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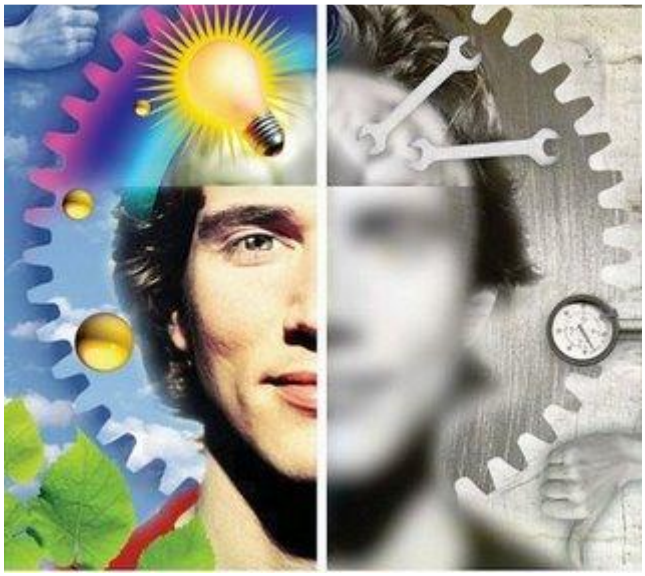

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The Effects of Direct Foreign Investment on the Labor Markets of China and Mexico

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Abstract

Much research has been done on the effects of foreign direct investment (FDI) and its positive relationship to economic growth. Additional jobs and higher incomes for workers are expected to be amongst the most prominent effects of such investment. Emerging markets, such as China and Mexico, have tried to promote FDI for their continued economic growth and development. This paper tried to study how the labor markets of these economies have reacted to such investment. Data shows that it has brought about different outcomes in both countries due to the type of FDI and country characteristics, such as competitiveness, productivity and economic stability.

Key words: China, Mexico, FDI, labor markets in emerging economies, economic benefits.

Introduction

Since the 1980s, China´s growth has been the object of a great diversity of studies due to the country´s open-door policy, which brought about unprecedented rates of growth. Many researchers have been trying to quantify the factors that have influenced the development of China´s economy. One of those most looked at has been the attraction of direct foreign investment (DFI), as it is considered an important indication of the future development of a country´s economy, especially in terms of job creation and salary increases.

From the onset, it is clear that the more DFI a country can attract, the more jobs will be created. That´s the Neoclassical Growth Theory argument1. This translates into increased income for the population at large. This study compares the effects of DFI in China and in Mexico, another important emerging market, in terms of incomes and salaries of the population at large. Although Mexico has not reached the growth and development that were hoped for in the last 15 years, the success of the Chinese case is fundamental in understanding how the amount of DFI translates into a country´s income and salary growth. First, we look at general economic data from China and Mexico. This will include the growth of DFI for each country, the structure of the domestic markets, the infrastructure and export sectors, and the tax incentives that each country has in place. Our parting point will be the year 1990, a few years after China implemented the open-door policy for economic growth. Then, we will analyze how their respective labor markets are structured and how DFI affects each one of them. Finally, we will compare both countries and reach conclusions on strategies that Mexico can implement for continued and productive growth.

I. The Economic Growth of China and Mexico

Economic theory asserts that economic growth is brought about by an accumulation of capital and technological advance (Samuelson and Nordhaus, 2002.) Nevertheless, countries have concentrated their efforts on capital accumulation, which includes DFI, and from which, they believe, technological development will derive. This strategy had been applied by the recent emerging economies.

Annual growth rates reported by emerging economies are, by nature, higher than those of developed economies. As they started growing in the early 20th Century, today´s developed nations were economically more advanced than the rest of the world. By contrast, today´s emerging economies began their growth process at the lower end of the international per capita income scale (Todaro and Smith, 1995.) Although China and Mexico are both considered emerging economies, clear differences exist in their growth rates. These differences could be traced back to a variation in technological applications, capital needs, infrastructure inefficiencies, inadequate structural institutions, and/or other (Todaro and Smith 1995.)

On January 1, 2009, the North American Free Trade Agreement (NAFTA) celebrated its 15th year. In 1994, when NAFTA was signed by Canada, USA and Mexico, Mexico´s future seemed different than today´s reality. Initially, it was forecasted that the growth rate of Mexico would be very high, as the country already presented high growth rates. The Mexican middle class was growing very fast. Increased DFI from the USA was expected to grow fast, bringing about income benefits and a better life to Mexican workers. Unfortunately, at the end of that same year, the so-called “Tequila Crisis” happened. It brought about much capital flight, the devaluation of the Mexican peso and the collapse of the financial system in Mexico. As can be observed in Table 1, Mexico´s economic growth in 1995 reached -6.2%. Although growth recuperated in 1996, the promised positive effects of the NAFTA agreement have not been palpable in terms of the real salaries of the Mexican workers. In addition, in 2001, Mexico lost thousands of export jobs, as the USA went into recession (The Economist, 1994.)

[1] According to traditional neoclassical growth theory, open economies experience income convergence at higher levels of capital flows from rich countries to poor countries where capital-labor ratios are lower and thus returns on investments are higher. See Solow Robert, 1956, “A Contribution to the Theory of Economic Growth” Quarterly Journal of Economics, Volume 70, Issue 1, pp. 64-95.

Mexican DFI has grown mostly on the border towns between Mexico and the USA under the "maquiladora" program, which grew primarily out of the need of cheap and not very specialized labor. Likewise for China, growth levels were very high, and even surpassed those of Mexico (see Table 1). During this time, China´s tremendous growth was due to its intensive exports program. Since then, the country has implemented an export-substitution program in order to change the economy´s structure and not depend so heavily on exports. Nevertheless, in 1980, manufactured exports from China totaled $8.7 Billion USD, which represented less than 1 percent of the global exports. By contrast, in 2006, manufactured exports from China reached $895 Billion USD, or 11 percent of the world's total (Lian Yang, 2008.)

Table 1. Growth Rates of the GDP

	Mexico	China
1990	5.1	3.8
1991	4.2	9.2
1992	3.6	14.2
1993	2.0	14.0
1994	4.5	13.1
1995	-6.2	10.9
1996	5.1	10.0
1997	6.8	9.3
1998	4.9	7.8
1999	3.9	7.6
2000	6.6	8.4
2001	-0.2	8.3
2002	0.8	9.1
2003	1.4	10.0
2004	4.2	10.1
2005	2.8	10.4
2006	4.8	11.6
2007	3.3	11.9

Source: The World Bank Group, World Development Indicators

1.1. Strategies for Attracting DFI

The process of globalization has brought about an expansion of the establishment of many companies in many countries. As a consequence, DFI continues to play an ever more fundamental role in the economic development of emerging economies, especially those of Asia and Latin America (Montero, 2008.)

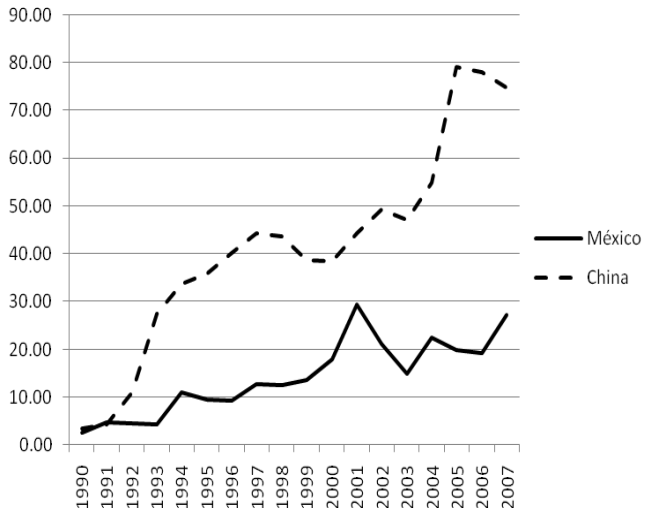
No other country attracts as much DFI as China does. Between 1990 and 2007, China absorbed a total of $674.29 Billion USD, while Mexico only got $229.75 Billion USD. The difference between both countries amounts to $444.54 Billion USD, as can be observed in Table 2 and Chart 1. But where does all this investment come from and what have been the motives of such disparities in salaries? What strategies have both countries followed that have resulted in such disparities?

Table 2. Levels of DFI
(in Billions, USD)

Year	Mexico	China	Difference
1990	2.55	3.49	0.94
1991	4.74	4.37	0.38
1992	4.39	11.16	6.76
1993	4.39	27.52	23.13
1994	10.97	33.79	22.81
1995	9.53	35.85	26.32
1996	9.19	40.18	30.99
1997	12.83	44.24	31.41
1998	12.41	43.75	31.34
1999	13.70	38.75	25.06
2000	17.94	38.40	20.46
2001	29.43	44.24	14.81
2002	21.10	49.31	28.21
2003	15.01	47.08	32.07
2004	22.47	54.94	32.47
2005	19.88	79.13	59.25
2006	19.22	78.09	58.87
2007	27.17	74.77	57.60
Total	229.75	674.29	444.54

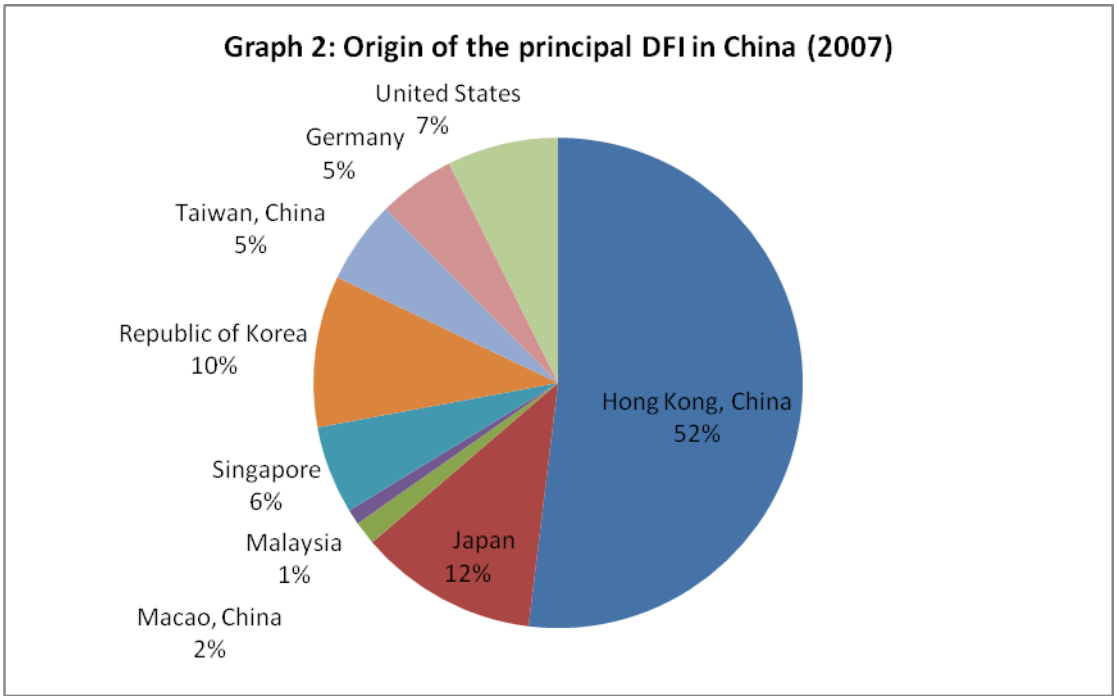
Source: World Development Indicators. World Bank; Banco de Información Económica (INEGI) and China Statistical Yearbook 2008.

Graph 1
DFI to Mexico and to China (in Billions USD)



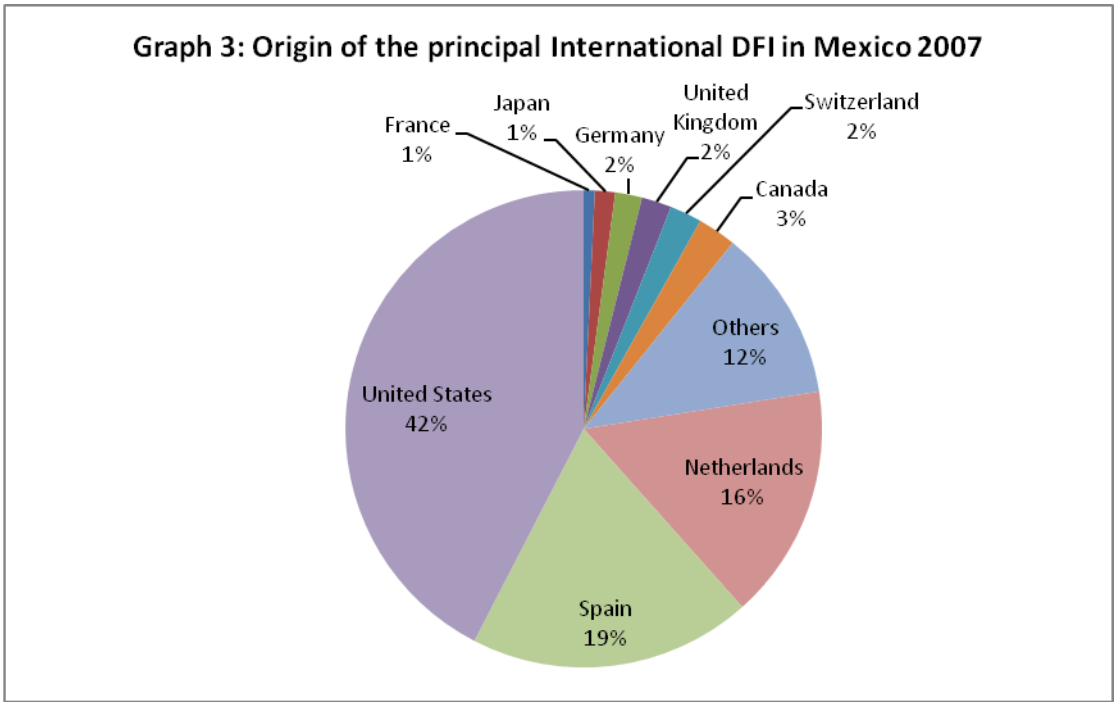
Source: from Table 2. Data drawn from World Development Indicators World Bank, Banco de Información Económica (INEGI) and China Statistical Yearbook 2008

In 2007, China´s FDI came primarily from Hong Kong, followed by Japan, Korea and the USA, respectively, as is shown in Chart 2. Most FDI into China comes primarily from other Asian countries, as these countries exported their trade surpluses to coastal China. They were made very welcome, for political as well as economic reasons, and paved the way for the big multinationals (The Economist, 2005.)



Source: Chart built with information from the National Bureau of Statistics of China 2007

As can be observed in Chart 3, in the case of Mexico, DFI comes mainly from the USA, followed by Spain and Holland in second and third place, respectively. It is only natural that geography plays a big role in attracting American DFI into Mexico. The signing of the NAFTA agreement and the physical closeness of the US and Mexico are the main reasons for the size of this DFI into Mexico.



Source: General Office for DFI, Mexican Commerce Department (2007)

It could be inferred that the differences in DFI flows for China and Mexico have fundamentally geographical reasons. While this could be true for the short term, data shows that this is not the case for the long run. In the case of China, for example, DFI primarily comes from Germany and the USA, in that order.

Other emerging economies have used different positioning strategies for attracting DFI. The main ones are:

- A potentially vast domestic market
- A potentially large and cheap labor market
- An important infrastructure and export sector
- Tax incentives

1.1.1. A potentially vast domestic market

For any investor, the most important question to ask is whether the country he or she wants to invest in has enough internal demand to support its investments. In the last years, workers´ salaries in China have increased by 23% annually, whereas in Mexico, it has increased by 7%, a more moderate growth in per hour salary (see Table 4). The income growth in China is due to a continued increase in DFI and a strong demand in the labor force. In addition, Chinese companies are transforming their industries to compete internationally. This brings about a strong internal competition with foreign-owned companies for the local labor force. This, in turn, generates increased demand for goods and services from a population that can now afford them. Hence, the more DFI the country has, the more the domestic market will grow. On the other hand, Mexico´s strategy has not followed the same model of development, mainly due to the behavior of the DFI. As this investment has tended to be more portfolio investment, income generation has been slower, and has reflected into a more moderate increase in demand (Sistema de Cuentas Nacionales de México, INEGI, 2008.)

1.1.2. A potentially large and cheap labor market

The Chinese labor market is one of the most attractive in the world. Many companies consider its human resources very attractive and one of the main advantages of the country. China has the largest labor market in the world with 803 million people, mainly low cost labor combined with a high return rate. By contrast, Mexico has 45 million people in the labor force and occupies the 14th place in the world (CIA World Factbook, 2008.) These are the factors that have been used to promote DFI in both countries. Table 4 shows the differences in salaries. Although the average salary in Mexico is considered low, it is not comparable to the one a Chinese worker receives. Therefore, the strategy of attracting DFI based on a low salary has not been successful, as these have been displaced by much lower salaries in other countries, most notably in China. It can be seen in Graph 4, that although Chinese salaries have been growing throughout the years, they are doing so at a more constant pace, but are still much lower than a Mexican salary.

Table 4.

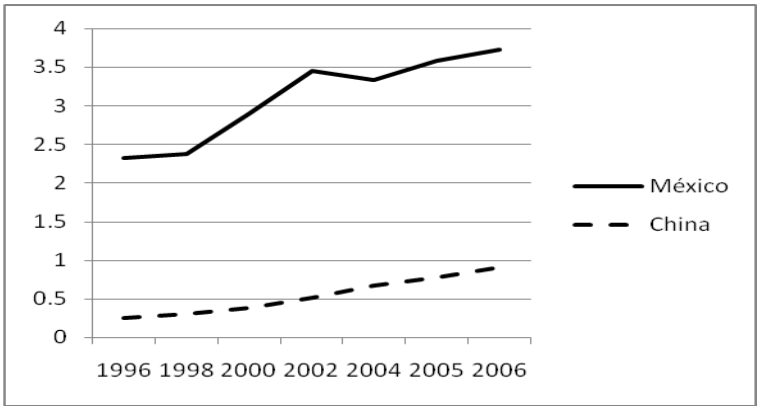
Average comparative salary per hour
Mexico-China (in USD)

Year	Mexico	China
1996	2.32	0.26
1998	2.37	0.31
2000	2.89	0.39
2002	3.44	0.51
2004	3.33	0.66
2005	3.57	0.77
2006	3.72	0.9

Source: Average Salaries, Mexican Institute of Social Security (IMSS) and Bureau of labor statistics of the United States Department of Labor

Graph 4.

