

Should we take into account national culture as we develop our marketing product policy?

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Summary:

This article studies the association between national culture and innovation and whether this link should be taken into account when strategic marketing decision is made. We verified the hypothesis that a cultural map will be replicated in terms of an innovation index. We chose a recent cultural map of nations based on stable attitudes toward moral norms associated with the creation and destruction of life (divorce, homosexuality, prostitution, euthanasia, abortion, and suicide) as measured by the nationally representative World Values Survey, and national numbers of registered patents with the U.S. Patent and Trademark Office in the past three decades. We found a high degree of similarity between the cultural pattern and the chosen innovation index. Our results support previous studies that discuss associations between culture and innovation and have implications for international managers.

Key words: national culture, innovation, marketing product policy

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Product policy occupies a prominent place in classic marketing theory (See

for instance Armstrong & Kotler, 2013; Best, 2013, Hooley, Piercy & Nicolaud, 2012; Kotler & Armstrong, 2012; Bains, Fill & Page, 2011; Klasova et al, 2002; Blagoev, 2003). It is one of the four main elements of the marketing mix (Armstrong & Kotler, 2013; Klasova et al, 2002; Blagoev, 2003). It practically makes it possible to elaborate and apply the other three strategies (price, distribution, and communication). Indeed, if we do not have a product, we have nothing to advertise and distribute. Therefore, many researchers are interested in a wide range of issues that have to do with the creation of competitive products that can attract customers and displace competitors.

First and foremost, it is interesting to know which global markets are more saturated with new products and hence, following a simplistic logic, seem more difficult to penetrate and establish stable sales growth. Everything else being equal, markets where local competitors create less competitive products are more attractive than markets characterized by intense local innovation.

Second, as a result of the intense technological innovation that we are witnessing, product innovation has become imperative for achieving market success. Products have a short life cycle that makes it hard to get an adequate return on investment in research and development. This leads to a greater interest in strategic partnerships

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with suppliers and even with competitors who might help speed up the innovation process and contribute to cutting costs. This should result in massive and effective introduction of new products in target markets.

In both cases, it is interesting to investigate the factors that impact innovation. This information could help management make strategic marketing decisions. We know that national culture influences customer behavior (Blagoev & Minkov, 2009). In this study we pursue a different task. Our research question is whether national culture is associated with a propensity to innovate. If it is, the potential influence of culture should be taken into account when making strategic marketing decisions. The paper launches the following hypothesis:

HYPOTHESIS: *Some cultural maps based on analyses of stable cultural indices (such as moral norms, values, diverse behaviors), which produce clusters of countries with similar cultural characteristics, will be replicated in an analysis of national differences with regard to the propensity to innovate.*

Our findings are potentially useful to managers who need to make strategic marketing decisions about penetrating foreign markets. Some of the questions that these managers may have to tackle are:

- In view of the company's limited financial resources and the contradictory information about potentially interesting markets, what product policy should be pursued?
- How should the company steer the process of new product creation?
- Which of the many available markets should we focus on, keeping in mind the fact that a marketing campaign for the penetration of a new market requires serious financial resources?

The results of our analysis could help company managers find the appropriate answers to these questions and select an optimal marketing mix in a new foreign market.

1. Literature Review

The association between culture and economic behavior was observed centuries ago (for instance in Smith, 1776) although authors from that period used a different terminology. In the past 20 years there has been increased interest in this issue (See Shane, 1992, 1993; Nakata & Sivakumar, 1996; Wonglimpiyarat, 2009; Rinne, Steel, & Fairweather, 2012). Hofstede (1980) was the first author who proposed a detailed analysis of this issue. Later Shane (1992) studied the association between social hierarchy and innovation. He found that greater power distance has a negative effect on people's interest in innovation. A potential reason for that is the bloated bureaucratic system in societies with high power distance. The creation of new products, and more generally innovation, requires intense communication and free exchange of information not only vertically but also laterally. In many cases, innovation requires a free flow of information across people, teams, departments, and professional domains are essential in a search for new technological solutions (Kimberly, 1978; Roberts & Berry, 1985; Kotabe, 1992).

