\text{Brazil}=4.54, SD=1.27) (t(47)=6.45, p<0.001).

Six items measured the construct of perceived quality. An exploratory factor analysis with Principal Components yielded a one-factor solution.
The measure was then combined in one index labeled Perception ($\alpha=0.831$), which explained 64.74% of the variance.

Next, we conducted a one-way ANOVA to test our hypothesis of a differential impact of the COT on quality perception. The analysis revealed significant main effects for COT ($F(1,47)=16.91$, $p<0.001$) but in the opposite direction that we expected. We saw that the Standardized COT condition ($M=4.28; SD=1.18$) had a mean that was 1.12 lower than the mean of the Adapted COT condition ($M=5.40; SD=.63$), whereas we had hypothesized that participants in the standardized condition would judge the quality of the gym to be higher than that in the adapted condition.

### 5.4. A Survey

A convenience sample of 400 undergraduate students (217 women and 129 men, with average age of 25 years) of Uninove University was used to test the hypothesis 4. A total of 420 survey questionnaires were handed out to the students but 18 returned with missing values, so they were cancelled out of the analysis and other 2 were randomly excluded so that we could have four groups with the same size (100 students per group). The effective return rate was of 95.24%. The survey was applied in two different ways: a. questionnaires were handed out in the classrooms during classes with the consent of the professors and b. students were randomly approached at the public areas of the University and asked if they could answer the survey.

Respondents were randomly given one of four versions of a questionnaire. Each version presented one Country-of-Know-How (COK) and asked the respondents to evaluate the average quality of four different services on a seven-point scale. Four service categories (Fitness Center, School of Martial Arts, School of Tango and High Cookery School) and four different countries (USA, Japan, Argentina and France) were selected. Demographic questions were included at the end.

In order to statistically analyze the data, we conducted a One-Way ANOVA for each of the services to test our hypothesis that a higher fit between the COK and the service category would indeed lead to more favorable service quality evaluations. As shown in table 2, we found statistically significant differences in quality average ratings for all service categories: Fitness Center ($F(3,396)=19.82$, $p<0.001$); School of Martial Arts ($F(3,396)=70.65$, $p<0.001$); School of Tango ($F(3,396)=103.55$, $p<0.001$) and High Cookery School ($F(3,396)=23.26$, $p<0.001$).
Table 2

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitness Center</td>
<td>116.067</td>
<td>3</td>
<td>38.689</td>
<td>19.817</td>
<td>.000</td>
</tr>
<tr>
<td>Martial Arts</td>
<td>409.620</td>
<td>3</td>
<td>136.540</td>
<td>70.648</td>
<td>.000</td>
</tr>
<tr>
<td>Tango</td>
<td>676.010</td>
<td>3</td>
<td>225.337</td>
<td>103.550</td>
<td>.000</td>
</tr>
<tr>
<td>High Cookery</td>
<td>168.290</td>
<td>3</td>
<td>56.097</td>
<td>23.225</td>
<td>.000</td>
</tr>
</tbody>
</table>

Source: Elaborated by the author.

Tukey’s HSD tests showed that all conditions significantly differed from the others. Specifically, confirming our hypothesis, average quality was perceived as higher when there was a fit between the COK and the service category, FitCenterUS (M=5.63; SD=1.20) was 0.52 higher than FitCenterJP (M=5.11; SD=1.51; p=0.044); 1.47 higher than FitCenterAR (M=4.16; SD=1.42; p<0.001), and 0.92 higher than FitCenterFR (M=4.71; SD=1.44; p<0.001). Similarly, MartialArtsJP (M=6.42; SD=1.15; p<0.001) was 1.69 higher MartialArtsUS (M=4.73; SD=1.52; p<0.001); 2.55 higher than MartialArtsAR (M=3.87; SD=1.37; p<0.001), and 2.40 higher than MartialArtsFR (M=4.02; SD=1.49; p<0.001). Also, TangoSchoolAR (M=6.18; SD=1.34; p<0.001) was 2.21 higher than TangoSchoolUS (M=3.97; SD=1.49; p<0.001); 3.65 higher than TangoSchoolJP (M=2.53; SD=1.42; p<0.001), and 1.96 higher than TangoSchoolFR (M=4.22; SD=1.60; p<0.001). Finally, HighCookeryFR (M=5.90; SD=1.32; p<0.001) was 1.66 higher than HighCookeryUS (M=4.24; SD=1.64; p<0.001); 1.47 higher than HighCookeryJP (M=4.43; SD=1.74; p<0.001), and 1.25 higher than HighCookeryAR (M=4.65; SD=1.49; p<0.001).

5.5. Experiment 5: COK versus Price

A convenience sample of 100 undergraduate students of FEA-USP (61 men and 39 women, with average age of 21 years) participated in Experiment 5, designed to test hypotheses 5a and 5b. Data were collected via a 2x2 between subjects full-factorial experiment. The experimental manipulations involved two Country-of-Know-How Levels (High Reputation; Low Reputation) and two Price levels (High: R$200; Low: R$50). Participants were randomly assigned to one of four conditions (with a total of 25 participants per condition); (High COK x High Price); (High COK x Low Price); (Low COK x High Price); (Low COK x Low Price). We selected two countries, USA and...
Portugal, as having, respectively, high and low reputation in sports. In all four conditions, participants received a booklet containing an article about the performance of USA and Portugal in sports and a scenario followed by a questionnaire.

