

ACES

**THE EUROPEAN UNION CENTER OF
EXCELLENCE**

AUGUST 2010

**RESEARCH GRANTS (RESEARCH SEED
AND WORKING PAPERS) GRANTS**

**Growing Global Brands in Foreign
Markets: A Brand Equity
Perspective**

Alexander V. Krasnikov

ACES – EU Grant

Working Paper

**IMPACT OF NATIONAL CULTURE ON TRADEMARK REGISTRATIONS IN EMERGING
ECONOMY: EVIDENCE FROM RUSSIA**

Alexander Krasnikov*

Assistant Professor of Marketing
Department of Marketing
George Washington School of Business
2201 G St. NW
Funger Hall, Of. 301B
Washington DC 20052
Ph: +1.202.994.4916
Fax: +1.202.994.8999
Email: avkrasn@gwu.edu

Maria Smirnova

Senior Lecturer (Marketing)
Graduate School of Management
Saint Petersburg State University
Volkhovsky per., 3
St Petersburg, 199004, Russia
Ph: +7.812.323.8464
Email: smirnova@gsom.pu.ru

** Corresponding Author*

IMPACT OF NATIONAL CULTURE ON TRADEMARK REGISTRATIONS IN EMERGING ECONOMY: EVIDENCE FROM RUSSIA

Abstract

In this study we explore how firms deploy intellectual property assets (trademarks) in international context and the impact of cultural characteristics on such activities. Trademarks capture important elements of firm's brand-building efforts. Using growth model, a special case of hierarchical linear model, we demonstrate that that stock of trademarks in foreign market increase future trademark activity.. Also, we explore the moderating roles of two cultural dimensions, individualism and masculinity, on such relationships. The findings indicated that firms from countries closer to host market (Russia) on individualism dimension tend to register more trademarks in host market. The opposite result is observed for masculinity dimension.

Keywords: intellectual property, trademarks, individualism, masculinity, hierarchical linear model.

IMPACT OF NATIONAL CULTURE ON TRADEMARK REGISTRATIONS IN EMERGING ECONOMY: EVIDENCE FROM RUSSIA

Introduction

It is widely accepted that firms may derive significant benefits deploying Intellectual Property (IP) assets in the global marketplace. Intellectual property (IP) refers to "the creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce" (WIPO, 2010). Nevertheless, complicating the efforts the firms made in using their IP resources in the global market is the fact that there is significant variation across countries in the extent to which those resources may be deployed due to cultural, institutional, and economics characteristics of the host markets (IPRI, 2010). Consequently, firms may choose from a wide spectrum of IP strategies with greater or lesser degrees of homogeneity across markets.

Brands represent a significant portion of firm's intellectual property that is transferred between markets as firms pursue internalization (Cervinlo & Cubillo, 2004). Firms spend considerable efforts in building and promoting their brands in the global marketplace. Those efforts may be captured and protected by trademarks, or registrations that help to retain rights for the use of brand and its elements and prevent from copying them by other parties (Cohen, 1986). Despite its importance, the whole subject of intellectual property, into which research on trademarks fits, has attracted a great deal of attention and a considerable volume of publications mostly in the legal world, but very little in the international business literature.

Trademarks were studied mostly in the context of the prevention of infringement and counterfeiting (Greene, 2008; Mansfield, 1994; Ong, 2009). Although, IP protection is paramount in firm's market efforts in the foreign markets, understanding the mechanisms by which firms may manage trademarks for profit has been largely neglected. As such, we are trying to bridge this gap and study how firms are using their trademarks to create brand value in the host country.

International and cross-cultural aspects that are mostly associated with branding and perception of brand depend on variation in cultural dimensions. Existing research thus has been addressing the issues

of dealing with trademarks as firms' intellectual property on consumer level, ignoring potential for hierarchical firm- and strategy-level effects (Arregle, Hebert, & Beamish, 2006). At the same time the return on investments in creating such intangible asset as brand equity may provide various results, depending on country and market specifics. Existing research has provided evidence on various levels of readiness of consumers in different cultural settings to create loyal attitude and thus provide higher return on investments, made by international firm in promoting brand in this market (Lam, 2007). These variations, driven primarily by cultural aspects, might have exploratory power in defining how international companies are planning and executing their trademark registration strategies. Consequently, we assess the role of two cultural dimensions, namely individualism and masculinity, on the trademark activities in the sample of firms drawn from eleven product categories in Russian economy.

Our paper proceeds as following. First, we define trademarks and discuss link between trademark and brand. Then, we present our hypotheses. Third, we describe database creation and outline our hierarchical linear model. Next, we present results of hypotheses testing. Finally, we discuss results, limitations, and provide managerial implications.

Role of Trademarks

World Intellectual Property Organization (WIPO, 2010) defines trademarks as "distinctive signs, used to differentiate between identical or similar goods and services offered by different producers or services providers." WIPO's definition highlights the role of trademarks as a source of merchant's identity. Consequently, consumers are using trademark-protected signs to distinguish between goods and services originating from different sources, e.g. shape of Coca-Cola bottle, one of the most recognizable protected elements of Coca-Cola's brand helps consumer to distinguish it from other brands of soft drinks.

