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The survival consequences of intellectual property for retail ventures

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ABSTRACT

While the value of patents is documented widely for technology ventures, whether retail ventures can improve their survival odds from patents, copyrights or trademarks remains unexplored. Given the relatively lower survival rate of retail ventures, whether investing in intellectual property could improve their survival odds is an important research question for both the retailing and entrepreneurship literatures. Based on a sample of 585 retail and 2406 non-retail ventures in the Kauffman Firm Survey, retail ventures have a lower chance of survival. Compared to non-retail ventures, patents, trademarks or copyrights in retail ventures increase the odds of survival. The findings have implications for resource allocations related to intellectual property in retail ventures.

1. Introduction

New retail ventures represent a significant portion of the US economy. Overall retail productivity is driven by “more-efficient firms replacing a set of less-efficient exiting ones” (Hortaçsu and Syverson, 2015, page 93). The US retail sector has vibrant entrepreneurial activity. In 2014, for example, entry and exit rates for new retail establishments with 1–4 employees were 15.0% and 20.5%, respectively. Despite their contribution to the vitality of the US retail sector, retail ventures face a slightly below average 5-year survival rate of 41.1% compared with an eight industry sector average of 43.9% (Census Bureau 2005 data).

While the interest in understanding retail venture failure has increased recently, the question of whether investments in intellectual property by retail ventures improve survival odds remains unexplored. We ask – Does the type of intellectual property protected by a retail venture improve its odds of survival?

We draw on a longitudinal sample of 585 retail and 2406 non-retail ventures followed from 2004 to 2011 in the Kauffman Firm Survey, the most comprehensive longitudinal sample of US ventures. To rule out alternative explanations, we control for a variety of factors, including credit risk from archival source, along with state, year, and industry dummies. We find that patents, copyrights, and trademarks improve survival odds of retail ventures.

1.1. Legal protection for intellectual property

Intellectual property (IP) is the term used to refer to the output of a creative process. When the United States government recognizes the ownership of intellectual property, it grants certain rights that will be protected under the nation's laws. There are three such types of intellectual property protection common among retail firms, which are known as copyrights, trademarks, and patents. We review each type of IP and highlight benefits of each type of IP for retail ventures.

Copyrights are a form of intellectual protection provided to authors of original works of authorship fixed in any tangible medium of expression, meaning that the work has been documented or communicated in an observable way, either directly or through a machine or device. In retail industries, copyrights have been issued to protect proprietary retail management software, and virtually all e-commerce retailers’ website designs. Other examples include artistic works, literary works, music, graphic works, and sound recordings.

A trademark is a word, name, symbol, device, or any combination, used or intended to be used to identify and distinguish a retailer's goods and services from those of others, or to indicate the source of those goods and services. Accordingly, trademarks prevent competitors from using confusing images or designs in order to piggyback on a retailer's hard-won brand identity. In addition to trademarking their business names, retailers also obtain trademark protection for their slogans, theme songs, logos, signature products, and their store and station layouts. The trademarked item must be distinctive and not trademarked by another firm.

Trademarks from the United States Patent and Trademark Office (USPTO) expire after 10 years but can be renewed. If a trademark application is approved, the company can add the registered trademark symbol (®) to the company's mark and is eligible for IP protection.

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Companies that have not successfully registered a trademark can use the ™ symbol to indicate their ownership of a mark, although the ™ symbol does not provide any special legal protection.

Inventions are protected by patents. Patent holders of designs, products, and processes are allowed to prevent others from producing selling or using the invention without authorization. Patents grant to their holders the exclusive right to make, use, or sell an invention for 14–20 years from their filing date, given certain considerations and provided that maintenance fees are routinely paid to keep the patent in force. Under U.S. law, patents on machines, known as utility patents, pertain to an invention that is novel, non-obvious, and usefulness. These terms have precise meanings within the domain of intellectual property law. Useful means that an invention's subject matter has a useful purpose and that, if the invention is a machine, is it fully operable. Novelty refers to the originality of the idea and connotes that an invention was not previously known or used by others, described in print, or previously for sale or in public use. Non-obvious means that an invention is sufficiently different from existing technology such that a person with "ordinary technical skill" would not consider an inventor's changes to any underlying machine obvious improvements.

