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Parallel imports debate: Resource Advantage theory perspective

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Parallel imports (PI) are goods brought legally into a market without the authorization of the local intellectual property rights (IPR) owner. Whether governments should allow PI liberally or not has been a subject of great debate. In this paper, we argue that full-scale liberalization of PI hurts international competition and should not be allowed. Instead, we argue that national/regional IPR exhaustion within countries or groups of countries with similar demand characteristics, while sustaining price differentiation across groups with different demand characteristics, may be the optimal global policy on PI activities. Our arguments are based on Resource Advantage (R-A) theory.

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INTRODUCTION

Parallel imports, also called gray market imports, are genuine goods produced under the protection of intellectual property rights (IPRs), sold into one market, and then brought legally into another market without the authorization of the local intellectual property rights (IPR) owner (Maskus, 2010). For instance, M-Tech Data Ltd., a UK-based retailer, imported 64 new Sun Microsystems computer disk drives from a U.S. retailer and sold them to a customer in the UK. These disk drives were originally supplied by Sun for purchasers in China, Chile, and the United States. M-Tech Data Ltd. did not seek the authorization of Sun when importing the goods from a U.S. retailer into the UK (UK Supreme court, 2010). Parallel imports, also called gray market goods, are widespread across many industries. Parallel import goods can include automobiles, books, video games, pharmaceuticals, consumer durable and non-durable goods, etc. (Ahmadi & Yang, 2000). Goods worth billions of dollars are placed in gray markets which directly result in substantial losses to companies. For instance, the parallel import activity in pharmaceuticals in the United Kingdom was valued at one billion Euros in the United Kingdom alone (Kanavos & Holmes, 2005). Also, parallel import activity in the information technology industry in the United States has grown from \$40 billion in sales and \$5 billion in lost profits in 2002 to \$58 billion in sales and \$10 billion in lost profits in 2008 (KPMG, 2008). While parallel trade has negatively impacted manufacturers, proponents of parallel trade point to the beneficial effects for the end consumers in that the goods become accessible at inexpensive prices.

Parallel import is essentially an arbitrage of IPR protected goods (Maskus, 2010). For instance, Bayer sells the drug ciprofloxacin for \$740 (U.S. dollars) per 100 units in Mozambique, while the same drug is sold in India for \$15 because of local generic competition. Such price differentials offer motivation to import the product from India without Bayer's consent (WHO, 2014). Most goods incorporate a complex mix of numerous IPRs such as copyrights, patents, and trademarks to support their global distribution. IPRs provide protection to their owners, encourage the creation and development of new technologies and products, enable IPR owners to monitor marketing activities, and enforce product quality (Maskus, 2010). For this reason, IPR owners are granted with exclusive production and distribution rights, which help them collect economic returns on their R&D investments. Therefore, IPR owners may find their profit diminished by the ability of parallel imports to interfere with price differentials, maintaining vertical control, and limiting licensing revenues (Maskus, 2000).

The most important limitation on the scope of IPR is the exhaustion doctrine, which states that at some point the IPR holder loses its exclusive distribution rights (Maskus, 2000). For example, in the United States and the European Union, first-sale doctrine indicates that distribution rights are exhausted upon the first sale anywhere in the U.S. (national exhaustion) and in the territory of the EU (regional exhaustion). Once IPRs are exhausted, it becomes legal for anyone to sell the goods purchased within the territory. However, both the U.S. and the EU prohibit imports of such goods from outside their territories. Though there are different practices when it comes to exhaustion doctrine, developing economies generally have a more open regime and, therefore, are more inclined toward allowing parallel imports (called PI hereafter) in all fields of IPR (e.g., copyrights, patents, trademarks) than are developed economies. This difference comes from the reasoning that competition from PI could force distributors to charge lower prices, and the resultant low prices benefit consumers of developing nations.

On the other hand, IPR owners have a strong incentive to sell their protected goods at different prices to different types of customers. Different markets represent different demand elasticity (changes in demand with respect to changes in many economic variables); and, given these differences in demand, firms prefer to differentiate their prices across different markets to increase their total return of investments. This environment creates opportunities for parallel importers to import from low-priced markets and sell in high-priced markets bypassing the authorized distribution channels as long as the costs of procuring and shipping (trade costs) do not exceed the price differentials between markets. Therefore, PI are essentially an arbitrage of IPR protected goods across markets regulated by different PI-related policies; and, they limit the scope for international price discrimination (Malueg & Schwartz, 1994). For example, pharmaceutical firms in developed economies that agreed to provide many essential drugs at

low cost in Sub-Saharan African nations are concerned that these drugs might be sold into higher-price markets through parallel export channels in Korea, Japan, and other nations (Maskus, 2000).

PI affect firm profits in many ways. They not only limit the scope for international price differentials but also make the distribution of goods inefficient because the costly trade of managing both legitimate and illegitimate distribution channels replaces more cost-efficient local distribution dealing with just authorized supply chains (Maskus, 2010). Reduced profits eventually diminish firms' R&D incentives. Therefore, regulation of PI has become a critical issue in the global trading system.

Because PI activities are damaging to manufacturers and perceived to be beneficial to consumers, there is a great debate about allowing PI. Proponents of PI argue that liberalization of PI will integrate markets, strengthen competition, and reduce prices for consumers. They also argue that a ban against PI could confer considerably greater market power on IPR owners, supporting their higher monopolistic prices in particular markets (e.g., Abbott, 1998). On the other hand, some analysts advocate a global ban against PI by arguing that it is a natural extension of the rights of IPR owners to control international distribution. Simply, allowing PI creates many hurdles for IPR owners which affect their ability to set separate prices that capture the economic valuation of specific consumers (Barfield & Groombridge, 1998). For instance, profits from PI go to unauthorized distribution channel members. Authorized channel members suffer a reduction in sales and profits creating disruption in relations between IPR owners and their authorized suppliers. Further, when genuine products are sold at a steep discount in a market, the brand image suffers (Myers & Griffith, 1999). It is also argued that IPRs are forms of knowledge capital, and they have been the key determinant of long run growth in national economies (Nelson & Romer, 1996). Hence, protection of IPRs and enhanced economic performance are strongly interconnected (Bale, 1998; Barfield & Groombridge, 1998).