However, bottom-up and lateral communication is uncommon in high power distance societies where top-down communication prevails. Ouchi (1980), Kotler and Rath (1984) and Kotabe (1992) reach the same conclusion. It seems that hierarchical societies create powerful control systems that stifle creativity. They do not rely on trust and do not allow a free exchange of information across different organizational layers. This appears to deter the innovation process, especially

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in interdisciplinary projects (Kotabe & Swan, 1995; Shane, 1992; Rinne, Steel, & Fairweather, 2012). The study by Rinne, Steel and Fairweather (2012), obtained through multiple regression using Hofstede's (1980) dimensions and country innovation data based on INSEAD's Global Innovation Index (GII) show a high negative correlation between Hofstede's power distance index and the GII innovation index. Wonglimpiyarat (2009) arrives at similar results. Minkov (2013) uses a different approach but reaches a similar conclusion about the relationship between culture and intellectual achievement, such as students' results on standardized math tests. This is relevant to our study because innovation requires a complex intellectual effort.

Hofstede, Hofstede and Minkov (2010) indicate that in countries with high power distance, subordinates expect to be told what to do and how to do it. This stifles individual initiative and suppresses creativity, which is necessary for innovation in the field of new competitive products and their effective marketing.

Of course, power distance is not the only factor that impacts innovation. Hofstede, Hofstede, and Minkov (2010) argue that uncertainty avoidance may also have an impact. Shane (1992) indicates that more individualistic societies should be more innovative. Individualism stands for greater individual freedom, not only in action but also in thought. More individualist societies encourage values such as imagination (Minkov, 2013), which is essential in innovation.

Thus, power distance and individualism seem to be most closely associated with national differences in propensity to innovate. These dimensions have been shown to correlate with INSEAD's (2009)

Global Innovation Index (GII). It comprises five main indicators: institutions and politics, human potential, infrastructure, market complexity and business complexity.

Another issue of special interest is the role of innovation in boosting competitiveness and achieving a high market share, which ultimately lead shareholders to profit. This issue is discussed by a number of authors (Armstrong & Kotler, 2013; Best, 2013; Hooley, Piercy, & Nicolaud, 2012; Kotler & Armstrong, 2012; Bains, Fill, & Page, 2011, etc.). As modern products are characterized by intense innovation and a short life cycle, finding a new competitive solution is of utmost importance and sometimes a matter of life and death (Blagoev, 2003). The situation is most dramatic in the field of computing and information technologies: smart phones, laptops, tablets, etc. A radically new product, such as Apple's iPhone, should guarantee market leadership for a long time. Yet, only three years later, Samsung achieved a higher global market share. In 2012, its new Galaxy S3 model captured 31.8% of the US market versus Apple's 26.2% (Funaro, 2013). This shows that innovation is crucial for market success, especially in the high technology sector.

In view of the evidence that innovation is associated with cultural characteristics, knowledge about the precise nature of these characteristics can be a competitive advantage in business. Companies could make more informed strategies about particular markets. If they need to invest in innovation, they should choose markets with appropriate cultural characteristics.

There is an abundance of studies that provide measures of cultural dimensions (Chinese Culture Connection, 1987; House et al. 2004; Inglehart & Baker,

2000; Minkov, 2013; Hofstede, Hofstede, & Minkov, 2010, Minkov, 2013, etc.). These are derived from the statistical analyses of a wide range of societal traits, such as values, beliefs, attitudes, national auto-stereotypes, and behaviors. The dimensions can be used to produce cultural maps of the world, which often replicate each other, although they rely on dissimilar data from different surveys.

Our main goal in this study is to verify that national differences in innovation follow a similar pattern to the one observed in a typical cultural map of the world.