Average salary per hour Mexico and China (in USD, per year)



Source: Graph based on the data from Table 4

1.1.3. An Important Infrastructure

An additional advantage of China is her investment in infrastructure. According to the China Statistical Yearbook (2008), by the end of 2007, China had 53,900 kilometers of expressways. For the same year, Mexico only had 11,616 kilometers of multi-lane expressways (Estadísticas de Transporte de América del Norte, 2007.) Additionally, the Chinese railways consisted of 78,000 kilometers in 2007, while Mexico only had 26,677 kilometers, three times less than in China. Moreover, investment in such an industry in Mexico has not always brought the desired results of better and faster movement of goods. It is clear that the increasing investment in infrastructure in China over the recent decades has allowed for the export sector to develop, while DFI continues to grow at an exponential pace. In the case of Mexico, this continues to lag both at the infrastructure level and for DFI attraction.

1.1.4. Tax incentives

When management makes business decisions on foreign direct investment and location choice, it takes into account many tax and nontax factors. While prior research shows some consensus on the impact of nontax factors on DFI and business location, the results on the impact of tax factors are conflicting and inconclusive (Ho and Lau, 2008.) Some studies (Soon-Sung, 2005) have shown that fiscal incentives are a recurrent strategy employed by emerging economies to attract DFI. Ho and Lau (2008) found that the effectiveness of a tax holiday in attracting DFI was also inconclusive, as some studies support it while others do not (Shahah, 1996.) Nevertheless, they do not have the expected results of attracting DFI as other, more specific factors of policy regulations.

Nevertheless, both China and Mexico do not tire of promoting the growth of economic activity and employment generation through fiscal stimuli directed at DFI incentives. In general, this strategy would be effective if other variables, such as infrastructure, the structure of the labor markets, costs, and so forth, were put into the equation. Finally fiscal incentives are used to reinforce such attraction and retention of DFI.

1.2. Why has the attraction and maintenance of DFI failed in Mexico?

As we have previously shown, DFI into China has grown tremendously since its market liberalization in the 1980s. This has brought about rapid and sustained growth rates of the Chinese economy. Contrastingly, Mexico, whose growth was expected to explode after the NAFTA agreement entered into force, has had a very different trajectory.

Many could think that the path of liberalization and growth for Mexico has failed, but it is not so. With only 15 years since NAFTA began, the economy has not been able to adapt to such quick market openings. Moreover, Mexican strategies for DFI attraction have been inefficient compared to the way Chinese have approached the process. Cheap labor, geography, infrastructure investment and tax benefits do not seem to be enough anymore to attract additional DFI into Mexico. The results have been different than those expected in matters of employment and income growth. From the beginnings of the market in the 1980s, DFI migrated towards the maquiladora industry, due to labor costs and geography.

The salaries of Chinese workers have grown like in no other country. This has led researchers to study the direct and indirect relationship of DFI and salary behavior (Hale and Long 2008.) Some (Qiu 2003) agree that the Chinese strategy of economic development has included elements other than low wages or geography. DFI into China has resulted in a more specialized industry, with more specialized workers with higher salaries. Almost no analysis has been done in this regard: how and why has the Chinese market become so specialized and converted its advantages into comparative dynamics? This is the topic of our next part.

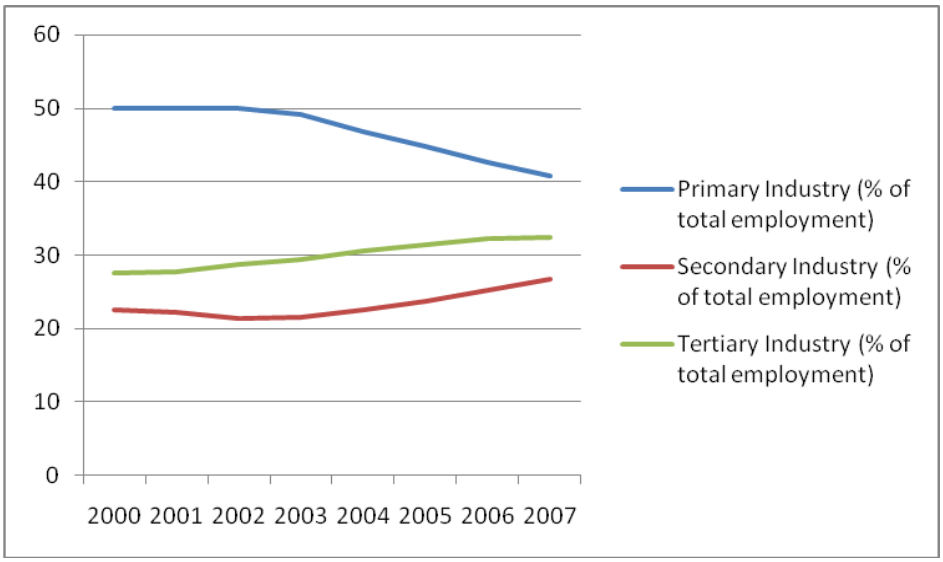
II. The Labor Markets of Mexico and China

2.1. Labor market characteristics in Mexico and in China

Although many studies have examined the labor markets in China and in Mexico, few have compared their labor markets in light of their market liberalization and development of DFI. In order to study the behavior of the labor markets of both countries, we must divide them between rural and labor markets. For purposes of this study, we will concentrate on Mexican and Chinese urban markets and the many changes these have undergone.

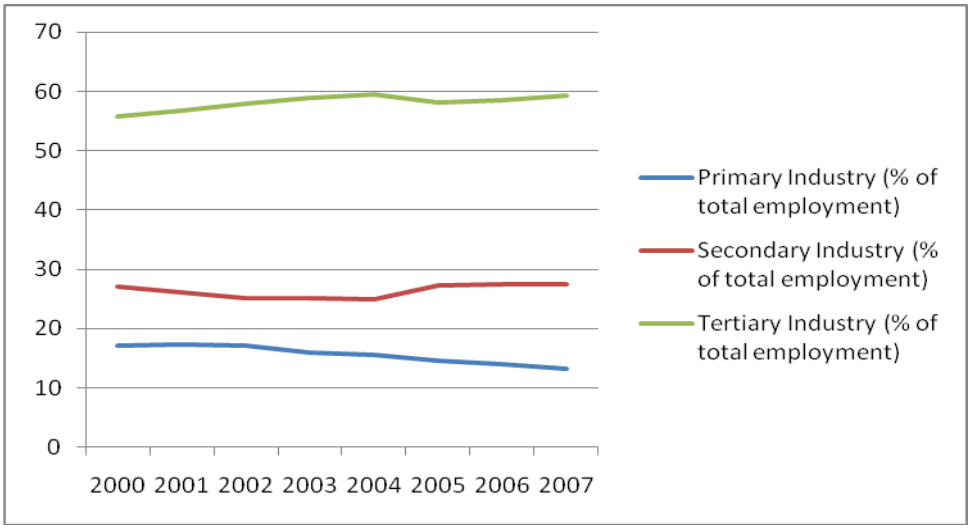
Table 5 compares the fundamental characteristics of these markets. Graphs 5 and 6 show how workers from agricultural sectors have been displaced into other sectors. In the Chinese case, they have gone to industry, and in the Mexican case, to services. Industry tends to be more capital- and technology-intensive, more so than others, including the service industry. The data from this table clearly shows that from 2000 to 2007, China has strengthened the industrial sector and its relation to salary behavior. The presence of DFI in China is putting an upward pressure on wages of skilled workers through increased competition in the market labor.

Graph 5. Labor market composition in China



Source: China Statistical Yearbook 2005 & 2008

Graph 6. Labor composition in Mexico



Source: OECD database

Table 5. Labor force and total employment by sector in China and in Mexico

CHINA	2000	2001	2002	2003	2004	2005	2006	2007
Total Labor Force (10 000 persons)	73992	74432	75360	76075	76823	77877	78244	78645
Total of Employed Persons (10 000)	72085	73025	73740	74432	75200	75825	76400	76990
Primary Industry	36042	36513	36870	36546	35269	33970	32561	31444
Secondary Industry	16219	16284	15780	16077	16920	18084	19225	20629
Tertiary Industry	19823	20228	21090	21809	23011	23771	24614	24917
Primary Industry (% of total employment)	50	50	50	49.1	46.9	44.8	42.6	40.8
Secondary Industry (% of total employment)	22.5	22.3	21.4	21.6	22.5	23.8	25.2	26.8
Tertiary Industry (% of total employment)	27.5	27.7	28.6	29.3	30.6	31.4	32.2	32.4
Unemployment (10 000)	595	681	770	800	827	839	847	830
Unemployment %	3.1	3.6	4	4.3	4.2	4.2	4.1	4

Source: Data from China Statistical Yearbook 2005, 2008

Table 5 (continued). Labor force and total employment by sector in China and in Mexico

MEXICO	2000	2001	2002	2003	2004	2005	2006	2007
Total Labor Force (1000 persons)	38 579.3	38 662.6	39 694.6	40 061.6	41 738.0	41 924.9	43 216.0	44 047.6
Total of Employed Persons (1000)	37 590.5	37 681.2	38 557.5	38 874.0	40 209.9	40 455.3	41 848.8	42 552.4
Primary Industry	6 516.4	6 555.7	6 644.6	6 239.0	6 309.4	5 945.1	5 901.5	5 650.6
Secondary Industry	10 133.0	9 791.3	9 637.1	9 742.2	10 015.2	11 021.0	11 456.5	11 651.2
Tertiary Industry	20 941.1	21 334.2	22 275.8	22 892.7	23 885.3	23 489.2	24 490.8	25 250.7
Primary Industry (% of total employment)	17.3	17.4	17.2	16	15.7	14.7	14.1	13.3
Secondary Industry (% of total employment)	27	26	25	25.1	24.9	27.2	27.4	27.4
Tertiary Industry (% of total employment)	55.7	56.6	57.8	58.9	59.4	58.1	58.5	59.3
Unemployment (1000)	988.8	981.4	1 137.1	1 187.6	1 528.1	1 469.5	1 367.3	1 495.2
Unemployment %	2.6	2.5	2.9	3	3.7	3.5	3.2	3.4

Source: Data from Database of OECD

2.2. Changes in DFI and incomes in China

No other emerging economy has seen its income increase as much as China. From 1996 to 2006, the per-hour salary has increased by 250%, while Mexican salaries have increased by only 60%. Table 4 shows the salary comparison by year and by country. Likewise during these years, DFI into Mexico has increased by 650%, while in China it has done so by 2,000%. We can see that the process of accelerated growth accompanies rapid capital accumulation and technological advance and that the two promote each other (Ping and Liu, 2008.)

There is an existing debate in the literature (Ping and Liu, 2008) on the role of technology on a country´s economic development. Most authors point to China´s economic advance mostly in light of capital accumulation, with technology taking a smaller part. In the course of opening up in the mid-90s, the technological advance and competitive edge acquired through learning by doing have made China the center of global manufacturing The study of Ping and Liu (2008) is a case in point:

> "First, there came the transfer of industrial technology into the original inventory, such as the technological transfer of heavy industry and military enterprises. Second, there was the introduction of various technologies after the opening-up, such as the arrival of color TVs, refrigerators, recorders, and Volkswagen production lines. The production capacity of durable consumer goods rapidly increased. Certainly, the major contributor to technological advance was the improved systematic efficiency of resource utilization due to systematic reform. As enterprises gradually became standard enterprises, a learning-by-doing learning curve was formed on the model of factor organization and progress. The rapid economic growth since the 1990s could not have happened without the learning-by-doing mechanism in technological advance. The success in large-scale transfer of rural labor force has accelerated economic development".

China has transformed her industry and her production processes. As a consequence, her labor market has become highly specialized, while the government has implemented the necessary economic reforms to develop the positive effects of DFI into the country, resulting in a country where the highest rate of growth in DFI, salaries and GDP has been recorded.

III. Is the Chinese model viable for Mexico? What alternatives exist for a positive impact in the case of Mexico?

The Chinese model will only be viable and applicable for the Mexican economy if the government understands that having cheap labor, signing FTAs or being close to the United States are not enough to continue attracting DFI in the quantities needed to develop an ever more competitive economy. Although these strategies are good for the short term, when GDP will grow, the future and potential GDP will continue to stagnate unless the government takes the lead to change the fundamental structures of the economy.

Based on the data, graphs and tables of this paper, it is clear that Mexico still has a long way to go. China has grown in an organic way because the government made a clear and directed decision as to the strategy she wanted to have, in order to achieve a sustainable, long-term growth, as the GDP growth numbers show. Investment in infrastructure, for example, has allowed for rural migration into cities, where workers have joined an urban work force. As Chinese salaries have increased at a higher pace than Mexican ones in percentage numbers throughout the years, they still remain below Mexican salaries. Nevertheless, as these continue to grow, Chinese workers will be attracted to industries where productivity will be pushed by DFI inflows, allowing for further increases in more productive industries. Data clearly shows that DFI is being attracted at a higher rate in China than in Mexico, both in percentage but also in real numbers. As return on investment increases as it seems to be the case for China, additional DFI will continue to spiral, as it has in recent years.

IV. Conclusions

Many researchers have been trying to quantify the factors that have influenced the development of China´s economy in recent years. Nevertheless, research is still in its relative infancy due to the numbers of years that the Chinese economy has been open to the outside world and to the accurate data provided by the Chinese government. As this emerging economy is poised to overcome the US economy in the not-too-distant future, it will become an example to study, if not to emulate, for other economies looking to develop as productively as the Chinese economy has.

The case of China has been an example of the benefits of markets, trade and globalization. However, countries like Mexico have followed the free market model of growth and the result is not comparable. Therefore Mexico would find reasons why the application of her model of growth could be considered a failure. The impressive growth of China at the end of the 1990s has altered the nature of the Chinese labor market. Increased competition and market mechanisms have contributed to increasing labor turnover and competitiveness in market wages. In China, the DFI and the industry specific features, the degree of specialization and competition have had a strong influence on growth. Much of the action came from region specific influences and regional spillovers (Hong Kong, Taiwan, Macao, for example). Existing regional strengths, especially high qualified human capital and infrastructure, also contributed to the long run growth.

Of course, the emulation of this model of economic success has its limitations. As we previously saw, the success of the Chinese economy is also due to specific regional circumstances. Nevertheless, the generation of highly qualified human capital and infrastructure should be within the main priorities of Mexico. Without these elements, redirecting DFI to more productive areas of growth will be impossible to compete with the impressive combination of low wages, high skills and know-how from China.

This paper has tried to relate and compare the growth in the Chinese and Mexican economies of the last twenty years. Although much of the data is new and has never been used in the way this paper has compared them, much remains to be studied to understand how the Chinese model could be applied to the Mexican economy, and to other emerging economies, for that matter.

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TECNOLÓGICO DE MONTERREY

Biomecánica

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Con este trabajo se pretende que los alumnos que estudien alguna ingeniería, específicamente Mecatrónica y Mecánica, se involucren de alguna manera en esta área para que apliquen sus conocimientos y de ésta forma contribuyan al desarrollo de la misma y sean capaces de proponer innovaciones tecnológicas.

1. Definición

La Biomecánica es una disciplina científica que tiene por objeto el estudio de las estructuras de carácter mecánico que existen en los seres vivos, fundamentalmente del cuerpo humano.

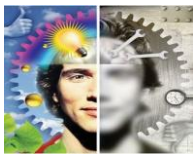
Esta área de conocimiento se apoya en diversas ciencias biomédicas, utilizando los conocimientos de la mecánica, la ingeniería, la anatomía, la fisiología y otras disciplinas, para estudiar el comportamiento del cuerpo humano y resolver los problemas derivados de las diversas condiciones a las que puede verse sometido.

Antecedentes

Numerosos autores han escrito sobre la historia de la Biomecánica y citan a Leonardo Da Vinci (1452-1519) como el primer "Biomecánico".

Sin embargo, Aristóteles (384-322 a. de J.C.), realizó importantes estudios sobre el movimiento de los animales y lo reflejó en su tratado "Incessu Animalium"; Arquímedes (287-212 a. de J.C.) estableció los principios hidrostáticos que gobiernan el comportamiento de los cuerpos en el agua y que hoy en día se siguen aplicando al estudio biomecánico de la natación.

Otro precursor de la Biomecánica fue Galeno (131-201) con sus estudios musculares de los gladiadores de la antigua Roma.
Estos grandes científicos dieron las primeras bases a lo que hoy conocemos como Biomecánica.



2. Aplicaciones

En los últimos años, la biomecánica mostró los beneficios del enfoque mecánico en la descripción de los objetos de la medicina, y la potencia del trabajo multidisciplinario. Dentro de la investigación básica trata de determinar las propiedades y características de los materiales biológicos y su dependencia respecto de las condiciones externas, las respuestas a distinto tipo de solicitaciones, sus interacciones para formar sistemas, su capacidad de asociarse con materiales no biológicos, etcétera.

Tiene aplicación potencial en las industrias del calzado, automotriz, muebles y maquinaria:

- Estudios antropométricos.
- Estudios de insumos para el calzado de confort, salud, seguridad.
- Diseño de equipo de medición.

Se identifican en la industria un potencial de aplicaciones en:

- Biomecánica Institucional
- Puesto de trabajo
- Biomecánica Deportiva
- Descanso y diversión
- Biomecánica Médica

Hoy en día las aplicaciones de la biomecánica son más frecuentes y esta nueva rama derivada de la mecánica y de la medicina ha ayudado a miles de personas a llevar una vida normal y realizar sus tareas cotidianas como el resto de las personas.

3. Subdisciplinas

La Biomecánica está presente en diversos ámbitos, aunque tres de ellos son los más destacados en la actualidad:

- **La biomecánica médica**, evalúa las patologías que aquejan al hombre para generar soluciones capaces de evaluarlas, repararlas o paliarlas. Usa la simulación que es la aceleración de la forma en que las empresas y los dispositivos médicos mueven los productos a través de diferentes fases de desarrollo. Los prototipos virtuales juegan un papel fundamental en el diseño de verificación y validación. El resultado final es una muy fiable y rentable diseño elaborado y validado en menos tiempo.

- **La biomecánica deportiva**, analiza la práctica deportiva para mejorar su rendimiento, desarrollar técnicas de entrenamiento y diseñar complementos, materiales y equipamiento de altas prestaciones. El objetivo general de la investigación biomecánica deportiva es desarrollar una comprensión detallada de los deportes mecánicos específicos y sus variables de desempeño para mejorar el rendimiento y reducir la incidencia de lesiones.
- **La biomecánica ocupacional**, estudia la interacción del cuerpo humano con los elementos con que se relaciona en diversos ámbitos (en el trabajo, en casa, en la conducción de automóviles, en el manejo de herramientas, etc.) para adaptarlos a sus necesidades y capacidades. En este ámbito se relaciona con otra disciplina como es la ergonomía.