The root of the debate, regarding a global ban versus full liberalization of PI, stems from the fundamental principle of the World Trade Organization (WTO), which is the prohibition of tariff and all other trade barriers to support the free movement of goods and services across and within the boundaries of member countries. Thus, restraints against PI constitute non-tariff barriers to international trade and are inconsistent with the fundamental principle of WTO (Abbott, 1998). Relatedly, advocates of PI support the idea that any vertical arrangements and market segmentation-based price differentiations to control PI have monopolistic purposes and artificially raise prices. The fundamental principle of WTO – free movement of goods and services – has this underlying belief that specialization and free trade will benefit all the trading partners in the long term. Therefore, any system that prevents PI does not comport with this belief. At the same time, the differences in perceived consumer interests make it difficult to achieve international agreements on exhaustion (Maskus, 2000). It almost proved impossible in WTO's trade negotiations to reach a global consensus on whether to ban or liberalize PI activities.

Our contribution through this paper is as follows. We show that, (1) assumptions behind the arguments made by both proponents and opponents of PI activity are inconsistent with the reality of international trade. Both sides assume that markets operate under the conditions of perfect competition. In reality, PI happen in markets with imperfect competition because imperfect competition is the result of firms maintaining pricing power and price differentiation schemes (Conley, 2008). Thereby, PI, in most conditions, are at odds with the WTO's free trade argument, (2) Based on the R-A theory of competition, we support the national/regional IPR exhaustion on PI. We argue that national/regional IPR exhaustion within countries or groups of countries with similar demand characteristics and low transport costs, while sustaining price differentiation across groups with different demand characteristics, may be the optimal global policy on PI activities. There are reasons to believe that price differentials, market segmentation, vertical price controls, and protecting IPRs to encourage firms' R&D investments in competitive markets can be beneficial overall. Further, we argue that full liberalization of PI harms the economic growth of nations, and is detrimental to global welfare in the long term. Therefore, our analysis is a departure from just the pro-parallel trade versus the anti-parallel trade debate and is rooted in sound theory.

The paper is organized as follows. We first briefly review the debate over PI by using two schools of thought in competition policies. Second, we provide an overview of the Resource-Advantage (R-A) theory. Third, based on R-A theory, we discuss why full liberalization of PI harms the economic growth

of nations in the long term, and how regional IPR exhaustion can be an optimal global policy. Finally, we discuss the implications for public policy and conclude that regional IPR exhaustion regime may promote social welfare at a global scale.

PARALLEL IMPORTS DEBATE

In the broadest international legal terms, the debate over liberalization of PI at a global scale stems from the question of:

“To what extent should the IPR holders within particular territories be entitled to restrict the importation of products into those territories on the basis of local IPR ownership when those products have been placed on the market outside the territory with their consent?” (Abbott 1998, p. 607)

This question considers the global trade term - *exhaustion*, which is the territorial right of the IPR owners after the first sale of protected goods and services. The ability of IPR owners to exclude PI legally from a particular market depends on the importing nation’s treatment of exhaustion of IPRs. There are two general territorial exhaustion regimes: (1) national/regional and (2) international. National/regional exhaustion regime awards the right to prevent PI, which means the IPR owners have the right to block the importation or sale of the protected product in domestic markets. However, they cannot prevent the subsequent resale of the product after the owner has exhausted the right of the first sale in domestic markets. On the other hand, according to the international exhaustion regime, the owner loses the exclusive privilege after the first sale of the product *anywhere* in the world, and PI become legal. In specific terms, there are two PI practices based on international exhaustion theory. Passive PI is when patented products are purchased in a foreign market and resold in the domestic markets. Active PI occurs when a foreign licensee exploits the patent then enters the domestic market in direct competition with the owner and other official domestic licensees (Fink, 2004). Both cases lead to intense intra-brand competition, which is the prime factor behind the heated debate around liberalization of PI around the globe. For a detailed discussion and examples on exhaustion policies, please see the following table.

**TABLE 1
PARALLEL TRADE POLICIES**

Parallel Trade Policy	Example countries implementing these policies	What is permitted by the policy?	What is not permitted by the policy?
<i>National exhaustion</i>	United States of America, Canada	Distribution rights are exhausted upon first sale anywhere in the country. Once IPRs are exhausted, it becomes legal for anyone to sell the goods purchased within the country. For example, if a company X has a patent in the U.S. and sells its product to a customer in the U.S., X’s	Countries that adopt this regime have the right to prohibit imports of such goods from outside of their territories. For example, if a company X has a patent in the U.S. and sells its product to a customer in China, X’s rights outside of the U.S. are not exhausted. X can prohibit efforts by the Chinese buyer to import the same product in the U.S.