2. Methodology

We used data from Minkov, Blagoev, and Hofstede (2013, p. 1100). Those authors provide a cultural map of 49

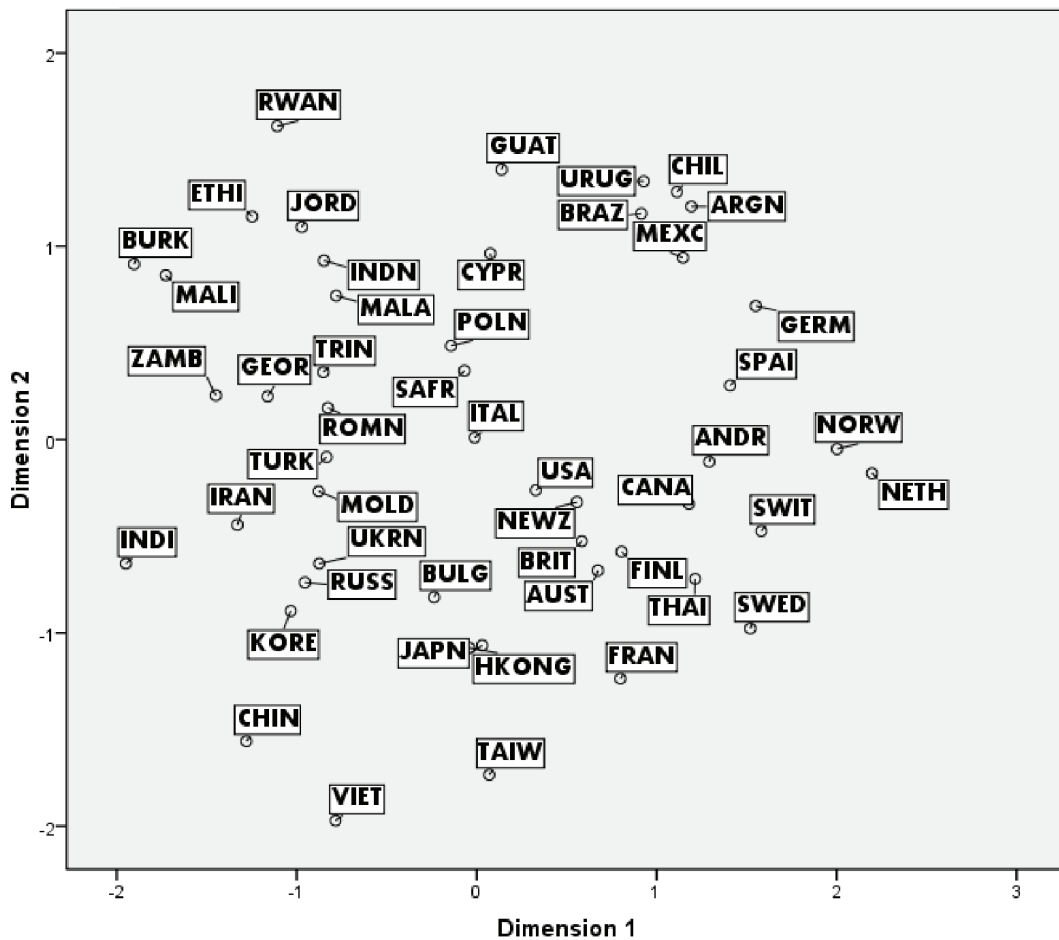


Fig. 1. Cultural map of the world with 49 countries studied by the World Values Survey (Minkov, Blagoev, & Hofstede, 2013)