4. Metodología

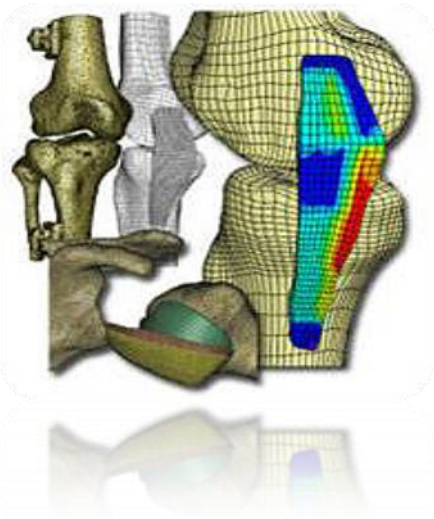
Muchos de los conocimientos generados por la biomecánica se basan en lo que se conoce como modelos biomecánicos. Estos modelos permiten realizar predicciones sobre el comportamiento, resistencia, fatiga y otros aspectos de diferentes partes del cuerpo cuando están sometidos a unas condiciones determinadas. Los estudios biomecánicos se sirven de distintas técnicas para lograr sus objetivos. Algunas de las más usuales son:

- **Análisis de fotogrametría.** Análisis de movimientos en 3D basado en tecnología de vídeo digital. Una vez procesadas las imágenes capturadas, la aplicación proporciona información acerca del movimiento tridimensional de las personas o de los objetos en el espacio.

- **Análisis de comportamiento** (tensión-deformación directo). Este tipo de análisis se determina la "resistencia" de un material biológico ante la ejecución de una fuerza que actúa sobre este.

Estas fuerzas, en sentido general, pueden ser de tipo **compresivo** o bien de tipo **tracción** y generarán en la estructura dos cambios fundamentales.

- **Biomecánica computacional.** Se refiere a las simulaciones de sistemas biomecánicos, tanto para poner a prueba modelos teóricos y refinarlos, como para las aplicaciones técnicas.



5. Conclusión

La Biomecánica permite la obtención de información útil sobre el funcionamiento de las estructuras óseas y musculares del cuerpo humano principalmente, logrando que se tenga una mayor conciencia de éste.

Con el conocimiento obtenido gracias a ésta disciplina podemos generar proyectos que solucionen los problemas que afectan al movimiento natural del cuerpo o defectos que presente el mismo.

Aún queda camino que recorrer en ésta área, esperando que éste artículo sirva de motivación para proponer soluciones que beneficien a este país y a toda la población en general y que los alumnos verifiquen que la Biomecánica es una rama muy importante en la cual desarrollarán al máximo su capacidad de innovar.

6. Agradecimientos

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Country-of-Origin: Background Studies Review

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Country-of-Origin: Background Studies Review

Probably one of the most studied areas in international marketing is country-of-origin. The literature offers a countless amount of papers, studies, proceedings, work-in-progress, and similar related to country-of-origin and its effects on consumer behavior. To advance in the knowledge of the area, background studies are examined following a classification of country-of-origin studies previously introduced. Background studies are reviewed using three major groups: literature reviews, consumer behavior using country-of-origin as a research frame, and methodology and theory construction. Using this classification, the reader will be able to realize what others have done and how generalization can be attained. Holistic studies, which combine foreground and background studies, are also included.

Introduction

Country-of-origin has been an area of research since the mid-1960. The "Made in" label has been the focus of those studies observing that consumers perceive differently products form foreign origin. As the stream of research has generated a large amount of publications and presentations, it can be said that country-of-origin is a fertile area of research in international marketing.

The globalization is pushing firms to be more aware than ever of the possible effects of products manufactured, produced, assembled, branded, and or designed in a third country. Consumers perceive products differently and may prefer global or international products with local approaches. The firm's decision to source products domestically or overseas, may have an impact on its market. Persistently, researchers have found that country-of-origin appears to affect consumer's perception of products (Bilkey and Nes, 1982; Peterson and Jolibert, 1995; Verlegh and Steenkamp, 1999)., either domestics or internationals. Global competition makes business to understand consumer attitudes better. It is increasingly becoming a matter of survival. Country-of-origin research needs to be done considering what the vast literature offers and how it has been done. The classification introduced by Wise and Cobas-Flores (2001) helps to organize the works and understand the country-of-origin stream of research while advance in the knowledge of the area offering diverse perspectives on potential ways to research it.

To develop the country-of-origin classification, Wise and Cobas-Flores (2001) scrutinized the extensive literature introducing three categories (see Table 1). The foreground studies were considered in Wise and Cobas-Flores (2001). This paper takes the other two categories, background studies and holistic and other relevant studies. Throughout, tables help to synthesize the concepts. What follows explain briefly the classification of country-of-origin studies, the background studies are next explained followed by the holistic studies. The paper ends with some final comments.

Classification of the Country-of-Origin Studies

As country-of-origin appears to have an effect on consumer's product evaluation (Bilkey and Nes, 1982), product's information cues available (Kaynak and Kara, 2002) may be critically relevant to marketers. Country-of-origin is an extrinsic product cue, a class of intangible traits including product's brand, price, and warranty (Cordell, 1992). Country of origin refers to "buyer's opinions regarding the relative qualities of goods and services produced in various countries" (Bilkey, 1993, p. xix) which generally is found as the "Made in" label". Such a small phrase may have a relevant impact on consumers (Dichter, 1962). Consumers use substitute or surrogate indicators (Cattin, Jolibert, and Lohnes, 1982) such as the "made in" indication under the lack of any other visible cue. The needs of competitive business tools makes country-of-origin a potentially powerful variable (Kaynak and Kara, 2002) to help firms better understand consumers in different countries.

The categories in the classification of country-of-origin studies introduced by Wise and Cobas-Flores (2001) include the background and holistic studies (see Table 1) which are presented hereafter advancing on the knowledge of consumer behavior. The background and holistic studies are detailed in this paper complementing what Wise and Cobas-Flores (2001) introduced before. The background studies are divided in three major groups presented in Table 1. The holistic studies are considered as a combination of both the foreground and background studies, also here considered. A substantial amount of research has been considered; nonetheless the interested scholar will discern that many other studies can be categorized using the classification. The major groups of the background studies are (I) Literature Reviews, (II) Consumer Behavior using Country-of-Origin as a Research Frame, and (III) Methodology and Theory Construction. What follows will describe each of the groups.

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Table 1
Classification of Country of Origin Studies

Foreground Studies	Background Studies
I. Research in Marketing 1. Source/Origin countries 2. Consuming countries 3. Test products 4. Test products brand	I. Literature Reviews 1. Product-country of origin 2. Product-country image
II. Construct Decomposition	II. Consumer behavior using country-of-origin as a research frame 1. Cue utilization 2. Perceived risk 3. Attitude theory 4. First-mover advantage 5. Cultural orientation influences 6. Market entry
III. Cross-cultural/national Generalizability Assessment of reliability	7. Belief-attitude model 8. Likelihood model 9. Brand effects/image 10. Event analysis
IV. Research in Related Areas 1. Stereotyping 2. Ethnocentrism 3. Animosity 4. Brand	III. Methodology and Theory Construction 1. Sampling 2. Surveyed method 3. Type of research 4. Model definition 5. Test of approach
Holistic and Other Relevant Studies	
Combined foreground studies with background studies	

Note. This classification in an expansion and extensive modification of Kaynak and Kara (2002) map of product country images literature (pp. 932).

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Background studies.

To study country-of-origin effects several considerations and topics need to be pondered. The three major groups included in the background studies category represent fundamental elements to perform such kind of studies. Firstly, literature reviews are found practically in every work in the area and help to discover gaps, understand the historical evolution of the area, and advance in the comprehension of a marketing phenomenon. Secondly, other kind of research has used PCOO as a research frame. Such research takes what is know about the PCOO effects on consumer behavior enhancing the value of the field

examined. Finally, no research can be performed without a research methodology and the construction of theory. The experience included in past research can help to overcome most of drawbacks in new studies. What follows explain the three groups within that categorization

I. Literature Reviews.

A literature review is an account of what has been published on a topic by accredited scholars and researchers. The area of country-of-origin has been productive and several writings have been done considering actual research to the date of publication. Furthermore, the reviews include different motivations resulting in two different focus related to country-of-origin (see Table 1). What comes next will introduce the reviews with a short explanation of them.

1. Product-country of origin. The works here included are related directly with country-of-origin effects. Special attention must be given to a few of the works due to their influence and consequences reflected on many of the studies that followed. Probably, the work done by Bilkey and Nes (1982) is one of the most cited by different researchers of country-of-origin and related areas. Even more, several country-of-origin reviewers quote them regularly. They examined the literature regarding the effect of country-of-origin on buyer evaluations of products. The explanation of external and internal information cues of products along with the "Made in" tag is the paper's core. The research considers the affirmation that "country of origin does indeed affect product evaluations" (pp. 90) discussing the effects from source countries, particularly pondering the classification of most and less developed. Next, several variables are addressed discussing findings from previous studies. After that, the effects of promotion and country of origin is included as well as a discussion of perceived risk and country of origin bias. In a similar vein, Bilkey and Nes (1982) explain studies that analyzed industrial purchasing under the perspective of country-of-origin and the methodological limitations of the studies investigated. Several of the recommendations done have been overtaken by other scientists in an attempt to improve the marketing knowledge. The descriptive study is the first effort to reviews concepts used to research country-of-origin.

As recognition of the importance of the stream of research country-of-origin represents, Papadopoulos and Heslop (1993) compiled what can be considered the most ambitious collection of works on the topic. The book includes a section of two reviews regarding country-of-origin research written by Baughn and Yaprak (1993) and Liefeld (1993). Baughn and Yaprak (1993) tried to synthesize what they called "the post-Bilkey and Nes contributions" (pp. 90) while Liefeld (1993) reviewed the results of experimental research on country-of-origin effects. Baughn and Yaprak (1993) mapped the, to then, current contributions into five areas. The first area incorporates the national characteristics of origin countries; a promising research avenue involving the nature of the evolution of the country image due to the conditions under which the product is produced. The second area assesses the integration of country-of-origin information as a single cue with other cues such as price and brand. According to the studies they analyzed, it can be said that consumers use country-of-origin integrated with other cues to form attitudes toward the product and willingness to purchase it. Consumers characteristics is the third area included in the review by Baughn and Yaprak (1993) because some studies presented contrasting findings. While some studies claimed that consumers have a tendency to prefer their own country's products (Erickson, Johansson, and Chao, 1984, Johansson, Douglas, and Nonaka, 1985; Johansson and Nebenzahl, 1986) other provided evidence of preference for foreign products (Heslop, Liefeld, and Wall, 1987; Papadopoulos, Heslop, and Berács, 1990). Apparently, the studies demonstrate that country images vary according to the country and characteristics (i.e. socioeconomic, nationalism, and familiarity) of the subjects surveyed.

The forth area has to do with the suggested country-of-origin cue impact on consumer attitudes and behavior. Cues like brand name, among others, may serve to consumers as a summary of product information thus the importance in the understanding of such information processing and attitude formation. That cues may be related to specific beliefs to overall attitudes toward a product and to what Han (1989) termed as halo effect. The halo effect suggests that consumers' beliefs are influenced by overall evaluations. Lastly, Baughn and Yaprak (1993) included methodological issues as the fifth area in their country-of-origin review. Sampling and measurement are their two biggest concerns. The use of

atypical populations as samples and response bias seem been raised by researchers as important methodological elements while studying country-of-origin. Baughn and Yaprak (1993) are aware of the richness of the area but also understand the complexity of it in cross-national purchase behavior. Ending the review, they mention that county-of-origin research attention has been concentrated to the process by which origin information is incorporated in attitude formation and related purchase intent. In a similar vein, consumer patriotism (Han, 1988) and ethnocentrism (Shimp and Sharma, 1987) are suggested as two very timely dimensions within country-of-origin research.

The second chapter included in the book edited by Papadopoulos and Heslop (1993) written by Liefeld (1993) focuses on determining the country-of-origin effect sizes and their relations with the study design. To do that, Liefeld (1993) first presents the findings reported in experimental research designed to measure the impact of country-of-origin cues on consumer product evaluations. Secondly, a meta-analysis of the country-of-origin effect size is reported. Finally, a discussion of the implications for practitioners and future research is included. In general, Liefeld reiterates what many others have said that country-of-origin effects are real and occur over a wide range of consumer and industrial products. Several other findings are briefly recognized such as the consumers perception that usually domestic products are considered better; the consumers perception of countries with highest quality products than others (country hierarchy); the magnitude of the country-of-origin effect seems related to the nature (price, complexity, fashion, etc.) of the product, experiment, and consumer demographic characteristics. In a similar vein, the nature and strength of country-of-origin effects also appear to be related to consumers prior knowledge or familiarity with the product, experience and beliefs with the product category, the amount of information cues analyzed, and the consumer information processing mode which may vary by consumers (Hong and Wyer, 1989). A brief mention of industrial buyers illustrates similar country-of-origin effects.

As a useful and powerful addition to the classical review of the country-of-origin literature, Liefeld (1993) presents what can be considered the first meta-analysis of the country-of-origin effects. A meta-analysis is an analytical generalization of quantitative summaries of individual experiments synthesizing statistical evidence, effect size in this case; similarly to what Peterson and Jolibert (1995) accomplished later. Although the limited amount of studies investigated by Liefeld (1993), he concluded that there is a limited association of effect sizes due to the number of cues, the use of intangible cues, or the use of students as samples. In contrast, Peterson and Jolibert (1995) based their meta-analysis on sixty-nine independent studies documenting quantitatively the effect size of the country-of-origin cue in what they call "a variety of circumstances" (pp. 894). Despite the conclusions that country-of-origin was a stronger predictor for quality/ reliability perception than for purchase intentions, Peterson & Jolibert allege that country-of-origin effect is somewhat generalizable. Thus, there is a need for further empirical research which considers both the antecedents and consequences of the country-of-origin effects under a variety of circumstances. Plausibly, that allegation is perhaps one of the key motivations researches have widely studied country-of-origin.

In a likely manner, Verlegh and Steenkamp (1999) performed another meta-analysis of country-of-origin research focusing three aspects of country-of origin: cognitive, affective, and normative. Cognitive aspects include country-of-origin used as a signal for overall product quality and quality attributes, such as reliability and durability. Affective aspects include country-of-origin as an image having symbolic and emotional value to consumers. Normative aspects include the consumers' social and personal norms related to a country; the preference for domestic products is an example of such social and personal norms. With that in mind, Verlegh and Steenkamp (1999) go beyond only effect sizes and search for explanations for the country-of-origin effect. Using 278 individual effect sizes for the meta-analysis, they argued that the impact of country-of-origin is larger on perceived quality of products than on attitude toward the product and purchase intention and that the origin country level of development has important implications in the country-of-origin effects.

2. Product-country image. The works here included position country-of-origin in the context of images and stereotyping in marketing. The literature on country-of-origin gives robust evidence that consumers develop stereotypical images of countries and their products subsequently affecting their

purchasing decisions (Baughn and Yaprak, 1993). Following Martin and Eroglu (1993) country image can be understood as the total of all descriptive, inferential and informational beliefs one has about a particular country (pp. 193). However, focusing on the "made in" images of the products is the key point to be included in this category. The work by Papadopoulos (1993) seems to be the first literature review example, and probably the only one, covering the product-country image topic.

Papadopoulos (1993) aptly asserts that "focus on the 'Made-in' images of products does not mean that one should think of country images in the sense of 'Made-in' product labels alone" (pp. 3, italics in the original). In that sense, countries can be seen as the product to market. His analysis includes brief explanation of images and stereotyping in marketing. Later, the history of academic research on product-country image in international marketing is included. It begins with the first study done by Schooler (1965). Next, outlines different directions taken by researchers such as studies using semantic differential scales (Nagashima, 1977), multivariate studies (Erickson et al., 1984; Johansson et al., 1985), and other connecting country images with several perspectives such as interdisciplinary (Lillis and Naranya, 1974), longitudinal (Darling and Wood, 1990) and methodological and related ones (Shimp and Sharma, 1987; Wang and Lamb, 1980, 1983) among others. After that, Papadopoulos (1993) presented some contentious issues while researching product-country images. Among them stand out perceptions of countries as products (origin in the product name, brand, label, and similar), the globalization phenomenon (global branding, hybrid products, and so on), and some methodological issues (customers evaluations, importance of the origin cue and its image effects). The final part is divided in two sections discussing strategic and research implications of product-country images. The chapter by Papadopoulos (1993) is the first one in a collection of papers included in the book "Product-Country Images: Impact and Role in International Marketing" edited by Nicolas Papadopoulos and Louise A. Heslop (1993). The chapter seems to be offered as the introduction to the book and can be considered as a good effort to synthesize the research up to then.

II. Consumer behavior using PCOO as a research frame.

Different studies use country-of-origin as a basis for the research related or not with the area. In general, country-of-origin is one of the main topics in such studies, but it is relevant or it is used as a basis for the research. The studies scrutinized here with their basic topics are presented in Table 2. They range from theories to analysis of events under the presence, or considering, country-of-origin effects. For instance, country-of-origin is used as an extrinsic cue by most of the researchers. In a similar vein, Liefeld, Heslop, Papadopoulos, and Wall (1996) evaluate the strength of country-of-origin as a cue against other product cues such as price in an intent to measure consumers' evaluation of products quality and product choices. In another research, Mort and Duncan (2000) assess the "Made in" cue and the "Owned by …" cue. Apparently, the "Owned by …" cue implies the consumers feelings regarding the importance of a company owned domestically in a clear relation to consumer ethnocentrism offering the cue as a new research area.

Perceived risk refers to the nature and amount of risk perceived by a consumer in contemplating a particular purchase decision (Cox and Rich, 1964) and can be used along with country-of-origin effects due to the risk element of getting a product of overseas origin. As part of the consumer behavior theory, perceive risk is related to the dependable of the purchase upon the degree of uncertainty concerning the suitability of the product and the importance with which the consumer affects to the possible adverse consequences, chiefly economic, of such a purchase. Accordingly, Baumgartner and Jolibert (1978) intent to explain the different consumers view of both foreign and domestic origin products concluding that the theory of risk perception provides an interesting insight on the judgment of foreign products. Cordell (1992) uses country-of-origin "as a multidimensional construct that evokes various product-triat-realted [SIC] responses" (pp. 253). He concluded that consumers will tolerate the risk associated with the country source of production under some circumstances such as an extra warranty, low risk products manufactured in countries with high risk perception while high risk products produced in countries with low risk perception, or having the final assembling in a low risk perceived country (despite the origin of the components) mentioning on the product label its final origin.