		rights are exhausted within the U.S. The buyer can resell the product anywhere within the U.S.	
<i>Regional exhaustion</i>	European Union	<p>Distribution rights are exhausted upon first sale anywhere in the region. Once IPRs are exhausted, it becomes legal for anyone to sell the goods purchased within the region.</p> <p>For example, if a company X has a patent in a country in the European Union, say Germany, and sells its product to a customer in another EU member country, say Italy, X's rights are exhausted within the E.U. The buyer in Italy can resell the product anywhere within the E.U.</p>	<p>A region that adopts this regime has the right to prohibit imports of such goods from outside the region.</p> <p>For example, if a company X has a patent in a country in the European Union and sells its product to a customer in China, X's rights outside of the E.U. are not exhausted. X can prohibit efforts by the Chinese buyer to import the same product in the E.U.</p>
<i>International exhaustion</i>	Russia, China, South Africa, India, and most of the developing countries	<p>IPR owners lose the exclusive privilege after the first sale of the product <i>anywhere</i> in the world, and PI goods become legal.</p> <p>For example, if a company X has a patent in the U.S. and sells its product to a customer in Japan, X's rights are exhausted anywhere in the world. The buyer in Japan can freely resell the product anywhere in the world.</p>	

The existence of PI raises a number of interesting policy and strategic questions that have attracted the attention of economists and policy makers. The Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement of the World Trade Organization (WTO) is the main focus of the extensive debate over the liberalization of PI. American negotiators in the Uruguay Round attempted to incorporate a global standard of national exhaustion into the agreement on TRIPS. However, it was not possible to reach such an agreement because of the divergent views on the net benefits of PI (Maskus, 2000). The well-known Article #6 states that

“[f]or the purposes of dispute settlement under [TRIPS], subject to the provisions of Articles 3 and 4 above, nothing in [TRIPS] shall be used to address the issue of the exhaustion of intellectual property rights.”

The final status of the TRIPS agreement preserves the territorial prerogative to regulate PI, which means it implicitly leaves the decision on whether or not to recognize the international exhaustion of IPRs to each member state. This flexibility gained popularity especially in developing countries.

WTO is the only organization that handles the dispute settlement regarding international trade issues. Article #6 of the TRIPS agreement permits each country to establish its own rules on exhaustion, and its decision may not be challenged under the WTO dispute settlement. That means, the PI issue is unresolved and there is no organization that can provide a global policy for the regulation of PI. For example, the United States (U.S.) adopts a mixture of regimes. It pursues the national exhaustion policy for *copyrighted* and *patented* products, thereby, allowing the IPR holders to restrict PI from abroad. However, the U.S. adopts international exhaustion in *trademarked* goods and services and allows their PI. The European Union (EU) adopts regional exhaustion in all fields of intellectual property rights within its member countries. According to Article 30 of the Treaty of Rome, free circulation of products and services should take precedence over IPRs (Maskus, 2000). The basic motivation for adopting this regime by the EU is to encourage regional market integration (Li & Maskus, 2006). Finally, international exhaustion is a general policy in developing nations. However, some developed nations such as Japan, Australia, and New Zealand have recently decided to move toward a more liberal treatment of PI. In May 1998, the New Zealand government accepted international exhaustion regime for the PI of copyrighted goods due to the high prices of compact discs and books (Maskus, 2000). Although music companies recognized that this decision would significantly impair their market segmentation and pricing policies, the New Zealand government argued that acceptance of international exhaustion in copyrighted goods would reduce the prices of consumer goods without disrupting the creative process, and thereby, increase the consumer welfare in the long-term. After this decision, New Zealand was included in the U.S. Special 301 watch list.

Recently, the Russian government announced that its ban on PI would be removed by 2020. They currently apply national exhaustion for trademark rights, and by 2020 they will be adopting the doctrine of international exhaustion. In this specific case, the Russian Federal Antimonopoly Service (FAS) insists that liberalization of PI will strengthen competition, while the ban is an abuse of the dominant position of the trademark owner. On the other hand, the Association of European Businesses (AEB) is trying to persuade the Russian government not to allow PI, arguing it will drive investors away from the local market in addition to increasing the flow of counterfeit products. Prior to the revision of Patent Law, China largely ignored the issue of PI. China's Trademark Law, Copyright Law, Anti-Unfair Competition Law, Foreign Trade Law, and Customs Law do not explicitly deal with PI. Only the revised Patent Law in 2009 has some policies on PI. The Chinese Patent Law follows the international exhaustion doctrine and permits PI (Si & Wang, 2011; Guizhen, 2011).

Since the issue is currently unresolved, it may be insightful to discuss the foundations on which both sides build their arguments. Proponents of PI reflect the monopoly school of economic thought (Barfield & Groombridge, 1998). This school of thought argues, briefly, that vertical restraints and any attempts to control supply chain through vertical arrangements are monopolistic moves intended to artificially segment the markets and raise consumer prices (e.g., abusive price discrimination). This school of thought argues that prevention of PI is a non-tariff barrier to global trade and that it is inconsistent with the fundamental principle of the WTO -- the integration of markets (Abbott, 1998). According to this view, the world should be treated as one uniform market, and the exercise of patent rights, market segmentation, and artificial price discrimination will lessen consumer welfare in the long term. By arguing for the liberalization of PI, proponents hope to prevent wealth transfer that results from a monopoly.

On the other hand, the efficiency school of thought believes that vertical arrangements reduce costs by increasing allocative efficiency (Bork, 1978; Tesler, 1960). Multinational firms expand their markets

through establishing exclusive dealership rights in various territories. These rights assure that multinational firms monitor their marketing efforts and enforce product quality, which results in increased customer benefits and satisfaction (Maskus, 2000). Further, they believe that allowing vertical arrangements is an indispensable means of competing on the basis of regionally distinct marketing components, and, therefore, becomes a decisive factor in international competition. Briefly, full restriction against PI is a necessary complement to exclusive territorial rights (Chard & Mellor, 1989).

We argue here that in the long run, both *full liberalization of* and the *global ban on PI activities* harm international competition and lessen social welfare. Both the monopoly and the efficiency schools base their assumptions on perfect competition and support the neo-classical, equilibrium-based research tradition. We believe that both approaches to PI are misguided. Instead, we suggest that the debate over PI should move beyond the neo-classical, equilibrium-based research tradition. We suggest that the evolutionary, disequilibrium provoking, and process theory of competition provides a more useful theoretical basis for a meaningful debate. With this commentary in mind, we present a brief overview of a process-based theory of competition, Resource Advantage theory of competition, in the next section.