A major characteristic of trademarks is related to the protection of the owner's rights to exclusively use of such sign in its business and defer others from imitating it (Trademark Act, 1946). Trademarks capture firm's investments in new product development, advertisement, and promotion and offer firms an opportunity to capitalize on those brand building efforts (Fink, Javorcik, & Spatareanu,

2005). Despite protected status, many firms run into the problem of trademark infringement and counterfeit products that hurt brand/trademark owner's sales and brand image. Especially, this problem is attenuated in international trade (IPRI, 2010). Large differences between countries in trademark registration and enforcement laws and practices made companies very vulnerable to imitators in some markets. Moreover, if in the past, counterfeiters mostly targeted electronics and small-sized luxury products, recent global expansion and outsourcing to overseas permit them to replicate more resource-intensive items. For example, German automakers recently reported that one Chinese car manufacturer started producing and selling abroad vehicles resembling popular BMW X-5 and Mercedes A-Class cars (Edmondson, 2007).

Despite lack of academic research of trademark practices in the international business, there is little doubt that such activities represent important part of firm's branding strategies in the global market. From resource-based perspective, trademarks capture critical firm assets (i.e. brands) that are heterogeneous across firms and countries and can serve as source of competitive advantage in global market (Cervino and Cubillo, 2004). In the similar vein, Fink et al., (2005) found that international trademark registrations play important role in international product differentiation and brand extensions. Moreover, they found that high-quality producers are actively engaged in trademark registration activities due to their interest in protection against brand imitation. Institutional theory also suggests that firms might utilize trademarks in their efforts to build legitimacy in their markets. For example, Bowie (2005) reported that firms tend to use graphical trademarks similar to those of others within their field. Furthermore, institutional theory argument is supported by proliferation of WIPO's Madrid System for the International Registration of Trademarks that provides simultaneous protection of firm's trademarks in several countries. Finally, some researchers perceive trademarks as indicators of product innovations (Mendonc, Preira, & Godinho, 2004; Millot 2009) that are instrumental for commercialization of new products and creation of new product categories (e.g. Sony launching first portable cassette player called Walkman in 1979).

Of particular interest are studies of trademark activities in emerging markets, which are characterized by underdeveloped institutions and weak protection of intellectual property rights. Both academicians and practitioners have mostly focused on business strategies that combat intellectual property infringement in such markets (e.g. IPRI, 2010; Greene, 2008). While some researchers (Perlman & Timaru, 2008; Ong, 2009) argue for strengthening coercive mechanisms for brand protection; the others (Cheung, Tang, & Wong, 2009) suggest that firms should pay more attention to cultural differences and adjust their branding strategies for emerging markets. For example, in her review of intellectual property protection in China, Greene (2008) highlights the positive synergetic effect of legal actions and such localization efforts, as educating of Chinese partners about the ramifications of infringement and reinvesting profits from penalty awards in community.

In summary, trademarks help company to differentiate its offering from those of competitors in the global market and to protect past investments in advertisement and branding. As such, we expect that the firms will be actively engaged in the trademark registration activities even in the markets with inefficient protection of intellectual property rights. Further, with respect to formulating the chain-of-effects linking firm's trademark activities with performance the resource-based view and institutional theory provide useful insights. These perspectives suggest that trademarks owned by firms may affect firm's financial performance in the emerging economy, as well.

Determinants of Trademark Activities

Economic theory suggests that trademarks encompass important intellectual property assets (Davidson, 2004) that may be leveraged for profit. However, not all firms are engaged in trademark registrations in the same manner. It was noted that firm-owned stock of active trademarks may vary significantly among firms even within the same industry (Fink et al., 2005). These variations may be explained by different strategies, by which firms create brand equity, or added value endowed by the brand to the product, in the host market (Farquhar, 1989; Keller & Lehmann 2006). Firm's advertisement and promotion may enhance brand equity by growing brand awareness (i.e. degree to which a brand is recognized by

consumers) and strengthening positive cognitive associations that consumers hold about that brand (Srivastava, Shervani, & Fahey, 1998). Such firm activities are captured by trademark registrations with home- and host-country patent and trademark offices (Cervinlo & Cubillo, 2004; Krasnikov, Mishra, & Orozco, 2009). Consequently, it may be argued that the firms with stronger brand equity are likely to have larger stock of registered trademarks.

Next, firms with strong brands may utilize trademarks for subsequent brand extensions, product modifications, and future promotions that may be executed more efficiently and effectively (Ambler 2003). This happens because firms may capitalize on positive spillovers from existing brands/products to new ones. For example, the successful introduction of new design of Lipton Ice Tea was largely determined by strong brand image of Pepsi product in Russia (Beverage World, 2007). Consequently, such activities will be also reflected in the higher number of trademark registrations in future periods. In other words, firms with stronger brand equity (and larger stock of trademarks) are more likely to register more trademarks and, as a result, demonstrate higher trademark activity. These arguments are summarized in the following hypotheses:

Hypothesis 1: Stock of firm owned trademarks in time period t is positively associated with trademark activity in $(t+1)$.