Probably the most familiar model linking beliefs and attitudes is the model developed by Fishbein and Ajzen (1975) in which attitude is determined by beliefs. Although the model has a general purpose, its relation to country-of-origin has been recognized (c.f. Kaynak and Kara, 2002). The generalization of the model is based on the assumption that human beings are quite rational and make systematic use of the information available to them. Attitudes are conceptualized as the amount of affect for or against an object; beliefs represents the information a person has about the object. The use of attitude theory models may help to the understanding of the beliefs and attitudes held by consumers regarding products from foreign origin. Using a product made in two different countries, Lee and Green (1991) examined the applicability that model in two cultures, Korea and the USA. They used the belief-attitudes model to examine its validity cross-culturally. The model seems quite similar to the one used by many researchers while studying country-of-origin. However, some variations of the model are included in several of the studies here scrutinized. For example, assessing the belief-attitude model of Fishbein and Ajzen (1975), Erickson et al. (1984) present a model with the possibility of a two-way influence between attitudes and beliefs where country image affects both. In a similar manner, Johansson et al. (1985) use that model generating a more complex one applying it to examine the impact of nationality and some demographic variables of respondents. Their idea was to consider the impact of those variables on product evaluations along with their interaction with familiarity and experience. Both Erickson et al. (1984) and Johansson et al. (1985) failed to attain definitive conclusion of their models; what is of interest here are the insights used to study country-of-origin effects on product evaluations.

Market entry refers to the strategies used by firms to enter international markets, an area of research emphasized by Lampert and Jaffe (1996). They developed a framework that incorporates both country-of-origin effect and the relative cost associated to the market entry strategies. The framework considers mainly factor costs (resources, raw materials, labor, technology, management, skills, marketing expenses, etc.) and the market value (the price consumers are willing to pay). With both elements, the framework proposed focuses on identifying some of the preconditions for market entry as determined by relative cost and country image. The framework posits that relative cost factors (traditionally on the supply side) and country-of-origin effects (on the demand side explaining how consumers evaluate foreign products and buying intentions) determine market entry opportunity. The strategy used to enter a market apparently is associated to the competitive advantage developed.

The term “first-mover advantage” refers to the pioneering brands that enjoy long-term market share advantages (Chen and Pereira, 1999). In international markets such area seems to be related to country-of-origin due to with the globalization of markets (Levitt, 1983) many products from foreign origin have the opportunity to be the first to enter new markets. Chen and Pereira (1999) designed an experiment to confirm the existence of first-movers advantages while studying the effects of country-of-origin on the first-mover as well as on the early and late followers. Their findings indicated that first movers tend to win more market share representing a crucial strategy in international marketing creating a competitive advantage. The first-mover advantage is more durable than the country-of-origin effect and the country image becomes less distinctive as more competitors enter the market.

Cultural influences refers to the effect of the products of a particular country may have on consumers. Consumers can seek products from different countries to admire or envy; thus, they would like to get such products to be part of that country. Under such perspective, Gürhan-Canli and Maheswaran (2000a) examined whether cultural orientation (individualistic vs. collectivistic) moderates country of origin effects. Their findings indicate that individualistics evaluate better their home products when they were superior to competition but collectivistics preferred home country products regardless of their superiority. Goldberg and Baumgartner (2002) work under the images created through the American way of life with teenagers. The findings suggest an affective process in which subjects were more attracted to the American lifestyle when they select USA as an attractive country good enough to live in. The influences of the country-of-origin culture apparently are signs of the feasible behavior of consumers.

Several other studies can be found under this classification. The elaboration likelihood model, brand effects/image and event analysis are some those examples. The first one model posits that individuals may form attitudes with one qualitative route, central or peripheral, of information processing

(Petty, Caccioppo, and Schumann, 1983). Hong and Toner (1989) apply the model to examine country-of-origin effects to conclude that such effects may be a function of the subjects´ general knowledge rather than their gender. Both Ahmed and d'Astous (1996) and Nebenzahl and Jaffe (1996) use brand effects or images to analyze country-of-origin. Finally, event analysis is examined by some researchers. Undertaking several longitudinal studies, Brunner et al. (1993) examine the pattern of acceptance of Chinese products in several samples from diverse countries considering the Tiananmen Square events and Nielsen and Spence (1997) examined the effects of the Forth of July and Barcelona Olympics Games on the consumers perception of domestic products over foreign. In addition, both studies by Klein, Ettenson, and Morris (1998) and Ettenson and Klein (2002) analyze animosity considering an event and its effect on the perception of consumers on products with foreign origin. First examines Chinese consumers' attitudes toward Japan and Japanese products in Nanjing, a city that endured terrible events of massacre during the Japanese occupation in World War II. The second animosity study focused on Australian consumers views of France and French products after France began nuclear testing in the South Pacific in the mid-90's and the Australians felt indignant protesting and boycotting products with French origin.

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Table 2
Details of the Classification of Product-Country of Origin Studies: Consumer Behavior using Country-of-Origin as a Research Frame

1.	**Cue utilization**	Eroglu and Machleit, 1989; Liefeld et al., 1996; Mort and Duncan, 2000
2.	**Perceived risk**	Baumgartner and Jolibert, 1978; Cordell, 1992
3.	**Belief-attitude model**	Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1997; Erickson et al., 1984; Johansson et al., 1985
4.	**Market entry**	Lampert and Jaffe, 1996
5.	**First-mover advantage**	Chen and Pereira, 1999
6.	**Cultural influences**	Gürhan-Canli and Maheswaran, 2000a; Goldberg and Baumgartner, 2002
7.	**The elaboration likelihood model**	Hong and Toner, 1989
8.	**Brand effects/image**	Ahmed and d'Astous, 1996; Nebenzahl and Jaffe, 1996
9.	**Event analysis**	Brunner et al., 1993; Nielsen and Spence, 1997; Klein et al., 1998; Ettenson and Klein, 2002

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III. Methodology and Theory Construction.

To research country-of-origin it is necessary to use particular principles and methods in order to build a coherent group of general assumptions applicable to consumers in different countries. Methodology refers to the principles and methods of a particular branch of knowledge; theory construction implies to build a coherent group of general assumptions. The research of country-of-origin effects has a connotation of cross-cultural marketing research; that is, the research is conducted across nations or culture groups (Malhotra, Agarwal, and Peterson, 1996) which is different than performing marketing research at home. The main differences are the comparability of phenomenon and or behavior, the generalizability of the findings, and the self-reference criterion applied (Malhotra, 1999). This major group includes aspects used by researchers trying to generalize while understanding country-of-origin.

1. Sampling frame. Developing an appropriate sampling frame is a complex task due to the difficulties needed to overcome and get a list of sampling units (target subjects) from which a sample will be draw. The sample frames used in the articles scrutinized are presented in Table 3. Although most of the samples where at hand or appear to be of convenience, the diversity is ample including directories, institutions, individuals, panels and organizations. Theoretical considerations to select the sample are in

general used but many are chosen by merely convenience. The usefulness of the sample is also a function of the diversity of cultures or countries included, Wise and Cobas-Flores (2001) compiled a list of most countries considered by researchers as consuming. Most of the articles selected samples from a single country with its consequent limitations in applicability and generalization of findings.

The two most used samples are consumers and students, both high school and university ones. Researchers as Almonte et al. (1995) recognize the use of a "convenience consumer sample" (pp. 32) whereas Insch and McBride (2002) claim have surveyed non-students "in shopping malls and public markets" (pp. 11). Other researchers only mention how the sample was surveyed predominating through intercept and face-to-face interviews in shopping centers (cf. Almonte et al., 1995; Fischer and Byron, 1997; Hester and Yuen, 1987; Zhang, 1996). On the other hand, students are used recurrently despite the cautious first noted by Bilkey and Nes (1982) and recently observed by Peterson (2001). In general, student samples are used because they are at hand and are convenient. However, one significant implication of their use is that students tend to be more homogeneous than other non-student samples (Peterson, 2001). With great homogeneity, it is possible to reduce data noise and extraneous variability; also, the magnitude of differences may decrease or existing relationships among variables are minimized (Peterson, 2001). Nevertheless, some studies require student samples because they were designed to use them. For instance Goldberg and Baumgartner (2002) hypothesized that for teenagers emulation of a developed country is one reason to smoke and selected a Thai sample of high school students. The second order meta-analysis done by Peterson (2001) concludes that the use of samples integrated by students must be done with caution if the purpose of the study is to make generalizations.

Two things that can be observed from the studies included in Table 3. First, although the use of students as subjects of research is noteworthy, researchers have employed a great variety of sample frames that may help with the generalization intent of the country-of-origin effects. Second, despite many samples are not identified as "consumers" by researchers, they have similar characteristics. For instance, church parishioners, households and housewives can also be considered as consumers. Usually, consumers are seen as street people that buy items that may have a foreign origin. With some limitations, the wide use of different kind of samples makes country-of-origin effects happen to be present in many countries.

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Table 3
Details of the Classification of Product-Country of Origin Studies: Sampling Frame

Buses Owners (Coach operators & Travel agents)	Stewart and Chan, 1993
Chief Executives/Top Managers	Khanna, 1986; Olsen and Olsson, 2002
Church Parishioners	Shimp et al., 1993
Consumer Panel	Crawford and Lumpkin, 1993
Consumers	Almonte et al., 1995; Baumgartner and Jolibert, 1978; Chao, 1989; Cordell, 1992; Darling and Arnold, 1988; Darling and Kraft, 1977; Darling and Wood, 1990; Ettenson, 1993; Fischer and Byron, 1997; Han, 1990; Hester and Yuen, 1987; Insch and McBride, 2002; Zhang, 1996
Database	Agrawal and Kamakura, 1999
Directories	
Business	Chang and Kim, 1995; Parameswaran and Yaprak, 1987; Wee, Lim, and Tan 1993; Yaprak and Parameswaran, 1986
Telephone	Cordell, 1992; Han, 1988, 1989, 1990
Ethnic Associations	Parameswaran and Pisharodi, 1994
Firms	Chasin and Jaffe, 1979; Fenwick and Wright, 2000
High School Students	Goldberg and Baumgartner, 2002
Households	Brunner et al., 1993; Chinen et al., 2000; Damanpour, 1993; Heslop et al., 1998; Nebenzahl and Jaffe, 1993; Nes and Bilkey, 1993; Papadopoulos,

	Heslop, and Bamossy 1994
Housewives	Bailey and Gutierrez de Pineres, 1997
Opinion Leaders	Papadopoulos and Heslop, 1989
Purchasing Directors/Agents	Cattin et al., 1982; Dzever and Quester, 1999; White and Cundiff, 1978
Residents	Jaffe and Martínez, 1995
University Students	Ahmed et al., 1993; Durvasula et al., 1997; Erickson et al., 1984; Gaedeke, 1973; Gürhan-Canli and Maheswaran, 2000a, 2000b; Hong and Toner, 1989; Hong and Wyer, 1989, 1990; Insch and McBride, 1998; Iyer and Kalita, 1997; Johansson et al., 1985; Li, Murray, and Scott, 2000; Lim, Darley, and Summers, 1994; Lim and O'Cass, 2001; Maheswaran, 1994; Marcoux et al., 1997; Mort and Duncan, 2000; Nebenzahl and Jaffe, 1996; Roth and Romeo, 1992; Schooler, 1965; Webb and Po, 2000; Zhang, 1997
School Teachers/Assistants	Heimbach et al., 1989

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2. Surveyed method. The approaches used to collect the data for country-of-origin research are diverse. Questionnaires were used in all the cases presented in Table 4. The articles here scrutinized openly mention the survey method used. However, many other articles fail to underscore which particular method was used for the survey. Although many of the samples were students –as mentioned before, see Table 3– only some researchers declare had administrated questionnaires in classroom. Moreover, few less such as Goldberg and Baumgartner (2002) specifically state how it was done: "teachers distributed the questionnaires in class where the students completed them" (pp. 902). The mention of the interviewing method enlightens the way of how country-of-origin research has been accomplished helping its understanding.

The literature mentions several survey methods expected to be found in international marketing research. In general, it can be said that the focus is on locating, contacting, and obtaining information from the respondents (Malhotra, 1994) of interest. The most common methods of interviewing used for international surveys are telephone, personal, and mail (Malhotra et al., 1996). The telephone interviewing method evidently works well in most of developed countries and many of the developing ones. Depending on how personal interviewing is conceptualized, it can be used overtly. The methods here included are hand-delivered, face-to-face, and mall intercept. Researchers use the term malls and shopping centers referring to a place where consumers go to do shopping; both terms are used indistinctly evidently as synonymous. Lastly, mail interviewing has two variations uncover in the studies scrutinized. The use of mail is one of the cheapest methods for surveying; however, several researchers used a combination here called drop-off/mail-back or pick-up. That is, the questionnaire is dropped in an address of interest with a paid return envelope; then, the respondent mails the answered questionnaire in it back to the researcher. The major setback using the mail is that the postal system of some countries is deficient with the consequent results of lost mail and slow or wrong delivery.

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Table 4
Details of the Classification of Product-Country of Origin Studies: Surveyed Method

Classroom	Ahmed et al., 1993; Durvasula et al., 1997; Goldberg and Baumgartner, 2002; Johansson et al., 1985; Marcoux et al., 1997; Nebenzahl and Jaffe, 1996; Roth and Romeo, 1992
Drop-off/mail-back or pick-up	Ahmed and d'Astous, 1996; Heslop et al., 1998; Okechuku, 1994; Papadopoulos et al., 1994
Hand-delivered	Darling and Arnold, 1988; Darling and Kraft, 1977; Parameswaran and Pisharodi, 1994
Home face-to-face Interview	Bailey and Gutierrez de Pineres, 1997; Ettenson, 1993; Han and Terpstra, 1988; Nebenzahl and Jaffe, 1993; Nes and Bilkey, 1993

Mail Questionnaire	Agbonifoh and Elimimian, 1999; Cattin et al., 1982; Chang and Kim, 1995; Crawford and Lumpkin, 1993; Damanpour, 1993; Dzever and Quester, 1999; Fenwick and Wright, 2000; Heimbach et al., 1989; Khanna, 1986; Parameswaran and Yaprak, 1987; Wee et al., 1993; Yaprak and Parameswaran, 1986
Mall Intercept	Almonte et al., 1995; Chao, 1989; Fischer and Byron, 1997; Hester and Yuen, 1987; Insch and McBride, 2002; Liefeld et al., 1996; Maronick, 1995; White and Cundiff, 1978; Zhang, 1996
Telephone	Brunner et al., 1993; Han, 1988, 1989, 1990; Nielsen and Spence, 1997

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3. Type of research. The research designs used as framework for conducting country-of-origin studies are predominantly causal and descriptive. However, the literature offers a case study (cf. Hayden and Edwards, 2001) that discusses country-of-origin effects but not for products rather for management performance and management development of a large Swedish multinational during its internationalization. Therefore, the studies scrutinized throughout considered country-of-origin effects employing varies types of research (see Table 5).

Design of an experiment apparently is the type of research more utilized while studying country-of-origin. As causal research, studies which utilized experiments can provide evidence regarding the causal relationship between variables (Churchill and Iacobucci, 2002). On the other hand, personal interviews and longitudinal studies will describe characteristics of relevant groups, estimate proportions of people who behave in a certain way, determine perceptions of product characteristics, determine the degree of variables association, and make specific predictions (Churchill and Iacobucci, 2002; Malhotra, 1999). The abundance of research designs selected by country-of-origin researchers helps to ensure the comparability of the data obtained from different consuming countries as Peterson and Jolibert (1995) and Verlegh and Steenkamp (1999) illustrated separately in their comprehensive meta-analysis of the literature on country-of-origin effects.

The use of experiments of country-of-origin range from simply tests of the product of interest (e.g. Schooler, 1965) to more elaborate ones as the selected by Cordell (1992) or Zhang (1996, 1997). Contrastingly, personal interviews have been completed with the questionnaire of interest on hand. Chasin and Jaffe (1979) performed personal interviews with more than 100 firms. Shimp, Samiee, and Madden (1993) conducted in-depth interviews, of the long-interview variety, to church parishioners. Finally, Stewart and Chan (1993) carried out personal interviews with travel agents and coach operators while studying industrial buyers' perceptions.

The country-of-origin longitudinal studies scrutinized have several configurations. Although several of those studies have indeed multiple cross-sectional designs (Malhotra, 1999) due to their similar collection of data over time, they are here considered as longitudinal. Darling and Arnold (1988) and Darling and Wood (1990) used three samples to report a ten-year period study of the attitudes of consumers in Finland toward the products imported from the USA, Japan, and three more European countries. In a similar fashion, Brunner et al. (1993) considered four different studies to determine the pattern of acceptance of Chinese products by USA consumers over the 1979-1989 decade. Furthermore, Nielsen and Spence (1997) selected a random sample of subjects for a period of eight weeks to assess the stability of the Consumer Ethnocentrism Scale (CETSCALE) as the results of what they called "patriotic events" (pp. 71). Finally, the analysis done by Agrawal and Kamakura (1999) used archival data. They selected a sample of 13 products reported from various issues of the US consumer magazine Consumer Reports from 1980 to 1994 to examine the differences in the objective quality of competing brands associated with different countries. Despite longitudinal research in marketing generally will involve a fixed sample of respondents (Churchill and Iacobucci, 2002; Malhotra, 1999), the studies reported in the country-of-origin literature as longitudinal lack such characteristic perhaps due to the problems associated in getting and maintaining a suitable panel of subjects willing to participate.

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Table 5
Details of the Classification of Product-Country of Origin Studies: Methodology and Theory Construction

Type of research		
	Experiment	Ahmed et al., 1993; Bruning, 1997; Chen and Pereira, 1999; Cordell, 1992; Ettenson, 1993; Fischer and Byron, 1997; Gürhan-Canli and Maheswaran, 2000a; Hong and Toner, 1989; Hong and Wyer, 1989, 1990; Lim et al., 1994; Maheswaran, 1994; Maronick, 1995; Nebenzahl and Jaffe, 1996; Nes and Bilkey, 1993; Olsen and Olsson, 2002; Schooler, 1965; White and Cundiff, 1978; Zhang, 1996, 1997
	Personal Interviews	Chasin and Jaffe, 1979; Shimp et al., 1993; Stewart and Chan, 1993
	Longitudinal	Agrawal and Kamakura, 1999; Brunner et al., 1993; Darling and Arnold, 1988; Darling and Wood, 1990; Nielsen and Spence, 1997
Model definition		
	Product Image Life Cycle	Lampert and Jaffe, 1998
	Deductive, Paradigm-Integrating Approach	Yaprak and Parameswaran, 1986
	Theoretical Framework	Obermiller and Spanngenberg, 1989
Test of Approach		
	Multientity scaling	Olsen and Olsson, 2002
	Test of transformation	Clarke et al., 1999

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4. Model definition. Despite country-of-origin literature evidences the persistent use of the belief-attitude model purposed by Fishbein and Ajzen (1975), several researchers have developed other models to approach the phenomenon. If models can be defined as a set of variables and their relationships designed to represent some real system or process (Malhotra, 1999), different models might be developed to research country-of-origin effects. At least three such models are found in the literature as is evidenced in second part of Table 5. The deductive, paradigm-integrating approach was developed by Yaprak and Parameswaran (1986). Overall, the model considers the general country and product attributes (GCPA) and the specific product attributes (SPA). During the validation of the model, Yaprak and Parameswaran (1986) found that both GCPA and SPA play both a key role in the purchase intentions expressed by consumers. As commented above, that model seems to be a decomposition of the country-of-origin construct three facets later identify by Parameswaran and Pisharodi (1994).