RESOURCE-ADVANTAGE THEORY OF COMPETITION

At the heart of the discussion over restricting PI is one of the most debated questions in the field of business/economics:

Why do firms replace market exchange, where the world is one uniform market and all consumers have access to the one uniform price, with a more complex form of market exchange processes such as vertical integration, contractual relationships, territoriality, segmented markets, and price differentiation? (Barfield & Groombridge, 1998; Williamson, 1985).

Are vertical integration and market segmentation strategies pro-competitive or anticompetitive? Are they good or bad for society's welfare in the long-term? Answering these questions requires exploring the role of these strategies in market-based economies in which privately owned companies compete with each other. It also requires understanding how moderate restrictions on PI influence both society's welfare and how firms compete. Our foundation for exploring these questions is the Resource-Advantage theory (hereafter, R-A theory) of competition. This theory is being developed in economics (Hunt, 1997), general business (O'Keeffe, Mavondo, & Schroder, 1998), management (Hunt, 1995; Hunt & Lambe, 2000), and marketing (Hunt & Morgan, 1995, 1997; Hunt & Arnett, 2001, 2004). Figure 1 displays the dynamic nature of R-A competition; Figure 2 shows the competitive position matrix; and Table 2 provides the foundational propositions of R-A theory. Our overview of R-A theory will closely follow the theory's treatment in Hunt (2000).

The Pedigree and Structure of R-A Theory

As an interdisciplinary theory of competition, R-A theory shares affinities with diverse theories, research programs, and traditions, such as evolutionary economics, Austrian economics, heterogeneous demand theory, differential advantage theory, resource-based theory, competence based theory, and socio-economics and institutional theory. Here, we briefly review the influence of each of these. *First*, R-A theory traces to evolutionary economics, which maintains that competition is a process that provokes disequilibrium (Dosi & Nelson, 1994). Competitive processes bring creative destruction and accelerate economic growth and productivity. Technological progress created by competition is what propels gains in real per capita income and long-term economic growth (Schumpeter, 1942). *Second*, Austrian economics views competition as a knowledge discovery process, which means that firms learn through competition as a result of feedback from their financial performance (Misses, 1920). *Third*, heterogeneous demand theory argues that demand in the overwhelming majority of industries is substantially heterogeneous and dynamic; therefore, consumers' tastes and preferences differ greatly within the same

product category and are always changing (Alderson, 1965; Chamberlin, 1962). *Fourth*, differential advantage theory asserts that competition is dynamic and firms struggle with each other for competitive advantages. Firms can either have an efficiency advantage (reducing costs while providing equivalent benefits) or an effectiveness advantage (producing more benefits) or both (more efficiently producing more benefits) (Alderson, 1965; Clark, 1961; Porter, 1985). *Fifth*, resource-based theory views resources as tangible and intangible entities that enable firms to produce market offerings which have value for some market segment(s). Further, it asserts that successful firms that are able to sustain their performance have not only heterogeneous resources, but also resources that cannot be duplicated or imitated precisely by competitor firms (Barney, 1991; Prahalad & Hamel, 1990). *Sixth*, competence-based theory explains how firms develop strategies to effectively and efficiently deploy resources. This theory argues that competition is a continuous dynamic process with the goal of superior financial performance as the major driver of the dynamic nature of competition. Since all competing firms cannot be simultaneously superior in financial performance, competition among firms stimulates both proactive and reactive innovations (Day & Nedungandi, 1994; Prahalad & Hamel, 1990). *Finally*, institutional theory recognizes that societal institutions can be independent variables in the analyses of competition that can cause changes in economic outcomes (Etzioni, 1988; Uzzi, 1996). Thereby, they can influence the process of competition, productivity, and economic growth. Indeed, societal institutions are one of the main facilitators of competition induced economic growth.

R-A theory draws from and shares affinities with several research traditions and theories. However, it is not simply a composite of these theories; it draws only on those aspects of the research traditions that fit together. R-A theory views competition as a disequilibrium provoking, evolutionary, and never-ending process. It views (1) both innovation and organizational learning as natural outcomes of the process of competition, (2) firms and consumers as having costly and imperfect information, and (3) macro-environmental factors (e.g., institutions, public policy, customers, suppliers, competitors) as affecting economic performance.

In R-A theory, firms and their resources are the hereditary units of evolutionary selection, and it is the process of competition that selects firms and resources. R-A theory defines the process of competition as “the constant struggle among firms for comparative advantages in resources that will yield marketplace positions of competitive advantage for some market segment(s) and, thereby, superior financial performance” (Hunt, 2000, p. 135). As shown in Figure 1, R-A theory emphasizes the importance of comparative advantages/disadvantages in resources, and the respective marketplace positions of competitive advantages/disadvantages. R-A theory’s treatment of resources will be one of the foundational arguments that we use to defend the regional exhaustion regime on PI in global markets. As shown in Figure 2, R-A theory emphasizes the importance of firms’ market segments due to differences in consumers’ tastes and preferences. Again, R-A theory’s treatment of market segmentation and price differentials will be another core argument in defending why regional exhaustion regime on PI is pro-competitive in global markets. In our argument, we will also use some of the foundational premises of R-A theory (Table 2).