Once the scenarios were presented, participants were asked to answer six questions assessing perceived quality of the gym. The format of the questions uses the same scale developed in Experiment 1 for perception of quality. Four questions were used as manipulation checks to test whether participants’ belief about the sport reputation and quality of fitness services of USA and Portugal were indeed consistent with those primed through an initial article, and one question was used as manipulation check to test whether the price levels were indeed perceived as low or high. Demographic questions were included at the end.

A series of paired t-tests confirmed our assumption that US was perceived as having significantly higher reputation than Portugal, both in sports (M_US = 6.31, SD=1.14; M_Portugal = 3.11, SD=0.93) (t(99)=20.22, p<0.001) and in fitness services (M_US = 5.74, SD=1.24; M_Portugal = 3.84, SD=1.29) (t(99)=10.65, p<0.001). We also conducted one Independent Samples t-test to check our assumption that R$50 was indeed perceived as being a low price and R$ 200 was indeed perceived as being a high price for a gym’s fee. The t-test was significant (M_HighPrice = 4.86, SD=1.03; M_LowPrice = 2.36, SD=1.22) (t(98)=11.04, p<0.001).

Six items measured the construct of perceived quality. An exploratory factor analysis yielded a one-factor solution. All 6 items loaded on one factor named Perception (α=0.917), that explained 71.54% of the variance.

Next, we conducted a two-way ANOVA to test our hypotheses of a main effect of COK on perceived quality and an interaction between COK and Price such that COK moderates the effect of Price on perceived quality. As shown in table 3, this analysis revealed a significant main effect for COK reputation on Perception (F(1,99)=18.281, p<0.001), confirming our hypothesis 5a. Participants’ Perception of quality was significantly higher in the conditions when COK was high (M_COKHighPriceLow = 5.67, SD=1.04; M_COKHighPriceHigh = 5.66, SD=.64) than in the conditions where COK was low (M_COKLowPriceLow = 4.74, SD=1.22; M_COKLowPriceHigh = 4.88, SD=1.00 ), despite the price level. However, neither the main effect for Price (F(1,99)=0.161, p=0.689), nor the COK x Price interaction (F(1,99)=0.112, p=0.739) were significant, so hypothesis 5b was not supported.
The effects of country-of-origin on the service sector: A multidimensional approach

Table 3
ANOVA

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>18.476(a)</td>
<td>3</td>
<td>6.159</td>
<td>6.184</td>
<td>.001</td>
</tr>
<tr>
<td>Intercept</td>
<td>2745.760</td>
<td>1</td>
<td>2745.760</td>
<td>2757.313</td>
<td>.000</td>
</tr>
<tr>
<td>COK</td>
<td>18.204</td>
<td>1</td>
<td>18.204</td>
<td>18.281</td>
<td>.000</td>
</tr>
<tr>
<td>Price</td>
<td>.160</td>
<td>1</td>
<td>.160</td>
<td>.161</td>
<td>.689</td>
</tr>
<tr>
<td>COK * Price</td>
<td>.111</td>
<td>1</td>
<td>.111</td>
<td>.112</td>
<td>.739</td>
</tr>
</tbody>
</table>

(a) R Squared = .162 (Adjusted R Squared = .136).

Source: Elaborated by the author.

Graph 1
ESTIMATED MARGINAL MEANS OF PERCEPTION

Source: Elaborated by the author.

During our studies, none of the dependent variables were significantly different across subject’s demographics; therefore, results were collapsed across age and gender.
6. GENERAL DISCUSSION

Overall, we can see that our proposed multi-dimensional framework was supported. Our studies showed that the COO construct could be broken-down in different sub-dimensions and that each sub-dimension seems to have a different level of influence on consumers’ quality perceptions for the service categories tested. With Experiment 1 we addressed the differences in the level of influence of each of our sub-dimensions on perceived quality. We expected that due to the peculiar characteristics of services the COP sub-dimension would be the most relevant one for consumers. Our results indeed supported our predictions and also showed some kind of hierarchy between the sub-dimensions, being COT the least important one. This result somehow supports Clark and Rajaratnam’s (1999) statement that although technology, knowledge and development are important, the service sector is mainly about people.

Experiment 2 reinforced the idea that participants strongly relied on national stereotypes (COP) in their service evaluations even in the presence of more concrete information, such as the level of expertise of the professional. Previous researches have already shown that consumers expect counter-stereotypical service providers to supply poor service (e.g., Grayson & Shulman, 2000; Matta & Folkes, 2005) or to be differently evaluated from a stereotypical provider. Our research supported these findings in the service categories and countries studied.