Trademarks and the Influence of National Culture

The success of global firm in the host market is largely derived from its brand and the accompanying goodwill. Trademark-enabled protection ensures exclusive rights for brand(s) and, as such, is often paramount to the ongoing success of a business in the host country. The empirical literature in economics and international business suggests that firms should assess and potentially modify strengths and level of protection of their intangible IP assets when making decisions about order of entry and entry mode (e.g. Aulakh, Jiang, & Pan, 2010; Mansfield, 1994; Smith, 1999). Nevertheless, a brand is considered in research as the most standardized aspect of the international marketing mix that firms introduce to the host market (Cervinlo & Cubillo, 2004). However, after entering the foreign market, the businesses have

to deal with the differences in perception of the brand in the different cultural setting (Foscht et al., 2008; Lam, 2007; de Mooij & Hofstede, 2010). As such, it is important to consider cultural determinants of firm behavior in the host market.

Among different frameworks in cross-cultural research, we chose framework developed by Hofstede (1980) who outlined four dimensions of national culture: individualism, masculinity, power distance, and uncertainty avoidance. Hofstede cultural concept is the dominating one in research, while the effects of four dimensions tested in multiple cultural settings (Kirkman, Lowe, & Gibson, 2006). We consider two of these dimensions, individualism and masculinity, as likely factors influencing firm's trademark activity in the host market.

The first Hofstede's dimensions, individualism may be assessed by examining individual's attitude to herself. The difference between individualism and collectivism may be described along following lines: "people looking after themselves and their immediate family only, versus people belonging to in-groups that look after them in exchange for loyalty" (de Mooij & Hofstede, 2010, p. 88). This dimension received great attention in international business and marketing research mostly from consumer perspective. Several researchers have noticed differences in values and beliefs of consumers who score differently on individualism dimension (e.g. Matsumoto et al., 2008; Lam, 2007). For example, consumers from the more individualistic societies are more self-confident, more brand loyal, and less likely to adopt innovations (Yoo & Donthu, 2005; Lam, 2007) On contrary, consumers in the more collectivistic societies exhibit higher degree of consumer ethnocentrism and conformity to their group's consumption patterns (Yoo & Donthu, 2005). Based on these examples, it is possible to conclude that if host and home countries differ on individualism-collectivism continuum, than a brand may be perceived differently by consumers in those countries, as well. Therefore, firm's branding strategies and brand equity in the host country may be affected as a result of such difference. This argument is further supported by Ralston et al. (1997), who found evidence of crossvergence in individualistic values of managers employed with multinationals in Russia. In our case, the varying impact of branding strategies

arises from the combination of cultural influences (i.e. differences in individualism) and firm's business ideology focused on maximizing value of global brand in the host market. Above we mentioned that brand equity in the host country is captured by trademarks. Consequently, we argue that the larger the firm's trademark stock in the host country with similar individualism score, than the more potential benefits the company will receive in the host market. In other words,

Hypothesis 2: The impact of trademark stock on trademark activity in (t+1) will be higher for firms from countries that are closer to host country on individualism dimension.

One of the major differences in cultures is the traditional notion of gender roles. Hofstede (1980) described masculinity dimension of national culture as the extent to which masculine values prevail over feminine values. Masculine societies emphasize assertiveness, achievement, material success (Hofstede, 1994, Lam et al, 2009). Consumers in such societies are paying attention to the brands indicating owner's status, e.g. jewelry or luxury goods (de Mooij & Hofstede, 2010). It was noticed that consumers with high masculinity have more control over their decisions and are less influenced by marketing impact (Lam, 2007). Moreover, Wiles, Wiles, & Tjernlund (1995) reported that the portrayal of gender roles in advertisement vary significantly between countries as a result of different cultural values. Therefore, the response of consumers to firm's branding efforts may vary dependent on gender identity congruity, or the extent to which correspondence is achieved between the configuration of a gender portrayal in an advertisement and the configuration specified by a consumer's schema or beliefs (Orth & Holancova, 2004). As gender role is an important dimension of one's self-concept, it is feasible that increasing the amount of gender-congruent information contained in an advertisement will facilitate the processing of this information and even increase possibility of liking and purchasing such brand (Feiereisen, Broderick, & Douglas, 2009). Consequently, we argue that branding strategies of firms from countries with similar to host market masculinity score, will generate higher returns, or

Hypothesis 3: The impact of trademark stock on trademark activity in (t+1) will be higher for firms from countries that are closer to host country on masculinity dimension.

Database Overview

We compiled dataset for testing our hypotheses from several, including Euromonitor, Integrum, and RosPatent databases. We extracted firms' trademark registrations in Russian Federation from Integrum database. Then, we verified those trademark registrations using online database of the RosPatent, the Russian Federal Service for Intellectual Property, Patents and Trademarks. Next, the information about firm's brands and product categories in Russian market was extracted from the Euromonitor database. Finally, we used Dr. Hofstede's website (<http://www.geert-hofstede.com/> - accessed on April 23rd, 2010) for measures of the individualism and masculinity dimensions.

The sample of firms for our study was developed based on several criteria. First of all, we chose firms in the following product categories: confectionary, deodorants, hair care, hot drinks, infant food, in-home consumer electronics, laundry care, oral hygiene, portable consumer electronics, soft drinks, and sweet and savory snacks. Euromonitor provides detailed data on sales, market share, and brands for these categories for the period 2001-2007. Moreover, firms in these product categories are actively engaged in branding, advertisement, and promotions, which should be reflected in trademark registration activity. Second, we verified that these companies indeed have trademark registrations in Russian Federations. As a result, our sample consisted of 43 companies from Finland, France, Germany, Japan, South Korea, Netherlands, Sweden, Switzerland, United Kingdom, and USA. Most companies were presented in more than one product category, resulting in the seven firms per product category, on average. Our final dataset consisted of 539 firm/year observations (Table 1). Following, we explain our measures in greater detail.

