

The effect of the Smartphone dissemination on the macro-marketing environment.

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ABSTRACT: *For the last decade, the diffusion of the Smartphone in the world has been phenomenal. A lot of academic research has been devoted to its addiction effect, its impact on learning, medical treatment, advertising and store shopping environment. This article aims at looking at its wide-ranging effect on the macro-marketing environment. It is divided in three parts:*

- 1. The direct competitive impact on sales of products like cameras, alarm clocks, calculators, watches, notebooks, diaries, regular line phones etc..*
- 2. The Smartphone Applications effect on consumption and use of certain types of products, like taxis, buses etc. as well as its effect on price competition.*
- 3. The third part considers the indirect beneficial effects on price inflation, and pollution environment.*

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I. INTRODUCTION.

The Smartphone revolution all over the world, has raised a few academic researches issues. Some articles have dealt with the issue of adoption and choice of the device (Kim, 2016; Baglione, 2014; Attri, Maheshwari, & Sharma, V. (2017); Mishra, M. K., & Choudhury, D. (2013); Lakshmi, & Kavida, (2018); Boscor (2016); Barrett (2012); Godinho de Matos, Ferreira & Krackhardt, D. (2014)...) Others have dealt with the addictive effect of the product, (Gumusgul, (2018); Jeong et al. (2018); Vahedi & Saiphoo (2018); Gündogdu et al. (2018)...) . Other researchers have focused on the learning effects of the Smartphone (Muchlas (2018); Klímová, (2018); Jain et al. (2018); Ahmed & Kabir (2018); Hochberg et al (2018)...) or on medical applications and issues (Versluis et al. (2018); Raicle et al. (2018); Minen et al. (2018); Evald (2018); Bier et al. (2018); Rausch et al. (2018); Richardson et al. (2018)...). Finally numerous studies have evaluated the Smartphone impact on Advertising and Shopping environment (Kelehaar et al. (2018); Martins et al. (2019); Ali et al. (2014); Kang & Kyunseung (2016); Barry et al.; Hanley & Boostrom (2011); Kim & Law (2015); Bhawe et al. (2013); Fuentes & Backstrom (2017); Fuentes et al. (2017); Spaid & Flint (2014); Holmes et al. (2014). As opposed to those past researches, the objective of this article is to investigate the wide-ranging effect of the Smartphone dissemination on the macro-marketing environment. It will be divided in three sections.

A. The direct competitive effects.

Because it incorporates many features besides its telephonic aspect, the Smartphone has caused a negative effect in the sale of some products.

For instance, the company Cannon developed in the late 1970's the so called "idiot proof camera", that enabled people with no photographic skills to realize nice pictures. This was a tremendous success. Today everyone with a Smartphone can produce similar results with the built-in camera. As a consequence the sale of ordinary cameras has decreased tremendously. Only the more expensive brands' targeted to skilled amateurs or professionals, have kept their sales volume.

To a lesser degree, the phenomenon of abandonment has touched other categories of products like diaries, address and telephone books, pocket calculators, notebooks, pens, alarm clocks and, sometimes even watches. The Waze and Google Map applications have seriously reduced the need for road and city maps. Those are only examples of the direct competitive effects that the Smartphone had on the sales of previously popular goods.

However the indirect effects on the consumption and consumer behavior for some other products and services have also been important.

B. The indirect competitive effects.

It is important to stress first, that by providing instant access anywhere to the Internet, the Smartphone has multiplied manifolds its impact on consumption habits. The effects of the Internet on consumption behavior

have already been investigated previously (Picard (2017)), but with full access, even within stores, consumers can compare prices immediately, (and even if they are particularly uninhibited, show the competitor's lower price to the store salesperson, who sometimes will even accept consequently, to grant this particular consumer a discount). This phenomenon puts enormous pressure on store price margins for standardized items.

The taxi industry has also been affected in different ways by the Smartphone dissemination. First, it has created direct competition by companies like Uber that provides quasi-similar services at lower prices. Second, applications like Google Map allow tourists to easily find their ways, even in cities where street signs are either none existent or written in an alphabet they are not familiar with. This might affect taxi use for short distances. The Uber (and likes) applications might also have reduced the need for a personal chauffeur, since it is extremely rare that no Uber driver would be available at wish, in a city.

Other applications like Moovit, that gives instant public transport directions and timetables' further reduce the need for tourists to spend more money on a taxi drive. That application, because it indicates the best way, and the time delay necessary to reach a destination has also increased the use potential of public transportation by local residents.

As an advertising vehicle, and an instant access to news, the Smartphone has also decreased the sales and profitability of newspapers and to a lesser degree other media vehicles.

The What's up application has also probably diminished the number of regular phone conversations. This has probably impacted the number of paid long distance calls that consumers had to incur in the past.

There are without any doubts many other indirect effects of the Smartphone on other products consumption' and the trend is certainly going to increase with the ever growing development of new applications. In the next section, some of the macro-effects of the Smartphone revolution will be examined.

C. The macro effects of the Smartphone.

As was indicated before, applications of the "Waze" category had seen huge popularity. They enable car drivers to save time and gasoline consumption by indicating the fastest way for reaching desired destinations. The global impact of Waze use, is both economically and ecologically positive, since less productive time is wasted on the roads, and by the consequential reduction of gas consumption, the global pollution level is diminished. To a similar extent the facilitation of public transportation caused by the "Moovit" and "Google Map" applications has also a positive effect on global pollution and gas consumption, since it provides a more ecological mean of transportation than the use of cars or taxis.

The instant access to competitors' price information in shopping place has further reduced the phenomenon of "dissymmetry of information" that greatly benefited to retailers in the past. It is becoming harder and harder to realize what economists call "supernormal profits" in the retail business and service industry. This might reduce the usefulness of hiring highly manipulative salespeople, and instead, encourage marketers in their efforts to earn profits through providing superior real value to their present and potential customers

D. Conclusion.

In addition to the social and other tremendous changes on Society that the Smartphone global dissemination has brought upon within the last ten years, this article has attempted to focus more intensively on the macro effects of the phenomenon. For that purpose a distinction was made between direct and indirect effects on other products consumption, and the macro-effects on the ecological and economical global environment. Nevertheless, it is probably too early to realize precisely how much life has changed with the advent of this technology.

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