In an attempt to define a country-of-origin model with explanatory and or predictive power, Obermiller and Spanngenberg (1989) conceptualized a theoretical framework. The model identifies situational and individual difference variables that mediate country-of-origin effects and output variables that indicate change considering cognitive, affective, and normative processes. The authors conducted a study to test only one small part of the framework with mixed results. In a similar effort, Lampert and Jaffe (1998) purposed a dynamic approach to study country-of-origin effects. They claim that "in international marketing, product image is affected by country of origin before brand names plays a role" (pp. 64). Thus, country image is seen as an asset and is posited that the image consumers have about a country and its products influence their buying intentions. With that in mind, the authors introduce the product image life cycle (PILC) with two different approaches. One is based on the new product adoption process by Rogers (1983), the other on the concept of form product life cycle. The PILC considers image due to halo effects (Han, 1989), brand familiarity, and product type familiarity. The overall idea here is that country image is dynamic and may be modified during time.

5. Test of approach. Studies testing an approach to find out its applicability to the country-of-origin literature stream are considered in this sub-group. Only two articles scrutinized reveal such development (see the third part of Table 5). As an extension of the Jaffe and Nebenzahl (1984) study, Olsen and Olsson (2002) empirically tested different country-of-origin attitudes (the entities) and semantic differential scales (the scaling format). The study concentrated on how different multientity scaling formats affect reliability, attitude response consistency, and predictive validity in country-image studies. Using randomized experimental designs with purchasing managers, the study also provides empirical evidence regarding country-of-origin attitudinal effects. The second study of this sub-group by Clarke, Owens, and Ford (1999) looks for a test to determine the country of origin a product should shown on its label due the level of transformation suffered in a particular country. That is needed as the World Trade Organization's "Agreement on Rules of Origin" is established. The article suggests four different kind of tests –name, character, and use; essence; value-added; and article of commerce– when an imported product is transformed substantially in different forms. Then, the country-marking norm needs to adopt specific criteria in order to help marketers to enhance the opportunity for achieving the best benefits of country-of-origin. The approaches here included enlighten the stream of research of country-of-origin by offering additional perspectives needed for its applicability in international marketing.

Holistic and other related studies.

Holistic relates to, or is concerned with, complete systems rather than with the details or parts that make up the system, that is the system is seen as a whole. Articles included in this major group focus on consumer behavior viewed as holistic studies combining the foreground and the background studies (Kaynak and Kara, 2002) suggested in the classification of product-country of origin studies (see Table 1). Two studies were scrutinized meeting that criterion. Peterson and Jolibert (1995) meta-analysis concluded that country-of-origin effects are somewhat generalizable. Those effect sizes were larger when the product was described to respondents than when it was actually shown. Similarly, the effect sizes analyzed by single-cue studies produced larger effects that did multiple-cue ones. Moreover, country-of-origin effect sizes of large samples were greater than those experimented by small samples. In the same study, Peterson and Jolibert (1995) claim that purchase intentions were more susceptible to methodological artifacts that were quality/reliability consumer perceptions. The study attempts to see the country-of-origin phenomenon as a whole, such its inclusion in this major group.

The other study considered in this major group was undertaken by Martin and Eroglu (1993). It was shown that consumers' product evaluation are affected by country images. As has been mentioned above, country-of-origin research varies across countries, samples, and products. Thus, in order to develop effective international marketing strategies, there is the necessity to assess the extent to which relevant country images are seen as favorable or as unfavorable and how those images affect product quality perceptions and consumer purchase behavior. Again, the results of country-of-origin research seem to lack enough consistency to make generalizations. Martin and Eroglu (1993) addressed that attempting to make it more generalizable. They developed a valid scale to measure country image per se following the procedures recommended by Churchill, (1979). Defining country image as "the total of all descriptive, inferential and informational beliefs one has about a particular country" (pp. 193, italics in the original), they identified three dimensions (political, economic, and technological) which fitted the theoretical dimensions suggested by the country-of-origin literature. Doing that, Martin and Eroglu (1993) have a holistic view of the country-of-origin phenomenon.

Final Comments

This paper continues the description of the classification introduced by Wise and Cobas-Flores (2001). Background studies are classified in three major groups covering the literature review examining country-of-origin, consumer behavior studies using country-of-origina as a research frame, and methodology and theory construction while study country-of-origin. To continue the research on the area, researchers might

use the classification to improve and enhance their research. The generalization of the country-of-origin effects is still desirable specially in a globalized world.

The literature reviews are presented considering the product-country of origin and image. The literature attempts to clarify the difference. Researchers and firms are aimed to distinguish that the image of a product originated in a foreign country is one of the aspects found on the country-of-origin literature. Apparently, both concepts are related and interact. Probably, consumers fail to conceive they ddifferently. The image an origin of the products represents an aspect to poder when studing country-of-origin with any consuming sample in every source/origin country.

One of the most important aspect of the effects of country-of origin is its effect on the bevahior of consumers. Whereas the cues found in products help consumers to categorize their preferences, several other research frames are valuable to advance in the understanding of the area. At least ten different research frames have been found and commented in this paper. Probably, there are more still to describe found in the literature and many more will be conceive in the futre. With the actual amount of research frames, scholars have plenty of options to follow.

Generalization of the country-of-origin effects seems accepted by most of researchers. However, the particularities for each consuming country or region are valid claims to investigate. As can be inferred from the foreground studies (Wise and Cobas-Flores, 2001) few countries –perhaps less 13– have been examined as consuming countries and source/origin countries in the same study. The diverse use of samples and survey methods helps to generalize the country-of-origin effects on consumers. Different models can be developed or used along with distinctive approaches. Consumers will evolve due to many facors, but globalization is one that firms might consider when consumers are each day more aware of the origin of the products in international markets.

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Country-Of-Origin: Foreground Studies Review

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Country-Of-Origin: Foreground Studies Review

Country-of-origin represents one of the most studied topics in international marketing. Many researchers have worked on it trying to understand the effects on consumer behavior. Globalization has not make easy this task and generalizations are more needed than ever. Therefore. it is critically important for businesses to understand the consumer attitudes and the effect they may have on product success or failure. This paper presents an extensive literature review of country-of-origin and its classification of foreground studies. The major groups considered in that classification are research in marketing, construct decomposition, cross-cultural/national generalizability, and research in related areas. This classification integrates and contrasts most of the studies employing the country-of-origin construct.

Introduction

Since the mid-1960s, numerous studies have been conducted on Country-of-Origin. The focus of those studies was on the 'Made-in' images of products. In general, they have found that consumers have significantly different general perceptions of products made in different countries. Since those days, that stream of research has produced a substantial amount of publications and presentations in congresses. Probably, country-of-origin has been one of the most prolific and researched area in marketing.

It is convenient for any firm deciding to access a new market to evaluate possible country-of-origin effects. Next, it is worthwhile to consider whether a global or local approach will be follow. Whether the firm decides to originate the product locally or overseas, the decision may imply important market and marketing consequences. Among others are the awareness of products of foreign origin, the market size, language used on the label, customers culture, status of other brands found in the market, and the brand positioning of its country-of-origin (Klein, 2002). The country-of-origin effects seem to have a direct impact on the consumer's overall perceived quality of the products (Bilkey and Nes, 1982; Peterson and Jolibert, 1995; Verlegh and Steenkamp, 1999). In consequence, the selected approach seems to be paramount for the firm's success particularly considering the customers' perception regarding the country-of-origin of the products.

It is critically important for businesses to understand the consumer attitudes and the effect they may have on product success or failure. Part of the reason for such interest may be attributable to increased global competition among foreign firms operating in different parts of the world. A growing number of studies in marketing and international business examine such attitudes and effects. Steadily, consumers can choose for a great variety of similar domestic and foreign products. Understanding the effects of country-of-origin on consumers' evaluation of products may signify the success or fail of any marketing program. To do that, research on the topic needs to be done considering what the literature offers and what has been done in the past. The classification here purposed will advance the knowledge in the area exposing in a snapshot different elements of the phenomena and offering a better perspective on possible ways to research country-of-origin.

The amount of studies scrutinized throughout of this paper is extensive. Tables presented help to synthesize the concepts. What follows introduces a classification of country-of-origin studies, next explains what is termed foreground studies of the areas along with each of its major groups, and ends with some related comments.

Country of Origin

In general, the country-of-origin affects consumer's product evaluation (Bilkey and Nes, 1982) since consumers evaluate a product considering information cues available (Kaynak and Kara, 2002). As consumers in general tend to be less familiar with products of foreign origin (Huber and McCann, 1982) the country-of-origin is also found to be one of those cues. Country-of-origin is an extrinsic product cue, a

class of intangible traits including product's brand, price, and warranty (Cordell, 1992). Country of origin refers to "buyer's opinions regarding the relative qualities of goods and services produced in various countries" (Bilkey, 1993, p. xix).

Classification of the Studies

Probably the seminal work by Schooler (1965) can be considered as the first-ever published research of country-of-origin (Papadopoulos, 1993). His study, made in the Central American Common Market (Costa Rica, Guatemala, El Salvador, and Mexico), analyzed the preconceived images of products on the bias of national origin. As Mexico was not then member of the Common Market, Schooler used it as a control group. In his investigation, he considered the regional jealousies, fears, and animosities as aspects with a specific weight in consumers' product evaluation. Even though the analyses are simple, the conclusion is that there are significant differences in the evaluation of identical products using labels with different country names.

The "Made in" label seems to have a significant impact on the consumers' product evaluation. Morello (1993) mentions the "Made in" concept is used since XIX Century as protectionist measures identifying products from foreign origin. The use of labels as origin identifiers is a common practice employed by companies of various nationalities in domestic and international marketing along with many governments whose regulations establish the obligation of declare the product's country of origin. Indeed, the World Trade Organization (WTO), pursuant to the principles decreed in the Uruguay Round's "Agreement on Rules of Origin," considers the country-of-origin marking as essential for global markets. Thus, we can think that the claim made by Dichter (1962) "The little phrase 'Made in . . .' can have a tremendous influence on the acceptance and success of products . . ." (pp. 116) is noteworthy. The "Made in" indication is one of the substitute or surrogate indicators (Cattin, Jolibert, and Lohnes, 1982) consumers have learned to use when there are missing cues; it has also been called by several authors as "stereotype" or "stereotyping" (c.f. Bannister and Saunders, 1978; Chasin, Holzmueller, and Jaffe, 1989; Khanna, 1986; Maheswaran, 1994; White and Cundiff, 1978; White, 1979) which exists and can influence people's behavior (Papadopoulos, 1993). As a multifaceted construct with facets clearly interpretable (Parameswaran and Pisharodi, 1994), country-of-origin is potentially a powerful variable that can be used as a competitive business tool (Kaynak and Kara, 2002).

The country-of-origin's stream of research is classified in two categories introduced in this paper, foreground studies and background studies, subdivided into several major groups (see Table 1). Both of the categories contribute to the advancement of consumer behavior knowledge in its own right. This paper details the foreground studies, while the background studies and holistic and other relevant studies are developed in Wise and Cobas-Flores (2001). Table 1 includes the foreground studies with four major groups which approach country-of-origin effects, while the three major groups of background studies use country-of-origin as a basis for the research. For this classification, at least 99 studies were categorized representing a substantial part of the total research in the area.

The different approaches used to study the effects due to the country-of-origin examine product considering several areas of research. These areas of research are the four major groups here found (see Table 1): (I) Research in Marketing, (II) Construct Decomposition, (III) Cross-Cultural/National generalizability, and (IV) Research in Related Areas. Next, a description of each of them follows.

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Table 1
Classification of Country of Origin Studies

Foreground Studies	Background Studies
I. Research in Marketing 5. Source/Origin countries 6. Consuming countries 7. Test products 8. Test products brand	I. Literature Reviews 3. Product-country of origin 4. Product-country image
II. Construct Decomposition	II. Consumer behavior using country-of-origin as a research frame 11. Cue utilization 12. Perceived risk 13. Attitude theory 14. First-mover advantage 15. Cultural orientation influences 16. Market entry
III. Cross-cultural/national Generalizability Assessment of reliability	17. Belief-attitude model 18. Likelihood model 19. Brand effects/image 20. Event analysis
IV. Research in Related Areas 5. Stereotyping 6. Ethnocentrism 7. Animosity 8. Brand	III. Methodology and Theory Construction 6. Sampling 7. Surveyed method 8. Type of research 9. Model definition 10. Test of approach
Holistic and Other Relevant Studies	
Combined foreground studies with background studies	

Note. This classification in an expansion and extensive modification of Kaynak and Kara (2002) map of product country images literature (pp. 932).

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Foreground Studies

I. Research in marketing.

This is probably the largest major group of the whole classification due to several marketing variables are well embedded in the country-of-origin. One of such marketing variables has to due with the source or origin countries of the products, i.e. countries from which products are originated. The second variable has to do with the consumers' nationality of the products, i.e. nationality of the interviewee. The third and forth marketing variables refer to the products and their brands respectively.

1. Source/origin countries. The country of origin research has been done considering diverse regions of the world (see Table 2). Diverse interviewees expressed their opinions about products originated from different regions of the world located in almost all the continents. Only six out of the 99 scrutinized studies consider products originated from single countries: Australia, Fischer and Byron (1997) studied the Buy Australian Made campaign; Canada, Bruning (1997) analyzed the national loyalty effect in Canada; China, Brunner, Flaschner, and Lou (1993), investigated the purchases information of "made in

China" products; New Zealand, Fenwick and Wright (2000) researched the Buy New Zealand-Made campaign; and the U.S.A., Maronick (1995) examined the consumers' perception of "made in USA" products. In all the cases, the "made in . . ." label was addressed. The selection of a single country seems to be rooted in the nature of the studies. Brunner et al. (1993) analyzed the pattern of acceptance of Chinese products in the USA over a decade. Other three studies examined the perceptions of domestic products by nationals of the same countries.

On the other side, diverse studies used several denominations or tags for identification of diverse regions of the world (cf. Iyer and Kalita, 1997; Schweiger, Häubl, and Friederes, 1995; Hester and Yuen, 1987; Marcoux, Filiatrault, and Chéron, 1997; and Wee, Lim, and Tan, 1993). Iyer & Kalita (1997) analyzed brands of USA and Europe origin on products from developed (USA), newly industrialized (South Korea) and developing (China) countries. Schweiger et al. (1995) examined the "Made in Europe" label and compare the perception of quality of diverse products bearing such label with others showing "Made in the US" and "Made in Japan" labels. Both Hester & Yuen (1987) and Marcoux et al. (1997) examine previous purchases behaviors and responders' attitudes and perceptions of products either domestic or imported. Hester & Yuen (1987) identify imported products as foreign products while Marcoux et al. (1997) called the same imported products as made in Western countries (i.e. USA, Canada, and the European Union). However, Goldberg and Baumgartner (2002) mention the use of America in their questionnaire referring to the USA although it is not clear its reference.

Wee et al. (1993) used several not clearly specified references as origin countries. They refer to three regions of the world using different denominations, Asian NICs (newly industrialized countries, traditionally Hong Kong, Singapore, South Korea and Taiwan), ASEAN (Association of Southeast Asian Nations), and Australasia. However, Wee et al. (1993) only mention Singapore as one of the Asian NICs and clarify which countries are included in the ASEAN, i.e. Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand. All of them were active members 1993. Finally, Wee et al. (1993) included only Australia and New Zealand in Australasia. Throughout, the study fails to explain whether the questionnaire used enumerates the countries considered by each reference used although all the countries are mentioned elsewhere in the article.

The largest direct mention in the 99 studies scrutinized is first for Japan and then for the USA with 51 and 46 respectively. Of them, 64 studies mention directly either Japan or the USA, or both together as the sourced countries researched. Both countries are evaluated in 33 studies while 27 discuss products originated either form Japan or the USA. The main selection for the two countries as source of products is the classification of them as industrialized (Darling and Kraft, 1977); developed (Okechuku, 1994) or major trade powers (Papadopoulos and Heslop, 1989). Further factors have been pondered such as been major trading partners of another country (Agbonifoh and Elimimian, 1999; Chang and Kim, 1995; Jaffe and Martínez, 1995), between them (Chao, 1989; Han and Terpstra, 1988; Han, 1990) or have recognized their products and brands as similar or comparable (Ettenson, 1993; Goldberg and Baumgartner, 2002; Johansson, Douglas, and Nonaka, 1985; Nebenzahl and Jaffe, 1996). While other studies do not mention any clear or specific reasons for their selection of sourced or originated countries (cf. Chinen, Jun, and Hampton, 2000; Gürhan-Canli and Maheswaran, 2000a; Insch and McBride, 1998, 2002; White and Cundiff, 1978), several are based on the selection made by previous studies (Agrawal and Kamakura, 1999; Cattin et al., 1982; Han, 1988; Maheswaran, 1994; Nes and Bilkey, 1993; Shimp, Samiee, and Madden, 1993; Zhang, 1997). It is plausible to mention that Japan and the USA are both sourced and originated countries employed by many researches due to their importance in the world market, presence of brands and products in almost every marketplace. Maybe due to their perceived preponderance, products from many countries are compared to products from Japan and USA.

Other countries that worth to refer to regarding the amount of mentions received in the studies scrutinized are Canada (15), France (11), Germany (32), Great Britain (15), Korea (24), Mexico (23), and Taiwan (12). Some countries are identified using several names while Canada is the only one recognized through its provinces, Ontario and Québec. For instance, Korea and South Korea appear to be the same country because North Korea (with one mention) is not considered an open economy. On the other hand, in a recent study by Heslop, Papadopoulos, and Bourk (1998) the Canadian provinces of Ontario and

Québec are analyzed as the sourced regions. They where chosen because the sample was from Ottawa-Hull, a contiguous metropolitan area lying in both provinces with two official languages (English and French).