Insert Table 1

Measures

Measures of Trademark Activity and Stock of Trademarks. We extracted complete trademark registration files for 43 companies in our sample from Integrum up to year 2007. Then, two doctoral students with the

help of one of the researchers recorded following information for each trademark: trademark owner, registration number, registration date, and class of goods and services. This information was later verified by independent coder who also checked that trademark registration indeed belongs to a firm in question. Overall, we extracted information for 6,404 trademark registrations. Then, for each firm we estimated trademark activity (*TMA*) as the total number of registrations that were granted to a focal firm in a given year. Stock of firm-owned trademarks (*ST*) was calculated as total number of active (i.e. live) trademarks that firm possessed during given year.

Cultural Dimensions. We used Hofstede's scores for individualism and masculinity dimensions. For each dimension and each country, we calculated absolute difference between that country score and score for Russia.

Controls. For the current study, we used two control variables for firm's branding strategy and two – for product category. First, past research (e.g. Rao, Agarwal, & Dahlhoff, 2004; Krasnikov et al., 2009) suggests that number of brands may serve as predictor of firm's brand equity. As such, we collected information about brands that are marketed by firms from our sample in Russia using Euromonitor. Furthermore, we verified that these brands are protected by trademarks in Russia. Then we estimated number of brands (*NBR*) for each firm in each product category in a given year.

Second, trademark registrations also provide information about classes of goods and services, in which a firm is protecting its brand. In other words, a firm identifies in registration a product or service category, in which it is planning to market its product or service. For example, Cadbury-Schweppes in Russia registered its product Crush in two categories: snacks and soft drinks. Therefore, we used average number of classes of goods and services per trademark registration (*CLASS*) as other control for firm's branding strategy.

Following past research examining firm market performance in growth models (e.g. Gruca & Rego, 2005), we included two controls for product category attractiveness. First, we controlled for competitive intensity in given category using Herfindahl concentration index (*HHI*), calculated as a sum

of squared shares of firms in the product category. Second, we estimated demand instability (*INST*) as standard deviation of three-year growth in product category. Descriptive statistics for our measures is provided in Table 1.

Model Development

For testing our hypotheses we used growth model, a special case of hierarchical linear models (Raudenbush & Bryk 2001; Singer 1998). Our study utilizes data measured at multiple levels. First, firms are nested within product categories (e.g. hot drinks, snacks, in-home consumer electronics, etc.). Second, several companies share same home country. Third, we collected longitudinal data for all firms. Resulting nested data structure may lead to heteroskedasticity in the errors in the traditional regression analysis as firms in the same product category from the same country (e.g. LG and Samsung from South Korea or Wella AG and Henkel from Germany) are more “alike” than firms in different categories/countries. As such, multiple regression analysis may not be appropriate because it could produce biased parameter estimates. In order to assess such risks we conducted White’s test for heteroskedasticity (White 1980) and indeed found presence of non-constant error variance in regressions for trademark activity (White’s test $\chi^2 = 203.70$ d.f.=53 $p < .01$). As such, the use of hierarchical linear models that account for different sources of heterogeneity in nested designs is justified in this case.

Apart from empirical considerations (i.e. nested data structure), our model was largely driven by conceptual issues. First, our framework suggested that stock of trademarks may positively affect trademark activity. Also, past research in marketing and brand management suggests that these outcomes are related to firm’s branding strategy (Krasnikov et al. 2009; Rao et al., 2004). Consequently, we account for firm branding strategy by incorporating a) number of brands owned by firm and b) average number of classes of goods and services per trademark. As such, Level 1 equation of our hierarchical model has following form:

$$TMA_{ijt} = \beta_{0ijt} + \beta_{1ij} \cdot ST_{ijt-1} + \beta_{2ij} \cdot NBR_{ijt} + \beta_{3ij} \cdot CLASS_{ij} + \varepsilon_{ijt}$$

(1)

We modeled variability in the outcome variable TMA_{ijt} (i.e., trademark activity) of firm i in product category j in time period t as function of stock of all trademark owned by a firm in time period $t-1$ in category j (ST_{ijt-1}), number of firm's brands (NBR_{ij}), and average number of classes of goods/services, for which a firm i registers its trademarks ($CLASS_{ij}$) (Equation 1). Since variable $CLASS_{ij}$ does not vary a lot during the seven year period covered in our research, we averaged these values for each firm and treated them as fixed effects. The residuals ε_{ijt} are normally distributed random errors that are specific to firm i in product category j .