The items forming the two dimensions (with World Values Survey codes in parentheses) are: homosexuality (v202), prostitution (v203), abortion (v204), divorce (v205), euthanasia (v206) and suicide (v207)

countries based on data from the nationally representative World Values Survey in 2005-2008 (www.worldvaluessurvey.com). The six items are questions about the acceptability of morally debatable acts associated with the creation and destruction of life. The items (with World Values Survey codes in parentheses) are: homosexuality (v202), prostitution (v203), abortion (v204), divorce (v205), euthanasia (v206) and suicide (v207). Attitudes toward these acts have a strong cultural component: they are durable and associated with diverse and equally stable cultural values. Furthermore, they exhibit meaningful geo-economic clusters which is a well-known property of all properly produced cultural maps. The map, presented in figure 1, was obtained through multidimensional scaling of the six items, as in Minkov, Blagoev, and Hofstede (2013). Those authors have not interpreted the two dimensions of the maps; these are merely geometrical axes defining a two-dimensional space in which the 49 countries are organized geographically. Nevertheless, it is correct to say that countries in the lower right part of the map in figure 1 have the most liberal attitudes toward the six morally debatable acts, whereas those located at the upper left end are the most restrictive.

We also used data from the World Intellectual Property Organization, 2010, as well as the US Patent and Trademark Office (2012) which provides number of patents for a wide range of countries for 1977-2011. The data are freely available at (<http://www.uspto.gov/web/offices/ac/>

[ido/oeip/taf/cst_all.htm](http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_all.htm)). We chose this US patent organization for two reasons. The USA is the largest high technology market in the world. This means that all companies that seek protection for their intellectual property attempt to patent their innovations in the USA. Next, the US Patent and Trademark Office (2012) has a large statistical database, including many countries that have been studied also by the World Values Survey.

3. Results

We found that the countries in the lower right part of the map in figure 1 have the highest number of patents, registered in the USA. The latter is the world leader (2,433,535 patents), followed by Japan (852,028), Germany (298,635), Taiwan (114,125), the United Kingdom (113,600), France (113,324), Korea (98,079), and Canada (94,987). Italy has 50,549 patents. Brazil, Russia, India, and China have 2,831, 5,156, 7,198, and 27,814 patents, whereas South Africa has 3,881. Interestingly, Bulgaria has 560 patents and can be classified in the group of countries that have between 100 and 1,000 patents: Poland (826), Turkey (371), Chile (360), Ukraine (304), Romania (238), Indonesia (270) and Uruguay (128). The group of countries with 10-100 patents is represented by Iran (76), Cyprus (52), Guatemala (47), Georgia (35), Vietnam (16) and Moldova (10). All other countries have registered less than 10 patents in the USA. There are many that have registered none.