Although nowadays China and Hong Kong are a single country with two systems, two studies (Gaedeke, 1973; Crawford and Lumpkin, 1993) were performed well before the integration of Hong Kong to China and two others (Dzever and Quester, 1999; Goldberg and Baumgartner, 2002)afterwards. The case of Germany and West Germany has similar characteristics to those of China and Hong Kong. The studies made by Cattin et al. (1982) and Lumpkin and Crawford (1985) were published years before the integration of the two Germanys and the perception of the products originated in Germany may have been modified due to the reintegration. However, at least twelve articles using Germany as the sourced country were in print before the fall of the communist government in 1989. In a similar vein, Russia, Soviet Union and USSR (Union of Soviet Socialist Republics) have alike characteristics. Studies using Russia (e.g. Durvasula, Andrews, and Netemeyer, 1997; Dzever and Quester, 1999; Nebenzahl and Jaffe, 1996; Shimp et al., 1993) appear completed after the dissolution of the Soviet Union or USSR in 1991. Chasin & Jaffe (1979), Darling & Kraft (1977) and Lumpkin & Crawford (1985) analyzed the USSR as a sourced country years before the dissolution. Notwithstanding the aforementioned, Ettenson (1993) uses both names, Soviet Union and Russia; perhaps due to the recent dissolution of the USSR, they found necessary to use both names. Still, Russia is used in Ettenson's article; but apparently, the attributes of interest were researched using Soviet Union. The results of the studies may happen to differ due to the modification of the consumers' perception of products originated from Russia, Soviet Union or the USSR. Finally, Britain, England, Great Britain and UK, on one side, and Côte d'Ivoire and Ivory Cost, on the other side, are not the same as the abovementioned. England and Côte d'Ivoire have not suffered modifications recently, or with an apparent direct impact on perception of products originated from there. For both countries, the used names are interchangeable and easily recognized as the same country. In the first case, England is part of the United Kingdom of the Great Britain and Northern Ireland; while in the second situation, Cote d'Ivoire is the conventional short form for the former Western African country of Ivory Coast.

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Table 2
Source/Origin Countries by Geographical Area

Africa (16)	
Chad	Nes and Bilkey, 1993
Côte d'Ivoire	Heslop et al., 1998
Ivory Coast	Crawford and Lumpkin, 1993
Egypt (2)	Cordell, 1992; Crawford and Lumpkin, 1993
Ethiopia	Crawford and Lumpkin, 1993
Ghana (2)	Agbonifoh and Elimimian, 1999; Crawford and Lumpkin, 1993
Kenya	Nes and Bilkey, 1993
Libya	Crawford and Lumpkin, 1993
Malawi	Nes and Bilkey, 1993
Mali	Nes and Bilkey, 1993
Niger	Nes and Bilkey, 1993
Nigeria (2)	Agbonifoh and Elimimian, 1999; Crawford and Lumpkin, 1993
South Africa	Crawford and Lumpkin, 1993
Sudan	Crawford and Lumpkin, 1993
Tanzania	Nes and Bilkey, 1993
Zimbabwe	Heslop et al., 1998

Asia (19)

China (6)	Brunner et al., 1993; Crawford and Lumpkin, 1993; Goldberg and Baumgartner, 2002; Iyer and Kalita, 1997; Liefeld et al., 1996; Wee et al., 1993
Hong Kong (4)	Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Gaedeke, 1973; Goldberg and Baumgartner, 2002
India (9)	Chinen et al., 2000; Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Gaedeke, 1973; Khanna, 1986; Mort and Duncan, 2000; Nes and Bilkey, 1993; Shimp et al., 1993; Wee et al., 1993
Indonesia (4)	Chinen et al., 2000; Cordell, 1992; Crawford and Lumpkin, 1993; Gaedeke, 1973
Iran	Shimp et al., 1993
Japan (51)	Agbonifoh and Elimimian, 1999; Agrawal and Kamakura, 1999; Ahmed et al., 1993; Ahmed and d'Astous, 1996; Cattin et al., 1982; Chang and Kim, 1995; Chao, 1989; Chen and Pereira, 1999; Chinen et al., 2000; Cordell, 1992; Crawford and Lumpkin, 1993; Damanpour, 1993; Darling and Kraft, 1977; Darling and Wood, 1990; Dzever and Quester, 1999; Erickson et al., 1984; Ettenson, 1993; Goldberg and Baumgartner, 2002; Gürhan-Canli and Maheswaran, 2000a; Han, 1988, 1989, 1990; Han and Terpstra, 1988; Heimbach et al., 1989; Hong and Toner, 1989; Hong and Wyer, 1989, 1990; Insch and McBride, 1998, 2002; Jaffe and Martínez, 1995; Johansson et al., 1985; Khanna, 1986; Li et al., 2000; Lim et al., 1994; Maheswaran, 1994; Mort and Duncan, 2000; Nebenzahl and Jaffe, 1993, 1996; Nes and Bilkey, 1993; Okechuku, 1994; Papadopoulos and Heslop, 1989; Papadopoulos et al., 1994; Parameswaran and Yaprak, 1987; Roth and Romeo, 1992; Shimp et al., 1993; Stewart and Chan, 1993; Wee et al., 1993; White and Cundiff, 1978; Yaprak and Parameswaran, 1986; Zhang, 1996, 1997
Korea (18)	Agrawal and Kamakura, 1999; Chang and Kim, 1995; Chao, 1989; Gaedeke, 1973; Han, 1988, 1989, 1990; Han and Terpstra, 1988; Hong and Toner, 1989; Hong and Wyer, 1989; Iyer and Kalita, 1997; Khanna, 1986; Maheswaran, 1994; Okechuku, 1994; Parameswaran and Pisharodi, 1994; Roth and Romeo, 1992; Shimp et al., 1993; Zhang, 1996
South Korea (6)	Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Gürhan-Canli and Maheswaran, 2000b; Nebenzahl and Jaffe, 1993; Nes and Bilkey, 1993; Stewart and Chan, 1993
Malaysia	Mort and Duncan, 2000
North Korea	Crawford and Lumpkin, 1993
Pakistan	Nes and Bilkey, 1993
Papua-New Guinea	Crawford and Lumpkin, 1993
Philippines (6)	Ahmed et al., 1993; Cordell, 1992; Dzever and Quester, 1999; Gaedeke, 1973; Hong and Wyer, 1990; Webb and Po, 2000
Russia (4)	Durvasula et al., 1997; Dzever and Quester, 1999; Nebenzahl and Jaffe, 1996; Shimp et al., 1993
Soviet Union	Ettenson, 1993.
USSR (3)	Chasin and Jaffe, 1979; Crawford and Lumpkin, 1993; Darling and Kraft, 1977
Singapore (4)	Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Gaedeke, 1973; Wee et al., 1993
Saudi Arabia	Crawford and Lumpkin, 1993
Taiwan (12)	Agbonifoh and Elimimian, 1999; Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Gaedeke, 1973; Gürhan-Canli and Maheswaran, 2000b; Hong and Toner, 1989; Khanna, 1986; Li et al., 2000; Liefeld et al., 1996; Maheswaran, 1994; Nes and Bilkey, 1993; Zhang, 1996
Thailand (3)	Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Maheswaran, 1994
Vietnam	Crawford and Lumpkin, 1993

Oceania (2)	
Australia (4)	Crawford and Lumpkin, 1993; Fischer and Byron, 1997; Mort and Duncan, 2000; Webb and Po, 2000
New Zealand (2)	Crawford and Lumpkin, 1993; Fenwick and Wright, 2000
Central and South America and the Caribbean (13)	
Argentina (2)	Crawford and Lumpkin, 1993; Gaedeke, 1973
Bolivia	Cordell, 1992
Brazil (7)	Chao, 1989; Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Gaedeke, 1973; Nes and Bilkey, 1993; Stewart and Chan, 1993; White and Cundiff, 1978
Chile	Nes and Bilkey, 1993
Colombia	Nes and Bilkey, 1993
Costa Rica (2)	Cordell, 1992; Schooler, 1965
Cuba	Crawford and Lumpkin, 1993
El Salvador (2)	Crawford and Lumpkin, 1993; Schooler, 1965
Guatemala	Schooler, 1965
Haiti	Crawford and Lumpkin, 1993
Honduras	Crawford and Lumpkin, 1993
Panama	Nes and Bilkey, 1993
Venezuela	Crawford and Lumpkin, 1993
North America (5)	
Canada (14)	Ahmed et al., 1993; Ahmed and d'Astous, 1996; Bruning, 1997; Chinen et al., 2000; Cordell, 1992; Crawford and Lumpkin, 1993; Heslop et al., 1998; Hester and Yuen, 1987; Liefeld et al., 1996; Marcoux et al., 1997; Nes and Bilkey, 1993; Okechuku, 1994 Papadopoulos and Heslop, 1989; Papadopoulos et al., 1994
Ontario	Heslop et al., 1998
Québec	Heslop et al., 1998
Mexico (22)	Ahmed and d'Astous, 1996; Almonte et al., 1995; Bailey and Gutierrez de Pineres, 1997; Chen and Pereira, 1999; Chinen et al., 2000; Cordell, 1992; Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Gaedeke, 1973; Hong and Toner, 1989; Hong and Wyer, 1990, 1989; Insch and McBride, 1998, 2002; Jaffe and Martínez, 1995; Lim et al., 1994; Liefeld et al., 1996; Nes and Bilkey, 1993; Okechuku, 1994; Roth and Romeo, 1992; Schooler, 1965; Zhang, 1997
USA (46)	Agbonifoh and Elimimian, 1999; Agrawal and Kamakura, 1999; Almonte et al., 1995; Bailey and Gutierrez de Pineres, 1997; Baumgartner and Jolibert, 1978; Cattin et al., 1982; Chang and Kim, 1995; Chao, 1989; Chasin and Jaffe, 1979; Chinen et al., 2000; Crawford and Lumpkin, 1993; Damanpour, 1993; Darling and Kraft, 1977; Darling and Wood, 1990; Durvasula et al., 1997; Dzever and Quester, 1999; Erickson et al., 1984; Ettenson, 1993; Gaedeke, 1973; Goldberg and Baumgartner, 2002; Gürhan-Canli and Maheswaran, 2000a; Han, 1988, 1989, 1990; Han and Terpstra, 1988; Heimbach et al., 1989; Hester and Yuen, 1987; Insch and McBride, 1998, 2002; Iyer and Kalita, 1997; Jaffe and Martínez, 1995; Johansson et al., 1985; Maheswaran, 1994; Marcoux et al., 1997; Maronick, 1995; Nebenzahl and Jaffe, 1996; Nes and Bilkey, 1993; Okechuku, 1994; Papadopoulos and Heslop, 1989; Papadopoulos et al., 1994; Roth and Romeo, 1992; Shimp et al., 1993; Webb and Po, 2000; White and Cundiff, 1978; Zhang, 1996, 1997

Europe (20)	
Czechoslovakia (2)	Chasin and Jaffe, 1979; Liefeld et al., 1996
Britain	Goldberg and Baumgartner, 2002
England (5)	Baumgartner and Jolibert, 1978; Cattin et al., 1982; Cordell, 1992; Darling and Kraft, 1977; Roth and Romeo, 1992
Great Britain (6)	Chinen et al., 2000; Damanpour, 1993; Heslop et al., 1998; Papadopoulos and Heslop, 1989; Papadopoulos et al., 1994; Shimp et al., 1993
UK (4)	Agbonifoh and Elimimian, 1999; Crawford and Lumpkin, 1993; Dzever and Quester, 1999; Nes and Bilkey, 1993
Denmark	Olsen and Olsson, 2002
Finland	Darling and Kraft, 1977
France (11)	Agrawal and Kamakura, 1999; Baumgartner and Jolibert, 1978; Cattin et al., 1982; Crawford and Lumpkin, 1993; Damanpour, 1993; Darling and Kraft, 1977; Dzever and Quester, 1999; Heslop et al., 1998; Nes and Bilkey, 1993; Papadopoulos et al., 1994; Shimp et al., 1993
Germany (27)	Agrawal and Kamakura, 1999; Baumgartner and Jolibert, 1978; Chang and Kim, 1995; Chao, 1989; Chinen et al., 2000; Cordell, 1992; Damanpour, 1993; Darling and Kraft, 1977; Dzever and Quester, 1999; Erickson et al., 1984; Ettenson, 1993; Han, 1988; Heimbach et al., 1989; Hong and Toner, 1989; Hong and Wyer, 1989, 1990; Johansson et al., 1985; Maheswaran, 1994; Okechuku, 1994; Papadopoulos and Heslop, 1989; Papadopoulos et al., 1994; Parameswaran and Yaprak, 1987; Parameswaran and Pisharodi, 1994; Roth and Romeo, 1992; Shimp et al., 1993; White and Cundiff, 1978; Yaprak and Parameswaran, 1986
West Germany (5)	Cattin et al., 1982; Crawford and Lumpkin, 1993; Nebenzahl and Jaffe, 1993; Nes and Bilkey, 1993; Stewart and Chan, 1993
Greece (2)	Chinen et al., 2000; Papadopoulos et al., 1994
Hungary (7)	Chasin and Jaffe, 1979; Crawford and Lumpkin, 1993; Ettenson, 1993; Liefeld et al., 1996; Nebenzahl and Jaffe, 1996; Papadopoulos et al., 1994; Roth and Romeo, 1992
Iceland	Olsen and Olsson, 2002
Ireland (2)	Liefeld et al., 1996; Roth and Romeo, 1992
Italy (5)	Ahmed and d'Astous, 1996; Cordell, 1992; Crawford and Lumpkin, 1993; Parameswaran and Yaprak, 1987; Yaprak and Parameswaran, 1986
Netherlands (4)	Agrawal and Kamakura, 1999; Liefeld et al., 1996; Okechuku, 1994; Papadopoulos et al., 1994
Norway (4)	Chinen et al., 2000; Cordell, 1992; Dzever and Quester, 1999; Olsen and Olsson, 2002
Poland (4)	Chasin and Jaffe, 1979; Crawford and Lumpkin, 1993; Ettenson, 1993; Nebenzahl and Jaffe, 1996
Rumania (2)	Chasin and Jaffe, 1979; Crawford and Lumpkin, 1993
Spain (3)	Chinen et al., 2000; Crawford and Lumpkin, 1993; Roth and Romeo, 1992
Sweden (9)	Agrawal and Kamakura, 1999; Chinen et al., 2000; Crawford and Lumpkin, 1993; Darling and Kraft, 1977; Dzever and Quester, 1999; Hong and Toner, 1989; Nes and Bilkey, 1993; Papadopoulos et al., 1994; Papadopoulos and Heslop, 1989
Switzerland (4)	Cordell, 1992; Mort and Duncan, 2000; Nes and Bilkey, 1993; Shimp et al., 1993
Yugoslavia	Shimp et al., 1993

Middle East (4)	
Israel (2)	Chinen et al., 2000; Crawford and Lumpkin, 1993
Turkey (3)	Crawford and Lumpkin, 1993; Gaedeke, 1973; Nes and Bilkey, 1993

Not Specified (7)	
America	Goldberg and Baumgartner, 2002
ASEAN	Wee et al., 1993
Asian NICs	Wee et al., 1993
Australasia	Wee et al., 1993
Europe (2)	Iyer and Kalita, 1997; Schweiger et al., 1995
Foreign Products	Hester and Yuen, 1987
European Union	Marcoux et al., 1997

Number in parenthesis indicates amount of studies for each region or country.

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Selection of the sourced countries by researches considers diverse factors deemed in Table 3. Although in some cases the factors pondered to choose a sourced country lack of a clear specification, in others it is quite explicit. Countries with three or more mentions but less than ten are India, Indonesia, Philippines, Russia, Singapore, Thailand, Australia, Brazil, Hungary, Italy, Netherlands, Norway, Poland, Spain, Sweden, Switzerland and Turkey. Countries with less than three mentions are from Africa (Chad, Côte d'Ivoire, Egypt, Ghana, Kenya, Libya, Malawi, Mali, Niger, Nigeria, South Africa, Sudan, Tanzania, and Zimbabwe), Asia (Iran, Malaysia, North Korea, Pakistan, Papua-New Guinea, Saudi Arabia, and Vietnam), Central and South America and the Caribbean (Argentina, Bolivia, Chile, Colombia, Costa Rica, Cuba, El Salvador, Guatemala, Haiti, Honduras, Panama and Venezuela), Europe (Czechoslovakia, Denmark, Iceland, Ireland, Finland, Greece, Rumania, and Yugoslavia), Oceania (New Zealand) and the Middle East (Israel). Many of these countries were chosen as sourced countries because the level of recognition of their products and brands presumably is low or because their products are among the least desirable (Ahmed, d'Astous, and Zouiten, 1993). Conversely, Olsen & Olsson (2002) chose Denmark, Iceland and Norway because they were ". . . the three most important suppliers . . ." (pp. 155) to Sweden over the last few years.

Almost certainly, Crawford and Lumpkin (1993) use the largest list of countries –46 in total– "representing a cross-section of political climates and stages of economic development from the world's culture realm" (pp. 346). While in some cases the selection of the sourced countries considers only one factor, in that study the selection of the sourced countries was done weighting more than one factor. For instance, Agbonifoh and Elimimian (1999) chose the UK, the USA, Japan, Ghana, Taiwan and Nigeria due only to the considerable presence of their products in the Nigerian market. On the other hand, Zhang (1997) selected Japan, Mexico, Taiwan, and the USA out of ten countries based on a pretest with consumers that considered the country images of the countries in producing two products, PCs and luggage sets. Furthermore, he states that the country location, i.e. Eastern and Western, was controlled using a Latin –square design in the pretest. Two countries are from the West (Mexico and the USA) while the other two are from the East (Japan and Taiwan). Additionally, although the countries chose by Zhang (1997) were selected based on a pretest, the level of development is also indicated along with the presence of products from Mexico, Japan, and Taiwan in the USA market. He's study used a sample from the USA. The factor used to select a sourced country may be relevant to the perception of the consumers or due to the performance or geographical location of the country. Thus, although only one factor may be pondered for the selection of the sourced countries, the diversity of factors used, or the use of more than one, seems to be common in the selection of the sourced countries.

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Table 3
Main Factors for the Selection of Sourced Countries

1. Classification of the level of development:
    a. Industrializing or industrialized
    b. Developing or developed
2. Trade Partners:
    a. Between two countries
    b. With a third country
3. Level of recognition of products and brands
4. Products from foreign countries
5. Products from the home country
6. Presence in the domestic market
7. Geographical location:
    a. East or West/Eastern or Western
    b. A continent or part of a continent
8. Previous studies
9. Selection by consumers in a pretest
10. No clear reason

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2. Consuming countries. Researchers have used subjects from diverse countries while studying country-of-origin effects (see Table 4). Such a study requires individuals who express their opinion regarding products from one or several source/origin countries. Those individuals reside in what can be named consuming country. In general, researches explicitly name the nationality of the consuming countries' subjects though in some cases assumed the reader would realize it. For instance, Cattin et al. (1982) assert that the responders selected for the study were Directors of Purchasing of Industrial Firms included in the Fortune 500 and in the Europe's Largest Companies. Moreover, they claim "The English questionnaire was mailed in the U.S. with an American return envelope, while the French questionnaire was mailed in France with a French return envelope" (pp. 132) but failed to assert whether only responders from the U.S. and French were used. On the other hand, Han & Terpstra (1988) are more obvious specifying that "Non-US residents were excluded from the population . . ." (pp. 240). In this case, although the reader might deduce that the target population was U.S. residents, such conclusion is not directly specified. In a similar vein, Mort and Duncan, 2000 used a similar practice explaining "respondents who had lived in Australia for less than two years were excluded from the analysis" (pp. 843) letting the reader deduce that the sample were Australians indeed. However, some authors failed giving enough clues to identify properly the respondents' nationality (cf. Hong and Wyer, 1990; Gürhan-Canli and Maheswaran, 2000b; Maheswaran, 1994). It is always convenient to mention explicitly the nationality of the sample used because its identification helps to understand properly the research results and their applicability.