Further, we argue that the impact of stock of trademarks (ST_{ijt-1}) on outcome variable is contingent on differences in two cultural dimensions between firm's home and host markets. Consequently, in Level 2 (Equation 2) we modeled the variability in intercept (β_{0ijt}) and slopes (β_{1ij} and β_{2ij}) as follows:

$$\begin{aligned}\beta_{0ijt} &= \gamma_{00jt} + \eta_{0ij} \\ \beta_{1ij} &= \gamma_{10j} + \gamma_{11j} \cdot IND_i + \gamma_{12j} \cdot MAS_i + \eta_{1ij} \\ \beta_{2ij} &= \gamma_{20j} + \eta_{2ij}\end{aligned}\tag{2}$$

where,

IND_i – absolute difference between values for individualism in firm's i home country and Russia, and

MAS_i – absolute difference between values for masculinity in firm's i home country and Russia.

The random effects in intercept (β_{0ijt}) and slopes (β_{1ij} and β_{2ij}) are captured by normally distributed errors η_{0ij} , η_{1ij} , and η_{2ij} , respectively (Equation 2).

Further, since our sample is drawn from multiple product categories at different time periods, there might be heterogeneity in parameter estimates in Equation 2 due to product category and time effects. In Level 3 (Equation 3) we, therefore, modeled the variability in intercept (γ_{00jt}) using product category level variables.

$$\gamma_{00jt} = \alpha_{000} + \alpha_{001} \cdot INST_{jt} + \alpha_{002} \cdot HHI_{jt} + \xi_{00jt}\tag{3}$$

where,

$INST_j$ – demand instability in product category j in time period t , and

HHI_j – competitive intensity in product category j in time period t .

The random effect in the intercept is captured by error term ζ_{00jt} that can be modeled by different variance-covariance structures: autoregressive, compound symmetry, or unstructured (Singer 1998; Wolfinger 1996).

Estimation of the Models

For estimation of our hierarchical linear model (Equations 1-3), we followed stepwise approach, outlined by Singer (1998) and Wolfinger (1996). We started by estimating unconditional means model without any predictors. Such simplified model allows us to determine within- and between-group variation and calculate intraclass correlation¹. Then, we started adding predictors from different levels to our model and estimated reduction in unexplained portions in both variance components. We found that 51 % total variance in trademark activity may be attributed to variation within industries/product categories. These results further support the choice of hierarchical linear model as analytical tool in this case.

Unconditional means model demonstrated that within-group variation in trademark activity equals 13.37 (z-value=15.20 p<.01) and was slighter larger than between-group variance 12.96 (z-value=5.37 p<.01). By adding firm, cultural, and industry variables to unconditional means model we were able to explain 42% ($[(12.96-7.17)/12.96]$) between-group and 17% ($[(13.37-11.13)/13.37]$) within-group variances. Next, we applied different forms of variance-covariance matrices arising from multiple observations per firm. We employed commonly used indices (log-likelihood ratio, Akaike's Information Criterion, and Bayesian Information Criterion) to compare fit of alternative covariance matrices (Littell et al., 1996; Singer 1998). The model with unstructured error covariance matrix did not converge; however,

¹ Group represents industry/product category in this context. Earlier we noted that firms are nested within respective product categories/industries, e.g. Nestle is represented in hot drinks and baby food categories.

models with autoregressive AR(1) and compound symmetry error structures did. Autoregressive AR(1) covariance structure provided better fit (-2LLR=2,993.30, AIC = 3,001.30, and BIC = 3,010.70) compared to compound symmetry error structure (-2LLR=3,042.10, AIC = 3,052.10, and BIC = 3,063.80). As such, we used AR(1) covariance structure for residuals.

Insert Table 2

Results of Hypotheses Tests. Consistent with our conceptual framework, we observe that stock of trademarks increases trademark activity ($\beta=.06$ t-value=2.09) (Table 2). Thus, hypothesis H1 was supported. Next, we found that interaction between trademark stock and individualism was negatively associated with trademark activity ($\beta=-.01$ t-value=-2.72) As such, we found that firms from countries closer on individualism dimension register more trademarks, which supported H2. However, contrary to expectations, the interaction between trademark stock and masculinity score marginally increased trademark activity ($\beta=.001$ t-value=1.91). That is, contrary to H3, firms from more distant on masculinity dimension countries register more trademarks in Russia.

Apart from hypothesized relationships, we found that number of brands did not affect trademark activity ($\beta=.08$ t-value=.80). Activity in product classes was not significantly related to any of outcome variables. Finally, we did not find any significant results for industry concentration ($\beta=-.20$ t-value=-.87) or demand instability ($\beta=.01$ t-value=.53) (Table 2).

Discussion

In the current study we attempted to examine how global firms deploy and grow their intangible assets, (i.e. brands) in the emerging economy, Russia. We argued that firm's brand equity that resides in its brands in the host market may be described with trademark registrations. Moreover, we examined dynamics in trademark registration practices by linking stock of trademarks with trademark activity and firm performance (sales and market share). We created a large database of all trademarks registered by 43 firms in the eleven product categories covering period 2001-2007. Overall, we examined 6,404 trademark registrations of these firms. As a result, we were able to confirm hypotheses that firm's trademarks

comprise very important assets in the host market that may be leveraged for growth in the host market. These findings attest to the role of intellectual capital in the global market and its importance in the foreign direct investment.