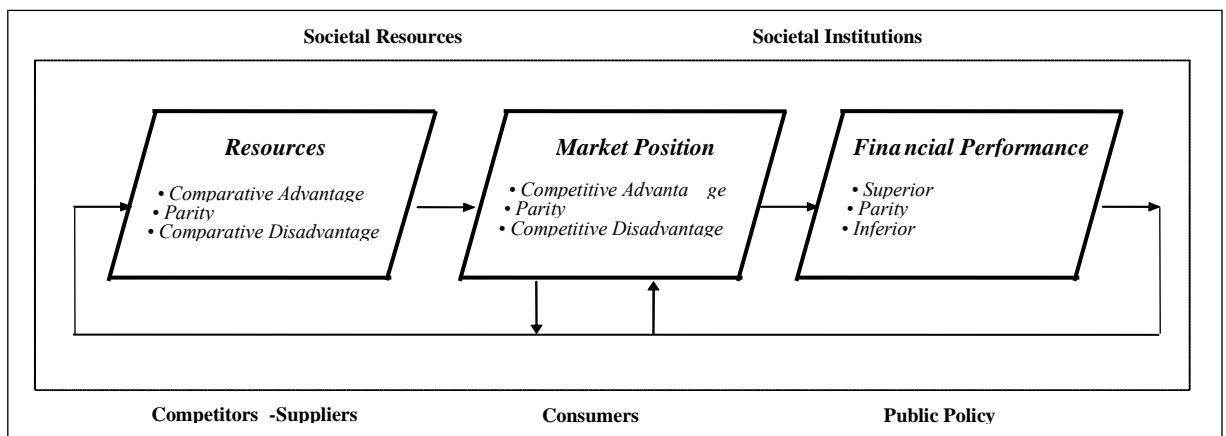
TABLE 2
FOUNDATIONAL PROPOSITIONS OF RESOURCE-ADVANTAGE THEORY

	<i>Resource-Advantage theory</i>
P1. Demand is	Heterogeneous across industries, heterogeneous within industries, and dynamic
P2. Consumer information is	Imperfect and costly
P3: Human motivation is	Constrained self-interest seeking
P4: The firm’s objective is	Superior financial performance
P5: The firm’s information is	Imperfect and costly

P6: The firm's resources are	Financial, physical, legal, human, organizational, informational, and relational.
P7: Resource characteristics are	Heterogeneous and imperfectly mobile
P8: The role of management is	To recognize, understand, create, select, implement, and modify strategies
P9: Competitive dynamics are	Disequilibrium provoking with innovation endogenous.

Source: Adapted from Hunt (2000).

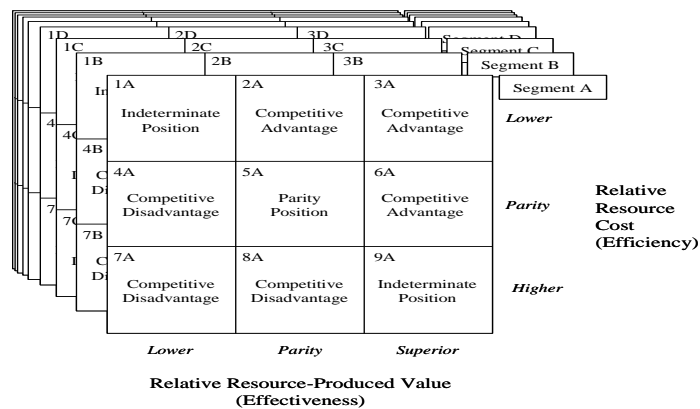
FIGURE 1
A SCHEMATIC OF RESOURCE-ADVANTAGE THEORY OF COMPETITION



Read: Competition is the disequilibrating, ongoing process that consists of the constant struggle among firms for a comparative advantage in resources that will yield a marketplace position of competitive advantage and, thereby, superior financial performance. Firms learn through competition as a result of feedback from relative financial performance "signaling" relative market position, which, in turn signals relative resources.

Source: Adapted from Hunt and Morgan (1997)

**FIGURE 2
COMPETITIVE POSITION MATRIX**



Read: The marketplace position of competitive advantage identified as Cell 3A in each segment results from the firm, relative to its competitors, having a resource assortment that enables it to produce an offering that (a) is perceived to be of superior value by consumers in that segment and (b) is produced at lower costs than those of rivals. * Each competitive position matrix constitutes a different market segment (denoted as segment A, segment B, ...).

Source: Adapted from Hunt & Morgan (1997).

R-A theory views firms as combiners of heterogeneous and imperfectly mobile resources, under conditions of costly and imperfect information, with the primary objective of superior financial performance. Due to the heterogeneity and immobility of resources, R-A theory focuses on comparative advantages in resources among organizations. Some firms will have comparative advantages in resources that are available to them, which enable them to effectively and efficiently produce particular market offering(s) that have value for particular market segment(s). As shown in Figures 1 and 2, when firms have comparative advantages/disadvantages in resources, they can occupy marketplace positions of competitive advantage/disadvantage that will result in superior/inferior financial performance. Furthermore, the extent to which the process of competition fosters productivity and economic growth is significantly influenced by several environmental factors (e.g., societal resources, societal institutions, competitors and suppliers, consumers, and public policy decisions). Figure 2 displays nine possible competitive marketplace positions based on two dimensions and three levels for each dimension. Depending on the level of a firm's relative resource-produced value for some segments and its level of relative resource costs for producing such value, it will either occupy an advantageous, disadvantageous, or an indeterminate position, which would in turn affect its financial position (e.g., superior, inferior, parity). Specifically, a "marketplace positional advantage" means that a firm is occupying one of three cells (cell 2, 3, or 6). In the next section, we will explain how a process view of competition, the R-A theory, could provide a meaningful theoretical foundation for the active debate on PI.