Table 4 enumerates the countries used by the 77 works scrutinized. Table 5 presents the studies in a cross-tabulation format of 28 consuming countries and 83 source/origin countries or regions. It is notorious the use of subjects from the USA whom have been asked to express their view for at least 72 regions of the world in almost all the continents. The USA is the only consuming country analyzed extensively in such amount of countries. Next is Australia with 18 source/origin countries (see Table 5) followed by Canada (16), Netherlands (13) and Ireland, Mexico and Poland (9 for each). However, not all the studies employed subjects from a single consuming country (see Table 4). Some researchers surveyed two or more consuming countries within a study. For instance, Almonte, Falk, Skaggs, and Cárdenas (1995), Durvasula et al. (1997), Gürhan-Canli and Maheswaran (2000a), Hester and Yuen (1987), Johansson et al. (1985), Parameswaran and Yaprak (1987) and Yaprak ands Parameswaran (1986) used subjects from two countries. Ettenson (1993), Khanna (1986), Okechuku (1994),

Papadopoulos and Heslop (1989), Papadopoulos, Heslop, and Bamossy (1994) and Roth and Romeo (1992) undertook studies with consuming individuals from more than two nationalities.

The bases for selecting subjects from a particular consuming country seem to be situational for the specific research. The case of several studies using Australia as a consuming country may help to appreciate such approach. So, Li, Murray, and Scott (2000) and Webb and Po (2000) collected data from university students while Dzever and Quester (1999) and Fischer and Byron (1997) surveyed non-students (Peterson, 2001). There is not explicitly mention of any reason for the selection of such subjects; a pattern frequently recurred by researchers. Despite the aforementioned, Johansson et al. (1985) and Okechuku (1994), among others, claim the use of convenience samples from different countries, which appears to be a common practice too. From the consuming countries here examined, 17 of them were also investigated as source/origin countries. Subjects from these countries are said to have expressed their opinions, at least, of their own country. In other words, subjects from Japan conveyed their opinions about Japanese products. The same country as consuming and as source/origin is found in no less than 45 studies. In some cases, the inclusions of other consuming countries comply with different reasoning as in the case of Heslop et al. (1998) intention to obtain a base for cross-national comparisons. In contrast, subjects form 11 countries expressed their opinions regarding other countries but their own.

Although the consuming country most researched is the USA, the presence of other developed countries is substantial as well as some developing countries. Ettenson (1993) selected Hungary, Poland and Russia as emerging market economies because with the globalization trend consumers from former Socialist countries are becoming more active participants in the global marketplace and little, if almost nothing, was known about their consumer behavior. Therefore, the selection of the consuming countries is driven yet by the sole characteristics of the study. Contrasting, the selection of eight consuming countries (six developed and two developing ones) done by Papadopoulos and Heslop (1989) lacks of an explicitly explanation for the bases of such choices. However, Roth and Romeo (1992) collected data from three consuming countries (two developed and one developing) explaining the cross-nationality different effects country-of-origin may have on consumers from various countries as the basis for such selection. The two developed countries selected by Johansson et al. (1985) as comparable samples may have a similar consequence. Interestingly enough, the choice made by Khanna (1986) included five consuming countries (one developed and four developing ones) of a judgment sample of firms substantially involved in import/export operations of the specific products researched (see Table 6) in the Indian market. Khanna asserts to explain an apparent sound basis for his selection. Nevertheless, in general, the selection of the consuming country seems to lack of other arguments than to be propelled by the characteristics of the analysis attempting to accomplish.

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Table 4
Details of the Classification of Product-Country of Origin Studies: Consuming Countries

Australia (4)	Dzever and Quester, 1999; Fischer and Byron, 1997; Li et al., 2000; Webb and Po, 2000
Austria	Schweiger et al., 1995
Canada (4)	Ahmed et al., 1993; Ahmed and d'Astous, 1996; Bruning, 1997; Heslop et al., 1998
Canada & USA	Hester and Yuen, 1987
Canada, Germany, Netherlands & USA	Okechuku, 1994
Canada, France, Germany, Great Britain, Greece, Hungary, Netherlands & USA (2)	Papadopoulos and Heslop, 1989; Papadopoulos et al., 1994
China	Zhang, 1996
Finland (2)	Darling and Kraft, 1977; Darling and Wood, 1990

France	Baumgartner and Jolibert, 1978
Guatemala	Schooler, 1965
Hong Kong	Stewart and Chan, 1993
Hungary, Poland & Russia	Ettenson, 1993
India, Japan, Philippines, Singapore & Thailand	Khanna, 1986
Ireland, Mexico & USA	Roth and Romeo, 1992
Israel	Nebenzahl and Jaffe, 1993
Japan & USA (2)	Gürhan-Canli and Maheswaran, 2000a; Johansson et al., 1985
Korea	Chang and Kim, 1995
Mexico (5)	Almonte et al., 1995; Bailey and Gutierrez de Pineres, 1997; Insch and McBride, 1998, 2002; Jaffe and Martínez, 1995
Netherlands	Liefeld et al., 1996
Nigeria	Agbonifoh and Elimimian, 1999
New Zealand	Fenwick and Wright, 2000
Poland	Marcoux et al., 1997
Russia & USA	Durvasula et al., 1997
Singapore	Lim and O'Cass, 2001
Sweden	Olsen and Olsson, 2002
Thailand	Goldberg and Baumgartner, 2002
Turkey & USA (2)	Parameswaran and Yaprak, 1987; Yaprak and Parameswaran, 1986
USA (30)	Agrawal and Kamakura, 1999; Brunner et al., 1993; Chao, 1989; Chasin and Jaffe, 1979; Chen and Pereira, 1999; Chinen et al., 2000; Cordell, 1992; Crawford and Lumpkin, 1993; Damanpour, 1993; Erickson et al., 1984; Gaedeke, 1973; Han, 1988, 1989, 1990; Han and Terpstra, 1988; Heimbach et al., 1989; Hong and Toner, 1989; Hong and Wyer, 1989; Insch and McBride, 1998, 2002; Iyer and Kalita, 1997; Maronick, 1995; Nebenzahl and Jaffe, 1996; Nes and Bilkey, 1993; Nielsen and Spence, 1997; Parameswaran and Pisharodi, 1994; Shimp et al., 1993; Wee et al., 1993; White and Cundiff, 1978; Zhang, 1997

Number in parenthesis indicates amount of studies for each region or country.

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Table 5
Amount of Source/Origin Countries studied using the Consuming Country

Consuming Country	Source/Origin Countries
USA	72
Australia	18
Canada	16
Netherlands	13
Mexico	9
Ireland	9
Hungary	9
Germany	8
France	7

Russia	7
Poland	7
Finland	7
Japan	6
Nigeria	5
Greece	5
Great Britain	5
Thailand	5
Singapore	4
Philippines	4
Korea	4
India	4
Hong Kong	4
Guatemala	4
Austria	3
Turkey	3
Israel	3
China	3
New Zealand	1

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3. Test products. Researchers have employed a plethora of products while studying country-of-origin. Those products range from general to specific goods covering services and concepts (see Table 6). Moreover, one research even used a fictional product (cf. Chen and Pereira, 1999). Many studies analyzed several products; often, only one product was used. For instance, Lim and O'Cass, 2001 sought to understand the role of origin information on consumer perception of brands utilizing fashion clothing as the test product. They allege the use of that particular sector due to its large number of successful global brands. Similarly, Crawford and Lumpkin (1993) focused on the specific apparel sector for two reasons. First, apparel appears to be a major category involving developed and developing countries. Second, apparel seems to have been the subject of major advertising campaign showing either the superiority of products made in the USA or the patriotism of buying such products. Furthermore, Hester and Yuen (1987) questioned the actual apparel consumer behavior due to the apparel import statistics showed an accelerated trend to growth and different surveys concluded that most people preferred clothing made in their country. The use of other products is also found in the studies of country-of-origin.

Some other products seem recurrent by researchers while studying country-of-origin. Automobiles (some authors use the term cars instead), TVs, VCRs and other appliances and products for personal use are among them. Johansson et al. (1985) examined the interaction of nationality and other demographic variables of respondents with familiarity and experience with specific products and brands. To accomplish that, they needed a product class as comparable as possible in terms of product variants in the two countries surveyed. Their “natural choice” (pp. 390) were compact automobile models because they could found similar foreign makers with very similar models in both countries, the USA and Japan. Han and Terpstra (1988) decomposition of the country-of-origin construct examined automobiles and TV because these products are frequently bi-national and are relatively well known to the average consumer. They sought those characteristics to research the decomposition of the country-of-origin construct into more simple concepts since the item’s brand name was one of them. In a similar vein, Ahmed and d'Astous (1996) selected automobile and two other products (shoes and TV) to “allow the generalization of results” (pp. 100) and based on “their financial risk, technological complexity, complexity of purchase task and personal involvement” (pp. 100). Similarly, Han (1990) examined compact automobiles and TVs

because their domestic and foreign brands were relatively well known to consumers in the USA where the study was conducted. Hong and Toner (1989) choice of automobiles, cameras and maxi-pad sanitary napkins was based on the results of a previous survey on the subjects' knowledge level about each product. That pattern of selecting products with relative familiarity to the subjects is also found in several other studies (cf. Hong and Wyer, 1989; Li et al., 2000; and Parameswaran and Yaprak, 1987).

Some authors' selection of products studying country-of-origin effects had varied foundations while others disregard apparently to mention any. Jaffe and Martínez (1995) selected consumer electronic household products (stereo systems, TVs and VCRs) because they were widely imported from both the USA and Japan and examined the perceptions of Mexican consumers toward competing products made in developed countries. Liefeld, Heslop, Papadopoulos, and Wall (1996) examination of intrinsic and extrinsic cues needed products representing a range of characteristics. Hence, they used three types of products (men's business shirts, smoke detectors, and pickles) providing a realistic variety of factors for the research. In contrast, Chao (1989), Insch and McBride (1998, 2002) and Schooler (1965), among others, overlooked to mention explicit reasons for their choice of consumer products. However, they give a glimpse of why of their selection allowing the reader to realize the bases.

Services and concepts have also been treated as test products in country-of-origin research. From the studies scrutinized, Bruning (1997) and Webb and Po (2000) are the only two examining services as test products (see Table 6). In both cases, their research design used country-of-origin to understand customers' preferences and perceptions. Besides, four studies employing concepts were recognized. Brunner et al. (1993), Fenwick and Wright (2000), and Wee et al. (1993) used countries to investigate, their product images. Nevertheless, studying the first-move advantage, Chen and Pereira (1999) use a fictitious, imaginary high tech product. In that paper, the first-move advantage refers to the pioneering brands that enjoy long-term market share advantages along with possible advantages in distribution, product-line breadth and quality. Chen & Pereira need of a product unknown to subjects propelled them to create the fictional "personal tutor" identifying its country-or-origin. They purpose was to measure the effect of the country-of-origin name on the evaluation of the product. No study was found to use more than one test product identified as service or concept contrasting appreciably with the use of goods as test products.

The selection of the test products researching country-of-origin seems to comply with particular factors of the research objectives. While the analyses of products range from goods to services, few studies used concepts as test products. In general, researchers have solid bases for the examinations of particular products despite few others mention their reasons. The variety of products used is substantial. Products diversity is ample, from personal (as discussed above) to industrial use. The presence of the country-of-origin effects on the subjects' evaluation appears to be involved with a wide range of products.

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Table 6
Details of the Classification of Product-Country of Origin Studies: Test Products

Goods	
Advertising, Cigarettes, & Movies	Goldberg and Baumgartner, 2002
Answering Machines, Camcorders, Cameras, CD Players, Clock Radios, Cordless Telephones, Microwaves, Receivers, Telephones, TVs, VCRs, VHS tapes	Agrawal and Kamakura, 1999
Apparel/Clothing	Crawford and Lumpkin, 1993; Hester and Yuen, 1987; Lim and O'Cass, 2001
Automobiles	Ahmed et al., 1993; Durvasula et al., 1997; Erickson et al., 1984; Heimbach et al., 1989; Johansson et al., 1985

Automobiles & Blenders	Parameswaran and Pisharodi, 1994
Automobiles, Beer, Bicycles, Crystal, Shoes, & Watches	Roth and Romeo, 1992
Automobiles, Calculators, Cameras	Parameswaran and Yaprak, 1987; Yaprak and Parameswaran, 1986
Automobiles, Cameras, & Maxi Pads	Hong and Toner, 1989
Automobiles & TVs	Han and Terpstra, 1988; Han, 1989, 1990
Automobiles, Shoes, & VCRs	Ahmed and d'Astous, 1996
Bed Sets, Cameras, Electric Typewriters, Luggage, Shoes, Sport Coats, VCRs, Wristwatches	Cordell, 1992
Bicycles & Typewriters	Maronick, 1995
Blend of several fruit juice & Fabric (beige)	Schooler, 1965
Building Materials, Chemical Products, Electrical Equipment, Farm Equipment, Machine Tools, Paper Products, Passenger Aircraft, Scientific Precision Equipment, Textiles, Turbines and Generators	Chasin and Jaffe, 1979
Buses	Stewart and Chan, 1993
Canned Meat, Canned Mushrooms, Canned Peaches, Canned Sweet Potatoes, Corned Beef, Jackets, Radios, Shirts, Shoes, Slacks, Tape Recorders, Toys, TVs	Gaedeke, 1973
Car Radio/Cassette Players & TVs	Okechuku, 1994
Car Radios, Car Tires, Drills, Flashlights, Glue, Hair Dryers, Toothbrushes & Towels	Nes and Bilkey, 1993
Cars/Spare parts, Electronics, Products-in-general	Agbonifoh and Elimimian, 1999
Chile Salsa & Potato Chips	Almonte et al., 1995
Clock Radios, Microwave Ovens, & Razor Blades	Heslop et al., 1998
Dictation System, List Trucks & Machine Tools	White and Cundiff, 1978
Farm Tractors	Johansson, Ronkainen, and Czinkota, 1994
Food Products	Bailey and Gutierrez de Pineres, 1997
Foreign products	Damanpour, 1993
Headache tablets & TVs	Mort and Duncan, 2000
Jeans, Sneakers, Stereos, & Watches	Iyer and Kalita, 1997
Jeans, Sport Shoes, Deodorants, Perfumes, After-shave, Walkmans, Calculators, & Watches	Marcoux et al., 1997
Luggage & PCs	Zhang, 1997
Machine Tools and Component Parts	Dzever and Quester, 1999
Mountain Bikes	Gürhan-Canli and Maheswaran, 2000a
PCs & VCRs	Hong and Wyer, 1989, 1990
PCs	Maheswaran, 1994
Playing cards, Life Insurance, Cough Syrup, & Winter Coats	Baumgartner and Jolibert, 1978
Seafood	Olsen and Olsson, 2002
Shirts & Tea bags	Fischer and Byron, 1997
Shirts & TVs	Zhang, 1996
Shirts, Smoke Detectors & Pickles	Liefeld et al., 1996
Stereo Systems	Maheswaran, 1994, 1994
Stereo Systems, TVs & VCRs	Chao, 1989; Gürhan-Canli and Maheswaran, 2000b; Jaffe and Martínez, 1995
Telephones & TVs	Lim et al., 1994
TVs	Ettenson, 1993; Li et al., 2000

TVs, Athletic Shoes, & Mountain Bikes	Insch and McBride, 1998, 2002
Services	
Air Line Industry	Bruning, 1997
University	Webb and Po, 2000
Concepts	
Countries as Products	Wee et al., 1993
Buy Campaign	Fenwick and Wright, 2000
Fictional Product: The personal tutor	Chen and Pereira, 1999
Made in China products	Brunner et al., 1993

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4. Test products brand. One extrinsic characteristic regularly attached to the test products researching country-of-origin is their brand. However, not every study uses brands in their analysis. Many of them test the products without considering any brand. For instance, the focus in many cases is on the evaluation of the origin of the products regardless of their brand (cf. Bailey and Gutierrez de Pineres, 1997; Insch and McBride, 1998; Olsen and Olsson, 2002; and Schooler, 1965 among others). Many other times, the brand is linked to a country-of-origin and researches examine the products using a particular brand. From the initial list of 99 studies investigated, 20 use brands for the test products. Table 7 shows the list of the brands included. Interestingly, the large amount of brands is from automobiles followed by TVs and VCRs. As mentioned earlier, researchers have employed such products given the consumers familiarity with them.