Of particular interest is the question of how such activities are affected by differences between firm's home and host cultures. Our conversations with trademark lawyers and managers as well as review of relevant studies suggested that two aspects of national culture are important in this context, namely individualism and masculinity. We speculated that firms from countries that are closer on these two dimensions to the host market will also experience higher impact of the intangible assets on trademark activity. Our tests suggest that firms from countries that are close to Russia on individualism dimension, experience higher impact of trademark stock on trademark activity. However, we observed opposite than proposed effect of masculinity distance for trademark activity. That is, firms from countries more distant on masculinity dimensions than Russia demonstrated higher impact of trademark stock on trademark activity. This finding may be attributed to the fact that gender roles may be more easily inferred from advertisement than other cultural values (Wiles et al., 1995). As such, firms from more distant on masculinity dimension may introduce more ads (and trademarks) that is congruent with gender roles that are consistent with values in the host market.

Our research also offers several important managerial implications. First, we demonstrate financial value of trademarks even in the context with weak protection of IP rights. We would like to point attention to the importance of protection of trademarks from potential infringement and counterfeiting in emerging economies. In these regards, the experience of several multinational corporations in China who organized separate departments for IP protection seems very relevant (Greene, 2008). Moreover, we would like to highlight the role of cross-cultural issues in brand management. Although, our study suggests that the impact of firm's brand on trademark activity in host market is attenuated by distances in individualism and masculinity between host and home countries, this should not be interpreted that companies from more culturally distant cultures will always be at disadvantage. On

contrary, the examples of global expansion of iconic companies as Coca-Cola, Apple, Ford, Nestle, Glaxo and others provide evidence of very successful adjustment to the host markets and ability to maintain strong brand identity.

Summary and Conclusions

In this cross-disciplinary study we combined three streams of research on brand management, intellectual property, and culture and studied how two dimensions of national culture, namely individualism and masculinity, affect global firms' trademark activities in the Russian market. Trademarks reflect firm's investments in firm's brands, one of the most important intangible assets, and, therefore, are crucial for our understanding of firm's evolution in foreign market. Overall, our findings confirm that stock of trademarks owned by firm in the foreign market increase future trademark activity.. Moreover, the trademark stock – trademark activity positive link is negatively attenuated by the distance on individualism dimension, while marginally positively moderated by distance on masculinity dimension. That is, firms from countries that are closer on individualism dimension and further away on masculinity dimension tend to register more trademarks in Russia.

Although our study has provided interesting and provocative results, there are several limitations that should be discussed. The key objective of this study was to study the impact of individualism and masculinity on firm performance and branding efforts in foreign market. Our first limitation stems from the limited data availability. Since we used objective data on trademarks from several databases, we also had to rely on secondary measures of cultural dimensions. It should be noted that international business research (e.g. Leung et al., 2005) advises for the use of primary data on culture measures obtained directly from the subjects. Nevertheless, Hofstede's measures were tested in numerous studies, so we are confident in their validity In future, researchers should rely on more refined measures of national culture. Second, it should be noted that not every aspect of branding or brand equity may be captured by trademarks. Therefore, future studies should introduce more refined measures of branding efforts in the host country.

Therefore, it would be advisable to combine secondary measures with primary measures as perceived by brand managers and consumers.

TABLE 1
Descriptive Statistics (N=539)¹

	<i>Mean</i>	<i>St.D.</i>	<i>TMA</i>	<i>ST</i>	<i>NBR</i>	<i>CLASS</i>	<i>IDV</i>	<i>MAS</i>	<i>HHI</i>
Trademark Activity (TMA)	3.29	5.12	1.00						
Stock of Trademarks (ST)	50.39	60.95	0.42	1.00					
Number of Brands (NBR)	2.13	3.12	0.16	0.40	1.00				
Classes of goods/services (CLASS)	2.36	1.79	-0.13	-0.27	-0.13	1.00			
Individualism (IDV)	37.22	16.22	-0.09	0.24	0.11	-0.22	1.00		
Masculinity (MAS)	28.81	14.82	0.15	0.07	-0.01	-0.03	-0.14	1.00	
Concentration ratio (HHI)	1.97	1.29	-0.08	0.03	-0.02	-0.12	0.14	0.04	1.00
Market Instability (INST)	7.33	8.36	-0.07	-0.24	-0.20	0.19	-0.34	0.10	-0.10

¹ – all correlations larger .09 and smaller than -.09 are significant at p<.05

TABLE 2

Parameter Estimates for Hierarchical Linear Models Using Hofstede's Dimensions

Predictor Variables	Hypotheses	d.f.	Trademark Activity β (t-value)
Intercept		75	1.59(2.03)*
ST _{ijt}	H ₁	456	.06(2.09)*
NBR _{ijt}		456	.08(.80)
CLASS _{ij}		75	-.12(-.85)
<i>Cultural Characteristics</i>			
ST _{ijt} *IDV _i	H ₂	456	-.01(-2.72)**
ST _{ijt} *MAS _i	H ₃	456	.001(1.91) [†]
<i>Industry Characteristics</i>			
HHI _{jt}		456	-.20(-.87)
INST _{jt}		456	.01(.53)