THE PARALLEL IMPORT DEBATE AND RESOURCE-ADVANTAGE (R-A) THEORY

We argue that regional exhaustion regime on unauthorized imports in the exercise of IPRs are, under most conditions, pro-competitive. R-A theory is the foundation for this view and provides supportive argument for this case in the following two sections: (1) price differentials and vertical price controls are pro-competitive and part of dynamic competition, and (2) IPRs represent a financial, informational, and legal resource; and they are the cornerstone of dynamic competition. Therefore, protecting them is essential in global competition and in building strong global economies.

Market Segmentation and R-A Theory

Proponents of the liberalization of parallel trade around the globe majorly subscribe to the monopoly school of thought and defend neo-classical, static equilibrium economics. They argue that IP owners use their rights to artificially segment the markets and charge different prices (Abbott, 1998; Chen, 2002). In this case, the practice of using price differentials is viewed as anti-competitive in that it permits firms to set prices according to each country's market power. This market power is sustained by restrictions against parallel trade, and such restrictions act as non-tariff barriers to trade in goods involved in PI. Supporters of this view believe that to the extent that market segmentation promotes collusive pricing behavior, restricting PI serves as a facilitating device for firms to charge differential prices (Maskus, 2000).

In neo-classical economics, all market offerings are treated as commodities and are "regarded for practical purposes as homogenous within [themselves]" (Robinson, 1933, p.17). It means that consumers' needs, wants, tastes, and preferences are assumed to be alike (homogenous). It also assumes that there is a single demand curve, a single supply curve, and common elasticity of demand (willingness to pay) for each commodity. Therefore, any activity (e.g., market segmentation) that treats consumers differently and fractures markets into artificial segments is detrimental to society and results in welfare losses (Stigler, 1982). Further, the monopolistic school of thought argues that consumers in high-price markets will benefit from PI because unauthorized distribution outlets would import the same goods being offered by the authorized distributors, creating intra-brand competition by lowering the prices. Eventually, the dynamics of this competition would threaten the distributors and motivate them to lower the overall prices (Barfield & Groombridge, 1998). In this case, parallel trade seems to be a competitive mechanism that would eliminate any price differentials and force firms to set uniform prices.

In contrast, other researchers argue that demand heterogeneity is a market reality, and price differentials in segmented markets happen according to demand elasticity (Alderson, 1965; Chamberlin, 1962; Hunt & Arnett, 2004; Smith, 1956). Smith (1956, p.6), in what is considered a seminal article in marketing, argued, "market segmentation may be regarded as a force in the market that will not be denied." As Sawhney (1998, p.54) points out "customers are becoming very sophisticated and are demanding customized products and services to match individual preferences and tastes." There will always be customers who are willing to pay higher prices for higher quality products; and, there will always be customers who would prefer to save money by accepting less quality. From this perspective, firms using market segmentation and price differentiation strategies are not necessarily conducting abusive price discrimination. They are just following the nature of dynamic market structure.

In most of the circumstances, when firm profits are higher, they have a greater ability to engage in price differentiation across different international markets (Krugman, 1986). However, contrary to the monopolistic school of thought, profits are not the only component of economic well-being. The overall impacts on a society's welfare are typically more ambiguous (Maskus, 2010). As Maskus (2000) notes, economic theory has long noted that price discrimination can provide positive economic benefits to society. Under a regime of price differentials, in comparison to a regime of uniform pricing, social welfare increases. Specifically, firms can supply more consumers with lower valuations for a product while extracting additional surplus from consumers with higher valuations. In this way, companies open new markets in countries with low marginal valuation, and, in doing so, both consumer and producer surplus rise. Further, empirical evidence shows that in the presence of parallel trade, IPR owners may choose not to sell in lower valuation countries because local demand could be insufficient under uniform pricing (Malueg & Schwartz, 1994). Therefore, ignoring the fact that there are distinct groups of consumers whose demands for the product differ in price elasticity invites strategic failures.

In this sense, R-A theory of competition provides a theoretical foundation for market segmentation strategy, contributes to explaining why such a strategy is required for economic growth, and explains why full liberalization of PI is detrimental in this process. Proposition 1 (in Table 2) agrees that demand in the overwhelming majority of industries is substantially heterogeneous and characterized by differential consumer tastes, preferences, and use requirements (Hunt & Arnett, 2004). In order to satisfy those different needs, firms should provide customized market offerings to each segment. Therefore, they have

to possess a bundle of unique resources to serve different markets. In this sense, as shown in Figure 1, R-A theory sees competition as a constant struggle among firms for comparative advantage in resources that will yield marketplace positions of competitive advantage for some *market segment(s)* and, thereby, superior financial performance. Briefly, R-A theory views market segmentation as a basic unit of competition. Figure 2 shows that there are two important factors that determine the competitive position of firms in different market segments: (1) consumer perceptions regarding the value of the market offerings relative to those of competitors, and (2) the relative cost of the resources that are required to produce the market offerings. Simply, R-A theory agrees that if a market is substantially heterogeneous, treating consumers' needs in that market uniformly will be detrimental to competition and social welfare. For example, in most cases, price differentiation allows firms to open new markets with low marginal valuation. In this way, consumers of poor countries are more likely to find the products in their markets than otherwise. This strategy would not be viable if the firms were forced to charge a uniform price. Thus, consistent with R-A theory, market segmentation and price differentiation may generate greater social welfare gains than are available under a uniform price – with the addition of more markets, consumer and producer surplus rise (Markus, 2010).

One of the central arguments of the monopolistic school of thought regarding restricting PI assumes that the world is one market, demand is uniform, and anything that differentiates markets results in discriminatory pricing and is anti-competitive. On the contrary, as a dynamic theory of competition, R-A theory argues that demand is substantially heterogeneous in many industries and treating demand as uniform (e.g., allowing PI) will harm not only the competition among firms, but also firms' motivation for creativity and innovation, which are the driving forces of strong global economies.