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Table 7
Details of the Classification of Product-Country of Origin Studies:
Test Products Brand

Automobiles	
Audi 400, BMW 320i, Chevrolet Citation, Datsun 200SX, Ford Mustang, Honda Accord, Mazda 626, Plymouth Reliant, Toyota Celica, Volkswagen Rabbit	Erickson et al., 1984
Audi 4000 or Audi 80, BMW 320i or BMW 318i, Chevrolet Citation, Datsun 200SX or Nissan Sylvia, Ford Mustang, Honda Accord, Mazda 626 or Mazda Capella, Plymouth K-Car, Toyota Celica, Volkswagen Rabbit or Golf	Johansson et al., 1985
Buick Skyhawk & Ford Escort, Honda Accord & Toyota Celica, Hyundai Excel	Han, 1989, 1990
Chrysler Colt, Honda Civic, & Volkswagen Rabbit	Han and Terpstra, 1988
Fiat 28, Honda Civic, Volkswagen Rabbit	Parameswaran and Yaprak, 1987; Yaprak and Parameswaran, 1986
Ford, Hyundai, & Toyota	Ahmed and d'Astous, 1996
Ford, Lada, & Toyota	Ahmed et al., 1993
Volkswagen Jetta & Hyundai Stellar	Parameswaran and Pisharodi, 1994
Blenders: Krup & Goldstar	Parameswaran and Pisharodi, 1994
Buses: Nissan, Mitsubishi, & Mercedes-Benz	Stewart and Chan, 1993
Calculators: Canon, Olivetti, Royal	Parameswaran and Yaprak, 1987; Yaprak and Parameswaran, 1986
Cameras: Canon, Leica, Ferraria	Parameswaran and Yaprak, 1987; Yaprak and Parameswaran, 1986
Canned Food: Del Monte, Green Giant, Libby's, & Swift	Gaedeke, 1973
Car Radios: Blaupunkt, Kenwood, Kraco, & Pioneer	Okechuku, 1994
Car Tires: Elkem & Goodyear	Nes and Bilkey, 1993
Cigarettes: Marlboro	Goldberg and Baumgartner, 2002

Clock Radios: Avery & General Electric	Nes and Bilkey, 1993
Drills: Algot & Black & Decker	Nes and Bilkey, 1993
Flashlights: Eiser & Ray-O-Vac	Nes and Bilkey, 1993
Glue: Home's & Elmer's	Nes and Bilkey, 1993
Hair Dryers: Tekam & Conair	Nes and Bilkey, 1993
Jackets: Penny's Towncraft	Gaedeke, 1973
Microwave Ovens	
GE & Sony	Nebenzahl and Jaffe, 1996
Grundig & Sanyo	Nebenzahl and Jaffe, 1993
Radios: General Electric, Motorola, Sears Solid State	Gaedeke, 1973
Shirts: Penny's Penn-Prest, Sears Perma Prest, Weinstock's Centura	Gaedeke, 1973
Shoes: Florsheim, Pfister, Thom McAn	Cordell, 1992
Slacks: Penny's Towncraft	Gaedeke, 1973
Stores[a]: Yellow, Trans Canada, & Simard and Voyer	Ahmed and d'Astous, 1996
Tape Recorders: Ampex	Gaedeke, 1973
Toothbrushes: T2 & Pepsodent	Nes and Bilkey, 1993
Towels: Roza & Cannon	Nes and Bilkey, 1993
Toys: Mattel	Gaedeke, 1973
TVs	
General Electric & RCA, Panasonic & Toshiba, Samsung & Goldstar	Han, 1989
General Electric, Grundig, JVC, & Samsung	Han and Terpstra, 1988
General Electric, Helios, Philips, Record, Sony, Videoton	Ettenson, 1993
Gold Star	Chao, 1989
Magnavox, Sylvania, & Zenith	Gaedeke, 1973
Philips, Samsung, Sony, & Zenith	Okechuku, 1994
VCRs	
GE & Sony	Nebenzahl and Jaffe, 1996
GE, Samsung, & Sony	Ahmed and d'Astous, 1996
Gold Star	Chao, 1989
Grundig & Sony	Nebenzahl and Jaffe, 1993
Watches: Seiko, Tempomax, Timex	Cordell, 1992

Note: a. Stores names were used as surrogate for shoes.

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II. Construct decomposition.

The importance of this major group in the classification of PCOO studies (see Table 1) is meaningful to the advance in the understanding of the country-of-origin effects. As the research in the area matured, the country-of-origin construct began to be decomposed into more specific elements. The studies here included represent that stream of research. The decomposition of the country-of-origin construct has one of its examples in a product branded in one country while actually is manufactured or designed in another. Although Parameswaran and Yaprak (1987) mention some facets of the country-of-origin construct later taken by Parameswaran and Pisharodi (1994), their research purpose was not to decompose the country-of-origin construct Probably, Han and Terpstra, 1988 are the first to explicitly scrutinize the decomposition of the construct. They estimated the values of country-of-origin vs. brand name as a cue in product evaluations contrasting products made and branded in the USA and abroad. They concluded that both source country and brand name affect consumer perceptions of product quality. Later, Chao (1993) used the term "hybrid products" refereeing to products made in one country, designed in another and sold in a third one. His study analyzed country of assemble (COA) and country of design (COD) addressing the multidimensionality nature of the construct. The results showed that COA had not significant impact on

design quality perception while the COD influenced the perception of quality. Chao's study demonstrated the value of dimensionalizing the country-of-origin construct.

Country-of-origin seems to have several dimensions, but some of them appear to be on the image of the origin country. Attempting to develop and refine a scale for measuring country-of-origin image, Parameswaran and Pisharodi (1994) identify several facets of country-of-origin image. Two of those facets, general country attribute (GCA) and general product attribute (GPA); the third facet was specific product attributes (SPA). The three facets were previously identified as two by Yaprak and Parameswaran (1986) while introducing a deductive, paradigm-integrative approach to study country-of-origin. GCA referred to consumer's perceptions of origin countries affected by cognitive, affective, and conative responses to the country-of-origin's people. GPA intended to capture the consumer's knowledge about the capacity of the people of an unfamiliar country for producing quality products in general. Finally, SPA included product-, marketing-, and firm-goodwill-related attributes. Parameswaran and Pisharodi (1994) study found that GCA consisted of two components, one represented by items measuring conation (the interaction facet) and the other represented by items measuring cognition and affect (the people facet). Likewise, GPA incorporated three components: negative or undesirable product attributes, positive or desirable product attributes relating to promotional/distributional image, and positive product attributes relating to product image. Nevertheless, the study was unsuccessful identifying clear components of the SPA.

It is plausible to delineate the domain of country-of-origin construct in a different fashion as Samiee (1994) attempted. Examining the customer evaluation of products, Samiee (1994) conceptualized three constructs: country-of-origin, country-of-manufacture (COM), and country stereotyping effects (CSE). Differently to what could be expected, Samiee identified country-of-origin as the country with which a firm is associated. COM followed a more traditional definition as the location of manufacture or assembly of a product referring to the final site of manufacture. Nevertheless, the influence or bias resulting from country-of-origin and/or COM was labeled as CSE which may be based on experiences with any product originated in the country of interest, from past personal experiences, knowledge about the country, political beliefs, ethnocentric tendencies, fear of the unknown, and similar. Although country-of-origin and COM are factual information, CSE seems to reflect customers' attitudes and emotions resulting of how both country-of-origin and COM cues are perceived. The introduction of the CSE is done by Samiee due to the then scant research of country-of-origin to form inferential beliefs. He asserts that subjects exposed to country-of-origin cues modify their attitudes toward products. Despite the deconstruction of the country-of-origin is never mentioned by Samiee, al least two of the dimensions examined (country-of-origin and COM) correspond to what others researchers have considered as part of the country-of-origin construct.

The growing literature findings on the decomposition of the country-of-origin construct have kept suggesting the multi-dimensionality of the concept. Ahmed and d'Astous (1996) undertook the division of it into at least two cues: country of design (COD) and country of assemble (COA), following Chao (1993), adding brand name as one of the additional information cues. Brand name was added because seemed often been associated with the brand's corporate headquarters country location. Thus, brand name, COD and COA were argued to be extrinsic cues used by consumers to evaluate products. The study concluded that apparently consumers make a distinction between the COD and COA cues which seem to perform strongly than brand cues; also, it was suggested to include country of parts (COP, researched later by Insch and McBride, 1998). In the meantime, Iyer and Kalita (1997) studied "bi-national products" (pp. 8) bearing a brand name associated with one specific country while its manufacture was done in a third country. They deemed that the country-of-origin construct has two parts, the "Made in" image (country-of-manufacture or COM) and the "country-of-brand origin" (COB) image. Apparently, COM is used in the same fashion as the COA introduced earlier by Chao (1993). The study tested the impact of both cues on consumer's perceptions of quality, value and wiliness to buy bi-national products. Again, it was found that COM and COB are factors considered by consumer's evaluations of quality and value. Moreover, such factors appear to have a particular effect absenting brand names.

Following the trend of the literature, additional research was further added to the deconstruction of the country-of-origin construct. Both studies by Insch and McBride (1998, 2002) include the same three

components of the construct, country of design, country of assembly and country of parts. Country of design (COD) is defined as the country where the product was conceived and engineered. Country of assembly (COA) is the country where most of the product's final assembly was done. Moreover, country of parts (COP) represents the country where the majority of the materials used in the product come from and/or the components parts are made. As expected, the results evidenced that the three components have an effect on consumers' perception of the product overall quality. However, not all the three dimensions demonstrated to have equally importance along the consuming countries and products analyzed. Thus, the authors suggest to evaluate carefully the convenience to indicate and to use different country images due to the powerful influence of the country-of-origin phenomena. Likewise, Dzever and Quester (1999) arrived to similar findings using only two dimensions COD and COA surveying a sample of purchasing agents which provided their perceptions of component parts and equipment from a range of countries (see Table 2). Finally, Li et al. (2000) examined the effects of global sourcing location and some related factors on consumer's evaluations of product quality decomposing the country-of-origin construct into COD, COA and country-of-corporation (COC).

The decomposition of the country-of-origin construct contributes to the study of consumer behavior presumably simplifying its multidimensionality. However, some of the dimensions proposed seem to have more than a single unidimensionality (for a full list of the components discussed before see Table 8). GCA, GPA, SPA and CSE can be included in that class. In a similar vein, while at least one component (USA branded) specify one country, the rest of them might related to more than one country, i.e. can be used for most of the origin or source countries. Although some authors have used different tags to designate equivalent dimensions, probably COA, COB, COD, COC and COP will prevail for future research. It general, it can be said that there are more advantages in the use of multi-items compared with a single-item to measure a single construct (Churchill, 1979). Despite the aforementioned, the proliferation of research using country-of-origin continues and seems endless as more studies include diverse aspects of relevance in countries sparse researched.

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Table 8
Details of the Classification of Product-Country of Origin Studies: Construct Decomposition

Country stereotyping effects (CSE)	Samiee, 1994
Country-of-assemble (COA)	Ahmed and d'Astous, 1996; Chao, 1993; Insch and McBride, 1998, 2002
Country-of-brand (COB)	Iyer and Kalita, 1997
Country-of-corporation (COC)	Li et al., 2000
Country-of-design (COD)	Ahmed and d'Astous, 1996; Chao, 1993; Insch and McBride, 1998, 2002
Country-of-manufacture (COM)	Iyer and Kalita, 1997; Samiee, 1994
Country-of-origin (CO)	Samiee, 1994
Country-of-parts (COP)	Insch and McBride, 1998, 2002
Foreign branded	Han and Terpstra, 1988
General country attribute (GCA)	Parameswaran and Pisharodi, 1994
General product attribute (GPA)	Parameswaran and Pisharodi, 1994
Specific product attribute (SPA)	Parameswaran and Pisharodi, 1994
USA branded	Han and Terpstra, 1988

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III. Cross-cultural/national generalizability.

Relevant to the study of PCOO is the cross-cultural/national generalizability of the findings included in this major group. It can be said, that by definition, all studies considering PCOO have a cross-cultural/national

elements since at least two countries are analyzed, the source and the consuming countries. However, studies here considered attempted to compare results from different cultures and/or nations crucial to make meaningful comparisons across them (Malhotra, Agarwal, and Peterson, 1996). Such research has used culture or a nation as its main independent or dependent variable but not as an extraneous and/or residual variable (Nasif, Al-Daeagj, Ebrahimi, and Thibodeaux, 1991). Generalizability refers to the degree to which a study based on a sample applies to the population as a whole (Malhotra, 1999). In general, the term reefers to the classical theory of generalizability where there is an emphasis on parallel tests assuming that measurement conditions are equivalent (Rentz, 1987). By the same token, Netemeyer, Durvasula, and Lichtenstein (1991) examined the proprieties of the consumer ethnocentrism scale (CETSCALE), originally developed by Shimp and Sharma (1987), with the intention to test its reliability among other statistical proprieties. The CETSCALE was initially developed with the intention "to measure consumers' ethnocentric tendencies related to purchasing foreign- versus American-made products" (Shimp and Sharma, 1987, pp. 281). The analysis performed by Netemeyer et al., 1991 used the 17-item CETSCALE along with other measures used in previous cross-national studies. The scale was translated, checked for consistency and applied to a homogenous sample of students from France, Japan, the USA and West Germany. The results provided support for the factor structure and reliability of the CETSCALE across the four countries. However, the limitation of the generalizations beyond the samples and countries used were also noted.

The study by Durvasula et al. (1997) examined the reliability of the CETSCALE similarly to what Netemeyer et al. (1991) did. Once again, Durvasula et al. (1997) collected data from university students in Russia and the USA. The CETSCALE was manipulated similarly and the findings were comparable to the earlier found by Netemeyer et al. (1991): consistency of the internal estimates across the countries, the scale was unidimensional exhibiting discriminant and nomological validity. Discriminant validity, a type of construct validity, concerns the individuals' general attitude toward their home country correlating possibly with the CETSCALE. Nomological validity refers to the extent to which predictions based on the concept purported to measure by an instrument are confirmed, the CETSCALE correlated negatively with the subjects' attitude toward buying foreign products.

Along the methodological considerations mentioned in the literature, cross-national consumer research relates to the concerns about generalization. Green and White (1976) discuss the instrument equivalence as a factor to ponder in cross-national research. Measuring the same problem across nations needs one of the two general types of measures: emic or etic. Emic instruments are tests constructed to study a phenomenon only in the context of a single society while etic instruments are culture-free and that instrument (adequately translated) can be employed in almost any country. In general, most of the instruments constructed to measure consumer behavior are emic (Green and White, 1976). The exercise performed by both Netemeyer et al. (1991) and Durvasula et al. (1997) is one example of the applicability of the same instrument in different country (possibly surrogating culture). The direct comparisons on the same variables across nations and solving, to a certain extend, the instrument equivalence problem (Nasif et al., 1991) helps to understand the universality of the PCOO effect. The applicability of a scale developed in one country (the USA) is relatively possible and desirable (Adler, 1983).

IV. Research in related areas.

Studies using PCOO as a base to undertake related studies are found in this major group of foreground studies. From the studies investigated, four related areas have been detected (see Table 1). Stereotyping refers to consumers common notions about people in other countries (Khanna, 1986). Furthermore, stereotypes can be schemas formed on less objective bases such as attributes that are inferred, context dependent, and vary across the consumers' classification of products (Maheswaran, 1994). Also, product country images have been considered as product country stereotypes (Almonte et al., 1995). Ethnocentrism can be defined as the beliefs to view purchasing foreign products as wrong because it hurts the domestic economy, causes job loss, and is unpatriotic (Durvasula et al., 1997; Shimp and Sharma, 1987). Animosity is defined by Klein, Ettenson, and Morris (1998) "as the remnants of antipathy related to previous or ongoing military, political, or economic events" (pp. 90) affecting consumers' purchasing behavior of products originated from a country with that resentments. Although brand is a very well known

concept in marketing, its use with PCOO is commonly seen. Under that conception, brand is envisaged as an identification of a product to differentiate it from competitor offerings. However, recent studies use country of origin of brands as part of the research question. All the research areas encompassed in this group have particular contributions to the advancement of PCOO knowledge and help to understand better their effects in the international marketplace.

In general, the studies included in this major group use country-of-origin as a basis to understand other phenomenon. Khanna (1986) focused on the negative impact of country stereotypes affecting consumer perception of products originated in developing countries. Likewise, Maheswaran (1994) examined country-of-origin as stereotypes influencing consumers' evaluations as well as their recall. Contrastingly, the research made by Almonte et al. (1995) used a particular phenomenon called "malinchismo" as the stereotypes Mexicans have about foreign products. "Malinchismo" is generally used in Mexico as a term to "signify someone who betrays national goals, sells out to foreigners, or devaluates the Mexican identity in favor of foreign benefits" (pp. 28-29) expecting that such phenomenon work in favor of foreign origin products marketed in Mexico. The study seems to have some implications to animosity and ethnocentrism, areas of research not explicitly considered.

The concept of consumer ethnocentrism was introduced and measured by Shimp and Sharma (1987). They defined the concept and developed a scale (the consumer ethnocentrism scale or CETSCALE). The definition (presented in the previous major group) needed products originated from a foreign country to measure the level of consumers' judgments bias to accentuate the positive aspects of domestic products over foreign ones. Although Shimp and Sharma (1987) said to follow the procedure suggested by Churchill (1979) to develop marketing measurements, Durvasula et al. (1997) validate the CETSCALE. The 17-items of the scale need to have a country other than the national to measure the ethnocentrism level of the consumers. The CETSCALE will be used and better explained later in this work.

The research done by Klein et al. (1998) distinguishes between animosity and consumer ethnocentrism. In general, studies of consumer ethnocentrism have found that scores on the CETSCALE are inversely related to willingness to buy foreign products, quality perception of imports, and cultural openness (Durvasula et al., 1997; Netemeyer et al., 1991; Sharma, Shimp, and Shin, 1995; Shimp and Sharma, 1987). While consumers scoring low on CETSCALE might tolerate purchasing products originated in some countries, their animosity will limit willingness to buy products form a specific country. As with the previous related areas, PCOO effects are used to analyze another related area, animosity.

Finally, brand can be considered as a related area to the study of PCOO employing the country where the brand was originated. Two examples of such studies including that perspective were recently done by Agrawal and Kamakura (1999) and Lim and O'Cass (2001). Agrawal and Kamakura (1999) reasoned in country of origin as a cue to evaluate competing brands associated with different samples and focused on the country with which the firm producing the brand is associated and not where the brand is indeed manufactured or assembled. Similarly, Lim and O'Cass (2001) alleged that hybrid products (Chao, 1993) information causes country-of-origin effects to shift from the product level to the brand level in consumers' product evaluation. They suggested that country-of-origin is less relevant to consumers than culture-of-brand-origin (the country associate with the brand) and this is more recognizable due to the consumer marketing exposure to the brand.

The related areas of research using PCOO as a framework help to explain several lacunas observed in international marketing. In many regards, it is possible to elucidate that the related areas here considered are not unique whereas the field is fertile. Similarly, these related areas of study are not exclusive and can be seen in other marketing studies (i.e. brand studies). It can be expected the inclusion of more related areas to the study of the PCOO effects as the field progresses.

Final Comments

The purpose of this paper was to introduce a classification of the country-of-origin research. The classification includes areas that cover aspects used by researchers while studying country-of-origin directly or as a base or support for other studies. As one of the classes, foreground studies have been scrutinized resulting in four major groups. Despite the generalized finding that country-of-origin is an effect present in almost every consuming country, there is still research needed to understand many of its effects on different consumers. Studying country-of-origin needs products originated in either the domestic market or international. The sourced countries studied represent a good amount of the countries. On the other hand, the consuming countries researched are only a small part having the opportunity to continue using them or adding other countries as the globalization reaches them. Many countries form Central and South America, Africa, and Asia are in that case.

As the globalization continues, the persistent presence of products designed, manufactured, produced, branded, and or with parts from different countries opens a good opportunity to research hybrid products. Additionally, the brands and store nationality could be added to the process. Although most of the researchers recognize the effects of country-of-origin on consumers' behavior, their generalization and specific effects are still controversial. Despite the large number of studies done, the country-of-origin effect is somehow generalizable, but much is still needed regarding the direction or intensity. Similarly, country-of-origin can be used to research related areas where much is yet needed. Understanding stereotyping, ethnocentrism, animosity and brands opens a vast door. Notwithstanding some of these have been studied extensively such as brand and stereotyping, the other two are relatively new.

Managers and marketers are each day more aware of the needs and perceptions of the consumers. Firms are investing and producing overseas. Then, they need to discover the best way to satisfy customers knowing their attitudes, perceptions and behavior. It seems that such tendency will draw the difference between survival and failure.

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