[†] - p<.10

* - p<.05

** - p<.01

*** - p<.001

References

- Akerlof, G. A. 1970. The market for lemons: Qualitative uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84 (3): 488-500.
- Ailawadi, K. L., Lehmann, D. R., & Neslin, S. A. 2003. Revenue premium as an outcome measure of brand equity. *Journal of Marketing*, 67 (October): 1-17.
- Ambler, T. 2003. *Marketing and the Bottom Line: Creating the Measures of Success*. London: Financial Times/Prentice Hall.
- Arregle, J.-L., Hébert, L., Beamish, P. W. 2006. Mode of international entry: the advantages of multilevel methods. *Management International Review*, 46(5): 597-618.
- Aulakh, P.S., Jiang, M. S., & Pan Y. 2010. International technology licensing: Monopoly rents, transaction costs and exclusive rights. *Journal of International Business Studies*, Forthcoming.
- Beverage World*. 2007. Lipton Russia's refreshing change. June 15: 103.
- Bowie, J. I. 2005. Differentiation and imitation in graphical trademark design. In *Organization & Management Theory Conference Paper Abstracts*. Academy of Management Proceedings: 1-92.
- Cerviño, J., & Cubillo, J. M. 2004. A resource-based perspective on global branding: an analysis of trademark registration data. *International Journal of Management*, 21(4): 451-463.
- Cheung, Y.H., Tang, L.M., & Wong Y. 2009. The current state of protection of European trademark rights in China. *Journal of Euromarketing*, 18(3): 169-181.
- Cohen, D. 1986. Trademark strategy. *Journal of Marketing*, 50 (January): 61-74.
- Davidson, S. 2004. When trademarks, trade names, and brands get valued. *CA Magazine*, 137 (7): 36-38.
- Edmondson, G. 2007. The sincerest form of auto design. *Business Week*, September 17: 12.
- Farquhar, P. 1989. Managing brand equity. *Journal of Advertising Research*, 30(4): RC7- RC12.
- Feiereisen, S., Broderick, A. J., & Douglas, S. P. 2009. The effect and moderation of gender identity congruity: Utilizing "real women" advertising images. *Psychology & Marketing*, 26 (9), 813-843.

- Fink, C., Javorcik B. S., & Spatareanu, M. 2005. Income-related biases in international trade: What do trademark registration data tell us? *Review of World Economics*, 141(1): 79-103.
- Foscht, T., Maloles III, C., Swoboda, B., Morschett, D., & Sinha, I. 2008. The impact of culture on brand perceptions: A six-nation study. *Journal of Product & Brand Management*, 17 (3): 131-142.
- Greene, S. M. 2008. Protecting well-known marks in China: Challenges for foreign mark holders. *American Business Law Journal*, 45(2): 371-398.
- Gruca, T. S., & Rego, L. L. 2005. Customer satisfaction, cash flow, and shareholder value. *Journal of Marketing*, 69 (July): 115-130.
- Hofstede, G. 1980. *Culture's consequences: International differences in work-related values*. Newbury Park, CA: Sage.
- Hofstede, G. 1994. Cultural constraints in management theories. *International Review of Strategic Management*, 5; 27-48.
- Hofstede, G. 2006. What did GLOBE really measure? Researchers' minds versus respondents' minds. *Journal of International Business Studies*, 2006. 37(6): 882-896.
- House, R.J., Hanges, P.J., Javidan, M., Dorfman, P. and Gupta, V. 2004. *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*, Thousand Oaks, CA: Sage Publications.
- International Property Rights Index. Annual Report 2010.
http://www.internationalpropertyrightsindex.org/2010_IPRI.pdf. Accessed on April 28th, 2010.
- Javidan, M., House, R. J., Dorfman, P.W., Hanges, P. J., & de Luque, M. S. 2006. Conceptualizing and measuring cultures and their consequences: a comparative review of GLOBE's and Hofstede's approaches. *Journal of International Business Studies*, 2006. 37(6): 897-914.
- Keller, K. L. & Lehmann, D. R. 2006. Brands and branding: Research findings and future priorities. *Marketing Science*, 25 (6): 740-759.

- Kirkman, B. L., Lowe, K.B., & Gibson, C. B. 2006. A quarter century of Culture's Consequences: a review of empirical research incorporating Hofstede's cultural values framework. *Journal of International Business Studies*, 37: 285-320.
- Krasnikov, A. V., Mishra, S., & Orozco, D. 2009. Evaluating the financial impact of branding using trademarks: a framework and empirical evidence. *Journal of Marketing*, 73(November): 154-166.
- Lam, D. 2007. Cultural influence on proneness to brand loyalty. *Journal of International Consumer Marketing*, 19 (3): 7-21.
- Lam, D., Lee, A., & Mizerski, R. 2009. The Effects of Cultural Values in Word-of-Mouth Communication. *Journal of International Marketing*, 17(3): 55
- Leung, K., Bhagat, R. S., Buchan, N. R., Erez, M., & Gibson, C. B. 2005. Culture and international business: recent advances and their implications for future research. *Journal of International Business Studies*, 36(4): 357-378.
- Littell, R. C., Milliken, G. A., Stroup, W.W., Wolfinger, R. D., & Schabenberber, O. 2006. *SAS for Mixed Models, 2nd Edition*, Cary, NC: SAS Publishing.
- Mansfield, E. 1994. Intellectual property protection, foreign direct investment, and technology transfer: Germany, Japan, and the United States. *International Finance Corporation, Discussion Paper 19*.
- Matsumoto, D., Yoo, S. H., Fontaine, J., Anguas-Wong, A. M., Arriola, M., Ataca, B., Bond, M. H., Boratav, H. B., Breugelmans, S. M., Cabecinhas, R., Chae, J., Chin, W. H., Comunian, A. L., DeGere, D. N., Djunaidi, A., Fok, H. K., Friedlmeier, W., Ghosh, A., Glamcevski, M., Granskaya, J. V., Groenvynck, H., Harb, C., Haron, F., Joshi, R., Kakai, H., Kashima, E., Khan, W., Kurman, J., Kwantes, C. T., Mahmud, S. H., Mandaric, M., Nizharadze, G., Odusanya, J. O. T., Ostrosky-Solis, F., Palaniappan, A. K., Papastilianou, D., Safdar, S., Setiono, K., Shigemasu, E., Singelis, T. M., Polackova Solcova, Iva, Spieß, E., Sterkowicz, S., Sunar, D., Szarota, P., Vishnivetz, B., Vohra, N., Ward, C., Wong, S., Wu, R., Zebian, S., & Zengeya, A. 2008. Mapping expressive differences around