Although there have been few empirical studies which directly analyzed the welfare tradeoffs of restricting PI, one study from Schmalensee (1981) supported the hypothesis that price differentials can increase the total welfare if the total consumption of goods increases. Similarly, a study by Malueg and Schwartz (1994) provides empirical support for the impact of price differentials on global welfare. They present a model, which includes many countries, and compare the impact of two global pricing scenarios: (1) a uniform price across all the markets, and (2) a mixed regime with uniform prices in subsets of similar markets and price differences among groups of markets. They find that a mixed regime with uniform prices within groups of markets and price differentiation across these groups offers the highest social welfare possibilities. They state that

“If parallel imports are prevented...firms could offer lower prices to lower income (more elastic) countries without fear of the products resurfacing in high markets. Absent such...segmentation, firms may well choose relatively high uniform prices, at which low-demand countries are likely to go unserved.” And, they conclude that (p.20) “...our analysis casts doubt on the view that world welfare would be enhanced by encouraging unrestricted parallel imports in order to prevent price discrimination.”

Briefly, the small, least developed countries would almost certainly not be served by original manufacturers were there a globally uniform price. In this case, the main beneficiaries of uniform pricing would be the consumers in high-income countries.

R-A theory provides a theoretical foundation for the success of market segmentation and price differential strategy. Based on its proposition #1, R-A theory argues that parallel trade could be beneficial among countries with similar demand structures, but would be harmful across nations with different demand patterns. In this case, permitting parallel trade may raise welfare within regional trade agreements (e.g., EU, NAFTA, preferential trading arrangements- PTA) where the demand structure is similar and transportation costs are low.

Intellectual Properties Are Resources

One of the essential requirements for a theory of competition to explain and predict why IPRs are essential in global competition and social welfare is that the theory must be capable of providing

reasoning for their unique, heterogeneous, and imperfect mobility resource nature. This is precisely what - as an interdisciplinary, integrative theory of competition -- R-A theory does. Our reasoning follows.

Consistent with the resource-based view of the firm, R-A theory broadens the concept of resources. Resources are defined as tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has value for some market segment(s). As shown in Table 2, R-A theory categorizes resources as financial (e.g., cash reserves and access to financial markets), physical (e.g., plant, raw materials, and equipment), legal (e.g., trademarks and licenses), human (e.g., the skills and knowledge of individual employees), organizational (e.g., controls, routines, cultures, and competences), informational (e.g., knowledge about market segments, competitors, and technology), and relational (e.g., relationships with competitors, suppliers, and customers). Under R-A theory, IPRs are resources *only if* they contribute to the firm's ability to produce a market offering of value for some market segment(s). That is, IPRs must be *perceived* as "value add" to the market offering by the market segment(s). As to the R-A theory's resource categories, IPRs may be considered as financial, informational, and legal resources.

First, IPRs are financial resources because they provide firms with rights to prevent imitation of their innovations for a limited period of time. Rights conferred give the IPR owners the exclusive right to make, use, and sell the protected invention including the exclusive right to import the invention, which help firms garner economic returns on their R&D investments. By its very nature, PI interferes with IPR owners' rights for discriminatory price setting and limits their licensing revenues. Today, global trade growth is increasingly driven by innovation in industries substantially dependent on IPRs for their financial performance and growth. The pharmaceutical industry is one of them. Developing new drugs involves substantial investments in R&D and accounts for approximately 30 percent of total costs for U.S. pharmaceutical firms (Danzon, 1997). PI eliminates price differences, and therefore, would cause prices to converge in the long term. Converging prices leads to marginal cost pricing, which is the price equal to, or in some cases below the marginal cost of production. If prices were set equal to marginal cost to give patients access to existing drugs at a reasonable cost, pharmaceutical firms would not be able to recoup their investments and the incentives for R&D would disappear. In the long run, with marginal cost pricing, too little investment in R&D results in too few drugs being developed. To correct this market imperfection, IPRs exist to allow companies to exercise some market power in order to recover their R&D investments (Maskus, 2000). IPRs, as financial resources, motivate firms to create new products and business models that change their competitive position in global competition.

Second, IPRs are informational resources because, according to the R-A theory of competition, consumers have imperfect information and searching for information is costly (Proposition 2 in Table 2). Therefore, consumers generally use trademarks and copyrights as heuristics of product/service quality (Erdem & Swait, 1998). That is, trademarks and copyrights are valuable sources of information to consumers. PI goods are identical to legitimate products except that they may be packaged differently and may not carry the original manufacturer's warranty and after-sale rights; therefore, they are highly likely to create dilution among existing and potential customers. Authorized distributors have the incentive to advertise and promote the new products. They incur costs of building territorial markets through pre- and post-sale marketing activities. These costs are generally likely to be quite significant (Rapp & Rozek, 1992). On the other hand, parallel importers - unauthorized distributors - simply buy the goods abroad without incurring similar marketing costs (e.g., free riding). Since the parallel import goods are meant for other markets, consumers in the imported market will be exposed to the same legitimate brand with two different presentations and will more likely question the equivalence and quality of these new products.

Finally, IPRs are legal resources because intellectual property laws prevent rival firms from imitating and infringing on IPR holders' knowledge capital (Grossman & Helpman, 1990), and stealing the value of their investment in developing their brands' equity (Hunt, 2006). For example, the WTO agreement on TRIPS represents a culmination of multilateral activity leading to global strengthening of national laws and regulations providing firms with rights to prevent copying and infringing of their innovations for a limited time period (Bale, 1998).

In summary, R-A theory argues that full-liberalization of PI will be detrimental to global competition and social welfare in the long term. The theory's fundamental premises view intra-industry demand as substantially heterogeneous and market segmentation as a basic unit of competition. By means of its treatment of resources, the theory also views IPRs as legal, informational, and financial resources that will yield marketplace positions of competitive advantage for some market segment(s) and, thereby, superior financial performance. Please find the summary of our discussion in the following table. Our contributions are related to the content in columns 4 and 5.