The proliferation of patents in retail industries provides evidence of the importance that competitors place on protecting their intellectual property. For example, since Amazon was founded in 1994, the company has obtained 1263 patents in the United States. From network encryption to software that blocks brick-and-mortar retailers' efforts to conduct competitive price checks against Amazon, patents have proven to be an effective component of Jeff Bezos' corporate strategy.

Another approach to protecting intellectual property derives its protection from the fact that it is kept secret from anyone outside of the company that developed it. Called a trade secret, it is not formally protected because the owner is attempting to save money or to assure nondisclosure by never permitting it to be publicly revealed even to government agencies. Business plans, client lists, manufacturing processes and restaurant recipes are examples. Similar to any other company property, its owners can bring suit against anyone who can be proven to have stolen a trade secret.

Exhibit 1 presents a simple taxonomic matrix that provides an overview of the characteristics of three intellectual property protections. The vertical axis shows these types of IP protection as patents, copyrights, and trademarks. The horizontal axis lists four characteristics of IP protection, namely a brief description, the period of time that the protection can be expected to last, the relative cost of the protection in comparison to the other two types, and several examples of intellectual property that benefit from the specific type of protection.

Next, we discuss literature explaining plausible gains for retail ventures from patents, trademarks, and copyrights.

2. Benefits of IP

In the retailing literature, empirical studies on intellectual property focused on large and established retail firms, while research on small entrepreneurial retailers has tended to focus on the role of patents for high-technology firms (Smith and Cordina, 2015). When using samples of large and established firms, retailing research has found support for the influence of IP on company performance (Pantano, 2014; Tsai et al., 2010), process management (Evanschitzky et al., 2015), and innovation outcomes of the consumer experience (Demirkan and Spohrer, 2014; Poncin and Mimoun, 2014). Unfortunately, the linkages among IP strategies and retail start-ups' survival are largely neglected topics in academic research.

New ventures are especially resource constrained and thus resource allocation decisions have elevated importance in their survival (Klingebiel and Adner, 2015; Kazanjian and Rao, 1999). In making resource allocation decisions, retail ventures must weigh the certain costs of IP against its uncertain and time-bound future benefits (Han and Shin, 2014). Rapid innovation pace in the retail sector further calls

Exhibit 1
Intellectual property protection.

Type of intellectual property protection	Characteristics of the intellectual property protection			
	Description	**Protection Period**	**Cost**	**Examples**
Patent	A government grant of an exclusive right that allows the holder of a novel and non-obvious invention to maintain a monopoly over the manufacture, use, and sale of the invention.	14–20 years depending on patent class.	$5000 - $10,000	● Amazon "1-Click" e-commerce feature ● Walmart smart-home technology that reorders customers' goods automatically ● Conduent's facial expression recognition technology assesses retail customer satisfaction in real time ● Priceline reverse auction process ● Google's mobile shopping lets customers scan a barcode to order online.
Copyright	Legal protection which grants the holder of an original work of authorship exclusive rights for the reproduction, distribution, and use of the original work.	The author's life plus 50–100 years.	$35 - $900	● Disney Mickey Mouse cartoons ● Ford website photos and content ● LL Bean outdoor apparel catalog ● Microsoft Windows software ● Proctor & Gamble packaging ad copy
Trademark[a]	A registered sign, design, symbol, or expression that distinguishes a product or service as owned or licensed and confers exclusive use upon the owner or licensee.	10 years, with a renewal of 10 years, under continued use	$225 - $1300	● Apple logo and brand ● Geico's talking gecko mascot ● Johnson & Johnson Band-Aid product name ● McDonald's golden arches symbol ● Nike "Just Do It" slogan

[a] Assumes registration. A nonregistered trademark is denoted by the ™ symbol and does not require payment of a fee.