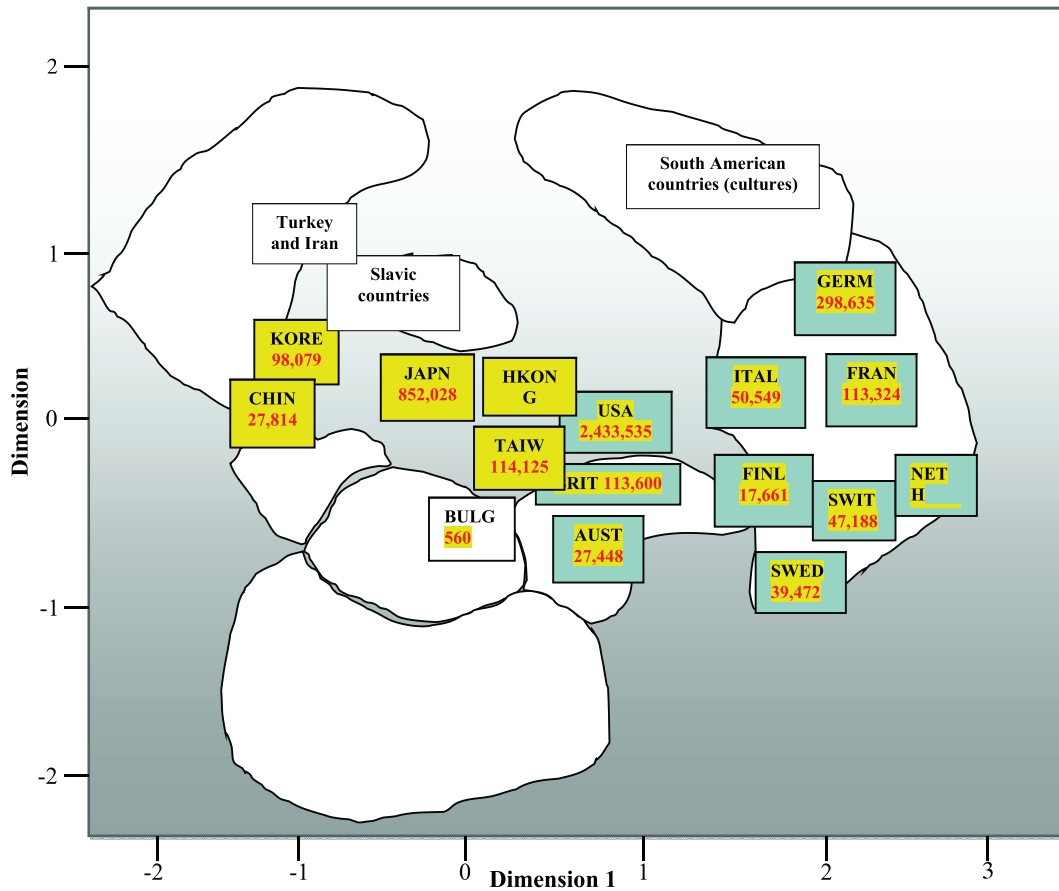


Fig 2. A country map showing those countries that have registered more than 10,000 patents in the USA in 1997-2011, with the map in figure 1 as a background.

These data provide support for our hypothesis. Even if we controlled number of inhabitants, the countries in the lower right part of the map will still be ahead of all other countries in terms of numbers perfect patents.

4. Discussion

Our study confirms the well-known fact that there is an association between culture and innovation propensity. Rather than looking for particular associations between cultural indices and innovation, we found the same geographic distribution of product innovation

as that suggested by the studies in our literature review.

Innovation is most common in rich, individualist countries, with low power distance and high individualism in Western Europe and the United States, regardless of the size of their population. We note that wealthy Japan, as well as South Korea, also hold a high number of patents.

Wealth seems to be only one of the factors that stimulate innovation. Innovative societies are also characterized by liberal attitude today to morally debatable issues associated with

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the creation of life and its destruction. Vice-versa, societies that impose severe restrictions in those domains are the least innovative.

These findings may seem puzzling. In fact, they are quite logical. Freedom in moral judgments is associated with a more general societal freedom, including intellectual pursuits. Societies that emphasize strict adherence to traditional norms in behaving and thinking cannot be innovative.

How can we use these findings to help businesses optimize their marketing and product policy?

Companies interested in innovation should prefer partnerships with innovative societies. Of course, there is likelihood that a particular society, characterized by low innovation, will have some highly innovative companies. Yet, the general trend is clear: the probability of finding innovation is much higher in some societies than in others.

If a company has chosen a price leadership strategy, it should seek partnerships with companies from Brazil, Russia, India, China, or other countries with a similar innovation index. Companies from those countries could be a good choice as those societies combine low labor costs with a reasonably good innovation propensity. Besides, in some of those countries, the work force is reasonably well educated and there is a good supply of experts in various fields that could be used to provide incremental improvements to imported radical innovation. A case in point is the Tata Nano car. Although cars are not an Indian invention, Tata Nano represents an interesting improvement designed specifically for low-income markets.

The scope of this study is limited as only a

small range of cultural indicators have been used and only information about patents in the United States has been analyzed. However, it reconfirms earlier findings by other researchers, which shows that the conclusions cannot be questioned as wrong. Innovation propensity is undoubtedly a cultural phenomenon, although it certainly requires a certain level of wealth.

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Should National Culture Be Accounted for in Developing Marketing Product Policy