TABLE 3
PARALLEL TRADE POLICIES AND COMPETITIVE ADVANTAGE THEORIES

Parallel Trade Policy	Monopoly school of thought perspective – pro-parallel trade	Efficiency school of thought perspective – anti-parallel trade	R-A theory perspective – adopted by this paper	Reasoning based on R-A theory
<i>National exhaustion</i>	Argue against national exhaustion	Argue for national exhaustion	Argue for national exhaustion	<p>(1) Demand heterogeneity is a market reality and price differentials in segmented markets happen according to demand elasticity. Each nation/region should be treated as one market.</p> <p>(2) IPRs as legal, informational, and financial resources will yield marketplace positions of competitive advantage for firms. Protecting them from parallel imports in the global markets will provide firms with superior financial performance, which will eventually increase their R&D investments.</p>
<i>Regional exhaustion</i>	Argue against regional exhaustion	Argue against regional exhaustion based on low transaction cost	Argue for regional exhaustion	<p>(1) Demand heterogeneity is a market reality and price differentials in segmented markets happen according to demand elasticity. Each country or region with a similar economic structure among member countries should be treated as one market.</p> <p>(2) IPRs as legal, informational, and financial resources will yield marketplace positions of competitive advantage for firms</p>

				and, thereby, superior financial performance in global markets. Regional exhaustion, if implemented well by institutions, is useful for global welfare in the long term.
<i>International exhaustion</i>	Argue for international exhaustion for global liberalization of the trade.	Argue against international exhaustion based on low transaction cost	Argue against international exhaustion	(1) If markets are treated uniformly, assuming they have a single demand curve, this move will reduce the consumer welfare in the long term because consumers' tastes and preferences are heterogeneous. (2) IPRs as legal, informational, and financial resources will yield marketplace positions of competitive advantage for firms. Protecting them from parallel imports in the global markets will provide IPR owners with superior financial performance, which will eventually increase their R&D investments. Protection of IPRs in global markets is essential today for invention, innovation, and for the healthy expansion of the global economic system.

CONCLUDING REMARKS

Parallel imports (PI) command different views on both sides of the global policy debate. Advocates of liberalization of PI point to the monopolistic structure of market segmentation strategy, vertical price controls, and price differentials among markets. They argue that territoriality and vertical price integration to control PI have monopolistic purposes; and, these controls are often viewed as anticompetitive in that they allow IPR owners to set prices according to their market power in each territory. Therefore, proponents see PI as an effective device for disciplining potential collusive practices among IPR owners. They believe that restricting PI will artificially segment the markets, raise the prices, and harm the consumer welfare in the long run. Therefore, they argue for the regime of international exhaustion as an effective competition policy. However, evidence shows that international exhaustion regime will have a significant negative impact on firms' R&D initiatives at a global scale (Danzon, 1997).

On the other hand, enthusiasts who support IPRs view restrictions against PI to be natural extensions of the rights to protect companies' R&D incentives. They also strongly argue that protecting IPRs has a positive social welfare effect in the long run. In this view, parallel trade is considered a competitive mechanism that could drive retail prices to converge. This convergence increases the prices in low-price regions, harming low-price consumers, and decreases the prices in high-price regions, benefitting high-price consumers. Besides, parallel trade wastes resources through transportation of goods and free-riding of marketing expenses.

Using R-A theory as a foundation for understanding dynamic market systems, this paper has explored the benefits that contribute greatly to global economic systems and social welfare when PI activities are permitted on a national/regional basis. R-A theory stresses the importance of market segments, which are defined as groups of consumers whose demand characteristics (e.g., tastes and preferences) with regard to output are relatively homogenous. With its focus on market segments as basic units of competition, R-A theory emphasizes firms' superior financial performance results from developing market offerings that match the needs of a specific market segment, and therefore, occupy a market place position of competitive advantage. With that in mind, this paper argues that it could be globally optimal to encourage national/regional IPR exhaustion where countries or groups of countries have similar demand characteristics and transportation cost is low among countries in that region. It also argues that price differentials should be sustained among countries where demand structure is different and procuring and shipping costs are high.

R-A theory also emphasizes the intangible and higher order resource nature of intellectual property rights. Therefore, protection of IPRs is essential today for invention, innovation, and the healthy expansion of the global economic system.

The inconclusive nature of initial TRIPS negotiations through Article 6 does not conclude the debate regarding the international exhaustion doctrine of PI. There is no reconciliation on the matter, and in most cases it is at the *status quo ante* with each country or region selecting its own policy. As a result, each member country to the agreement is free to decide how they deal with the exhaustion of IPRs by their own national laws. This passive approach to exhaustion is preferred to an affirmative policy of requiring exhaustion as a matter of international law. However, based on the arguments that we raised in this paper, we believe that the *status quo* is unsustainable for an indefinite period of time. Some attempt at policy harmonization in markets with similar demand characteristics may be the optimal global policy. Therefore, based on R-A theory, we argue that liberalization of PI only among countries of similar economic development with low transportation costs, and controlling PI between heavily and less regulated markets may increase the social welfare at a global scale.

Vigorous competition requires institutions, laws, and regulations that promote the linkage between innovation and rewards. Vigorous competition also requires governments to provide IPR owners the right to control PI activities on a regional basis. Global and national policies regulating PI require ample thought and careful implementation (Maskus, 2010). These policies should be flexible enough that if there are any collusive pricing practices, governments should have the ability to apply their competition laws to curb such international trade practices. Full-scale liberalization of PI at a global scale to prevent collusive business practices is nothing but sawing off the branch we are sitting on.

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