- the world: The relationship between emotional display rules and Individualism v. Collectivism. *Journal of Cross-Cultural Psychology*, 39(1): 55-74.
- Mendonç, S., Pereira, T. S., & Godinho, M. M. 2004. Trademarks as an indicator of innovation and industrial change. *Research Policy*, 33 (9): 1385-1404.
- Millot, V. 2009. Trademarks as indicators of product and marketing innovations. *OECD Science, Technology, and Industry Working Papers*, # 2009/6.
- Mizik, N. & Jacobson, R. 2008. The financial value impact of perceptual brand attributes. *Journal of Marketing Research*, 15 (February): 15-32.
- de Mooij, M. & Hofstede, G. 2010 The Hofstede model. *International Journal of Advertising*, 29(1): 85-110.
- Ong, R. 2009. Tackling intellectual property infringement in China. *China Business Review*, 36 (2): 17-21.
- Orth, U. R., & Holancova, D. 2004. Consumer response to sex role portrayals in advertisements. *Journal of Advertising*, 32, 77-89.
- Perlman, E., & Timaru, O. 2008. The Wild, Wild East: Winning trademark registration for US companies in China. *Intellectual Property & Technology Law Journal*, 20(2): 17-19.
- Rao, V. R., Agarwal, M. K., & Dahlhoff, D. 2004. How is manifest branding strategy related to the intangible value of a corporation? *Journal of Marketing*, 68 (3): 126-141.
- Raudenbush, S. W. & Bryk, A. S. 2001. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Thousand Oaks, CA: Sage Publications.
- Ralston, D. A., Holt, D. A., Terpstra, R. H., & Yu, K. C. 1997. The impact of national culture and economic ideology on managerial work values: A study of the United States, Russia, Japan, and China. *Journal of International Business Studies*, 28(1): 177-208.
- Schwartz, S.H. & Bardi, A. 2001. Value hierarchies across cultures: Taking a similarities perspective. *Journal of Cross-Cultural Psychology*, 32(3): 268-290.

- Simon, C. J. & Sullivan, M. W. 1993. The measurement and determinants of brand equity: a financial approach. *Marketing Science*, 12(1): 28-52.
- Singer, J. D. 1998. Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models. *Journal of Educational & Behavioral Statistics*, 23(4): 323-355.
- Slotegraaf, R. J. & Pauwels, K. 2008. The impact of brand equity and innovation on the long-term effectiveness of promotions. *Journal of Marketing Research*, 45(June): 293-306.
- Smith, P.J. 1999. Are Weak Patent Rights a Barrier to U.S. Exports? *Journal of International Economics*, 48:151-77.
- Srinivasan, V., Park, C. S., & Chang, D. R. 2005. An approach to the measurement, analysis, and prediction of brand equity and its sources. *Management Science*, 51(9): 1433-1448.
- Srivastava, R.K., Shervani, T.A. & Fahey, L. 1998. Market-based assets and shareholder value: A framework for analysis. *Journal of Marketing*, 62(1): 2-18.
- Swait, J., Erdem, T., Louviere, J., & Dubelaar, C. 1993. The equalization price: A measure of consumer-perceived brand equity. *International Journal of Research in Marketing*, 10(1): 23-45.
- Trademark Act of 1946 (1976), 15 U.S.C. § 1051-1127.
- White, H. 1980. A heteroscedasticity-consistent covariance matrix estimator and a direct test for heteroscedasticity. *Econometrica*, 48, 817-838.
- Wiles, J. A., Wiles, C. R., & Tjernlund, A. 1995. A comparison of gender role portrayals in magazine advertising: the Netherlands, Sweden and the USA. *European Journal of Marketing*, 29(11): 35-49.
- Wolfinger, R. D. 1996. Heterogeneous variance-covariance structures for repeated measures. *Journal of Agricultural, Biological, and Environmental Statistics*, 1(2): 205-230.
- World Intellectual Property Organization. 2010. <http://www.wipo.int/trademarks/en/> . Accessed on April 25th, 2010.

Yoo, B. & Donthu, N. 2005. The effect of personal cultural orientation on consumer ethnocentrism evaluations and behaviors of U.S. consumers toward Japanese products. *Journal of International Consumer Marketing*, 18(1): 7 – 44.