One unforeseen finding came in Experiment 3, where we wanted to investigate if consumers would prefer standardized or adapted tangibles on a service provider. Originally, we had hypothesized that the standardization would help international service providers to strengthen their image in consumers’ minds (Ferrand & Pages, 1999), which, in consequence, would increase the quality perception of consumers; nevertheless, our empirical findings pointed in the opposite direction. Research about COO in the manufacturing sector had already showed that incongruent information on country of origin could have detrimental effect on global product beliefs and attitude (Heath & Scott, 1998; Hui & Zhou, 2003), and we expected the same to be true to the service sector. Nevertheless, we have not found the same pattern in the service categories that we studied. The great majority of the participants gave more favorable quality evaluations when COT was adapted than when COT was standardized. One possible explanation for these results could be a more favorable image of Brazil if compared with the image of US for the participants of the study; an additional explanation is
that the extensive use of another country’s national colors and designs could
overwhelm the consumers making them feel some kind of inconsistency
with the patterns with which they are already used in their native countries.

Study 4 findings pointed out that no country enjoyed an absolute good
evaluation across all categories; therefore, the COK information should be
used in a company’s communication strategy only when there is an expected
fit between a country’s reputation and the service category being offered.
This finding reinforces the competitive advantage of the nations concept
raised by Porter (1998) that advises countries to apply their efforts in the areas
in which they have excellence. In this manner, they will have a differential in
comparison to other countries that will be more difficult to be surpassed
and will allow them to be competitive for longer periods of time.

Finally, with experiment 5 we wanted to investigate how the COK sub-
dimension would influence the perception of quality in the presence of
another extrinsic cue. We have chosen Price to be this additional cue because
it was already considered to be an important element in consumers’
evaluations of quality in previous studies (Dodds, Monroe, & Grewal, 1991;
Lichtenstein, Ridgway & Netemeyer, 1993). We expected the Country-of-
Know-How (COK) to have a greater weight than Price in consumers’
evaluation of a service quality and our empirical results supported this;
nevertheless, we also expected to find some kind of interaction between
these two cues, which was not found. This result corroborates with the
studies of Mitchell and Greatorex (1993) that have shown that price was an
ineffective cue for quality and Chao (1993) that found that perceptions of
quality based on cues such as price may be different according to the country
of origin.

Our results combined indicate that COO construct could be segmented
in different sub-dimensions, since we have indeed verified effects of all of
them on quality evaluations for the services and countries herein studied.

This paper provides, then, theoretical contributions to the COO
literature expanding the understanding of the occurrence of stereotypical
processing in consumer behavior on certain service categories by presenting
a more detailed look on COO cues by parts: know-how, personnel, and
tangibles; which offers researchers and practitioners a more pragmatic way
of treating this information and dealing with trade-offs between different
sub-dimensions, in order to leverage favorable behaviors or to neutralize
negative perceptions towards a service.

Another contribution of this research is the verification that, while in
the manufacturing sector the value seems to lie heavily on the place where
core knowledge is developed, for the services analyzed in this study, a greater value seems to migrate to personnel, which should then be considered in the development of international marketing strategies.

Finally, this is one of the few researches that provide insights from outside the United States. It was already showed that COO researches are just somewhat generalizable across nations and cultures (Peterson & Jolibert, 1995); that is, although the COO effect based on stereotypes is universal, the degree in which it is applied on the evaluation of a certain service and/or product and the sensitivity to this information vary from place to place (Chao, 1989), and also vary according to the consumer level of expertise regarding the product/service, therefore presenting the perspective of Brazilian consumers could aggregate value to this field of research.

7. LIMITATIONS AND DIRECTIONS FOR FURTHER RESEARCH

Since this is the first study to present and empirically test the multidimensionality of the COO construct, further replications are needed to reinforce the applicability of this framework. This research should be replicated with participants from different nations to see if their assessments vary according to cultural differences. Brazil, for instance, is considered a collectivist country, which means that its population tends to put a lot of emphasis on personal interactions (Hofstede, 1980), which could explain the relevance of the COP sub-dimension. Future replications in more individualist cultures would provide valuable insights on the behavior of different sub-dimensions. Also, some authors (e.g. Nebenzahl, Jaffe, & Usunier, 2003) believe that COO needs to be examined on a category-by-category basis, since an overall theory for all products/services may not be feasible. Therefore, it would be interesting to examine the behavior of the sub-dimensions across a wider range of services.

Additionally, previous studies observed that consumers tend to prefer products that originate from their own country or from culturally similar countries (e.g. Gurhan-Canli & Maheswaran, 2000), so it would be valuable to verify how cultural similarity could moderate the effect of different sub-dimensions of the COO construct.

Finally, our study verified the influence of the COO construct with only one additional cue, Price. It is expected that the more cues consumers have at their disposal, the less they will rely on the COO cue to assess quality.
Future studies could then add more cues, such as Brand or consumer expertise to verify how the influence of the sub-dimensions would be affected by their presence.

**REFERENCES**


The effects of country-of-origin on the service sector: A multidimensional approach


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